This exegesis and project entitled

*The View from Nowhere*

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by

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Abstract

The following document details my project in theoretical and hands-on practice-based research in philosophy, 3D modelling, 3D printing and digital media. First a research question is proposed, encapsulating the project theme and direction. This question regards the application of philosophical discourses around Enlightenment versus Counter-Enlightenment to my material production. An introduction will expand on this question and outline the basic philosophical terrain examined, the reasons for the media chosen, and the programme of research and practice.

The subsequent literature review is divided into two sections: situating the project philosophically; and situating the project art-historically. The former examines a number of categories where Enlightenment and Counter-Enlightenment thought clash, including individualism, ideology, epistemology and method, science and technology, nature, religion, history, and universalism. Various positions of different authors are examined in each of these sections.

In the second part of the literature review, theories about and works of dioramas are discussed first of all, as these form the core of my project. Works based on a clearly articulated corpus of ideas, such as Surrealism, are then looked at. Most significant in this section is a discussion of Duchamp and why I consider my work to fall into the realm of conceptual art. An analysis of Kosuth and how his works are strongly influenced by philosophy is also presented. An examination of the sculptures of Weiwei and his political vision follows. Finally, the contemporary 3D printed work of Aki Inomata is analysed.

An outline of the methodology followed in the project, practice-based research, is then described, along with specific examples of methods used and new knowledge gained. Then a discussion of how my ideas affected the choice of materials and aesthetic decisions, and how these changed along the way, is presented. Finally, an exegesis of three of the key works is given, along with screenshots of the digital version of these artefacts. Exegeses of the remaining works are contained in the appendix.
The View from Nowhere

Research question

The project question is: How can 3D-modelled and 3D-printed dioramas, sculptures and interactive digital artwork be used to explore my thesis that the Enlightenment/Counter-Enlightenment dialectic forms the core structure of our contemporary episteme? My work aims to examine and reify various aspects of this thesis.

Introduction

The question “What is Enlightenment (Aufklärung)?”, according to Foucault (1984, p. 32), has been at the core of modern philosophy for two hundred years, and has still not been answered. Further, according to Foucault “we must imagine Enlightenment as a historical change that affects the political and social existence of all people on the face of the earth” (1984, p. 34). And in terms of the very notion of our contemporary identities, “We must try to proceed with the analysis of ourselves as beings who are historically determined, to a certain extent, by the Enlightenment” (Foucault, 1984, p. 41).

Žižek (2012), writes that “Enlightenment remains an ‘unfinished project’ that has to be brought to its end, and this end is not … total scientific self-objectivization but—this wager has to be taken—a new figure of freedom that will emerge when we follow the logic of science to the end” (p. 119-120). And according to Zeev Sternhell (2010), “From the second half of the eighteenth century to the age of the cold war, the confrontation between the two traditions [Enlightenment / Counter-Enlightenment] formed one of the most prominent and enduring features of our world” (p. 1).

In summary, then, according to the authors above, the question concerning Enlightenment is the essence of modern philosophy; a movement of universal impact; and an ongoing, unfinished project that in many ways determines who we are and delimits the terrain in which we act and think. I have been researching and thinking about this confrontation for over ten years, and fully
agree with the positions of the writers quoted above. During this time, I have worked in digital media, CAD design, web development, and jewellery production using 3D printing. Thus, for my capstone project, I decided to combine my philosophical and historical interests with my strongest practical skills to produce a unique body of artefacts.

## Literature review

### Situating the project philosophically

*What is Enlightenment/Counter-Enlightenment?*

In what follows, while I will draw examples from a number of actors, my focus will be on attempting to identify the essential tendencies of the dialectic rather than arguing that any particular author or philosopher was in either camp.

*Individualism*

Perhaps the most salient aspect of the upshot of Enlightenment thought might be the rise of the autonomous, rational individual operating under their own authority. Foucault (1984) quotes Kant, who describes Enlightenment as the surpassing of “a certain state of our will that makes us accept someone else’s authority to lead us in areas where the use of reason is called for” (p. 35). For Foucault (1984), then, “Enlightenment is defined by a modification of the pre-existing relation linking will, authority, and the use of reason” (p. 35). In fact, “the self as an autonomous subject — is rooted in the Enlightenment” (1984, p. 40).

Against the rise of this autonomous subject — as opposed to the subject defined by guild, caste, Estate or tribal affiliation, for example — is the notion that this has resulted in the division of humankind, alienation, disenchantment, a catastrophically lost or missing totality. The Nietzschean *ubermensch* is left adrift in a violent, lonely ocean with only his own will and rationality to define himself as his own totem, his own “brand”, let’s say. Recently, this dialectic played out in full force: from the Christchurch gunman’s manifesto: “We must inevitably correct the disaster of hedonistic, nihilistic individualism” (Manifesto, 2019).
Political ideology

Perhaps the quintessential incarnation of Enlightenment individualism is Smithian/Hayekian/Friedmanian-inspired Liberalism, in which the best outcome is obtained when each person acts autonomously, as opposed to consciously acting for the benefit of society, in their own best interests…. Free people, free markets, free, deregulated corporations, free trade … all orchestrated by an invisible entelechy, or hidden hand. As the famously Hayekian Margret Thatcher (Montague, 2018) stated at the onset of the Neo-liberal era: “And, you know, there is no such thing as society. There are individual men and women and there are families” (Financial Times, 2013).

The two major counter-trends in political ideology opposed to this bourgeois democratic liberalism are arguably Fascism and Marxism. In Fascism, remarks Sternhell (2008), “it was sufficient to regard society not as an aggregate of individuals …, but as a single entity whose organic, biological and cultural unity, destroyed by the Enlightenment and modernization or at least strongly endangered by it, could and should be restored” (p. 286). And, as Lukacs (1971), claims, “It is not the primacy of economic motives in historical explanation that constitutes the decisive difference between Marxism and bourgeois thought, but the point of view of totality [my italics] (p. 27)

Epistemology and method

Foucault (1966) argues that what characterizes the shift into Enlightenment is really a shift in the prevailing epistemological paradigm away from an overarching hermeneutics, wherein nature is to be interpreted like a biblical exegesis, to the scientific method. The proliferation of this new method, with mathematics as its base, has laid claim to a hegemony on all forms of knowledge and wants to force itself into realms traditionally reserved exclusively for hermeneutics. As Isiah Berlin (1973) writes: “It was further believed that methods similar to those of Newtonian physics, which had achieved such triumphs in the realm of inanimate nature, could be applied with equal success to the fields of ethics, politics and human relationships in general” (p. 1).

“Things in themselves” could now be revealed to humankind with positivism as the royal road to a “true” epistemology. As Horkheimer and Adorno (2002) claim “For the Enlightenment, anything which cannot be resolved into numbers … is illusion; modern positivism consigns it to poetry” (p. 4-5). And what other way to approach poetry than hermeneutics?
The pushback to this perceived hegemony, I want to argue, is no more evident than in postmodernism, which I believe is essentially an atavistic turning back to hermeneutics: from Lacan, who insists (at least in his more structuralist phase) that because the subconscious behaves like a language and neurosis expresses itself in linguistic tropes, the proper approach to psychoanalysis is a hermeneutic one (Wicks, 2003); to Foucault’s discursive method in his approach to historiography; to Barthes (1967) rejection, in his infamous “Death of the Author”, of a direct line from text, to author, to the latter’s life history, material circumstances and intentions, in favour of a purely hermeneutic interpretation of the work of literature as pure ludic-linguistic shamanism. To paraphrase Martin Jay (1986), under post-modernism/post-structuralism, there really is no way from surface to an ultimate reality of the “thing in itself”. Rather, no matter how deep we dig, there is just more surface.

**Science and technology**

The Enlightenment wager that “a new figure of freedom … will emerge when we follow the logic of science to the end” (Žižek, 2012, p. 120) is more relevant today than ever before. Windshuttle (1994), for example, writes that “This scientific method, based on drawing conclusions from empirical observation and experiment, provided the apparatus for all our subsequent knowledge of the physical and biological worlds and has been the engine of the industrial and technological societies that have emerged in the train of this knowledge” (p. 187). Whereas commentators like Windshuttle would argue the benefits of an industrial-scientific society, there are countless others who see this exact teleology as nothing but the unmitigated disaster of our times, from the Luddites to the Unabomber and beyond.

This dialectic is perhaps no more evident today than in ideation around AI. Almost daily media pieces take one side or the other, on the one hand touting the benefits of robot surgery or freedom from drudgery in the workplace that AI will inaugurate, for example, or on the other hand, predicting a disaster when robots take our jobs in a postmodern replay of the introduction of mechanised production in the cotton industry—or even worse, when AI gains autonomous will to action and consequently runs amok in spectacular fashion, as depicted in films from *2001: A Space Odyssey* (1968), to *The Terminator* (1984) and *The Matrix* (1999), among many others.
Another major Enlightenment theme is the domination of nature. Horkheimer and Adorno (2002) address this question extensively, noting that an essential characteristic of Enlightenment thought was the striving after “Knowledge obtained through [scientific] enquiry [that] would not only be exempt from the influence of wealth and power but would establish man as the master of nature” (p. 1). Instead of being subservient to the power, caprices and impenetrable machinations of the world, this new knowledge would allow humankind to not only penetrate nature’s mysteries but gain control over her, ushering in a new age of human power, freedom and possibility.

Again, this project is seen by many as an unmitigated disaster, the global catastrophe of climate change and species loss being perhaps the most salient aspects of this perceived cataclysm. The world-wide Green movement, unprecedented protest against climate change, the fight against species loss and deforestation are but a few of the growing counter-currents moving against the stream. Further, as Horkheimer and Adorno (2002) claim, the dubious egalitarianism of scientific knowledge has really resulted in those imbued with power through technological hegemony “taking society’s domination over nature to unimagined heights” (p. xvii). Instead of freeing us, this new hegemony of knowledge/power has simply lead to a new form of slavery simply “afford[ing] the technical apparatus and the social groups controlling it a disproportionate advantage over the rest of the population” (2002, p. xvii). “Every road from Rousseau leads to Sade (Paglia, 1990, p. 14)”: from Reason to Robespierre; from Revolution to Gulag; from Turing to Big Data. “What human beings seek to learn from nature is how to use it to dominate wholly both it and human beings” (Horkheimer and Adorno, 2002, p. 2).

Religion, spirituality, primitivism, tribalism

Hand in hand with the domination over nature, “Enlightenment’s program was the disenchantment of the world. It wanted to dispel myths, to overthrow fantasy with knowledge…. The disenchantment of the world means the extirpation of animism” (Horkheimer and Adorno, 2002, p. 1-2). Proponents of this historical programme would argue that the Enlightenment “has freed our culture from the shackles of superstition, mysticism and quackery” (Windshuttle, 1994, p. 187). Importantly, in the New Zealand context, certain actors, such as Don Brash, controversially and antagonistically further this logic: “Most Māori have benefited enormously
from colonisation…. Let’s face it, pre-1840 Māori were cannibals. They had no written language, they had not invented the wheel, they were a primitive, stone-age society” (Moses, 2018).

Today, we see a forceful pushback against this programme: from the proliferation of tribal tattoos, motifs and piercings; to the resurgence of Te Reo and Maori spirituality and cultural practices; to decolonisation movements; to those going abroad to experience the ayahuasca ritual; to the resurgence of yoga, ayurveda, and meditation—mostly, I want to argue, in an effort to mitigate Enlightenment disenchantment and alienation, and connect, however flirtingly, with a real or apparent lost spiritual totality. Whereas scientific rationalism might see tribal thought as primitive, unsophisticated and a worthy object of the *mission civilisatrice* (and perhaps even genocide and cultural assimilation/extirpation), writers like Levi-Strauss (1966), have argued that animist societies with complex totemic systems are equally as sophisticated and well-structured as modern Western ones.

**History, progress, freedom, teleology**

Enlightenment thought seeks to characterise History as a rational, linear unfolding leading to a teleological goal, the perfectibility and emancipation of humankind. This is signally articulated by Hegel (1837): “… Reason is the Sovereign of the World; … the history of the world therefore, presents us with a rational process.” Hegel’s thesis is no less relevant today, with authors such as Fukuyama (1992) promulgating it in grand fashion. On the Counter-Enlightenment side, the nemesis to Hegel’s thought, among others, is Foucault, who “propounds a Nietzschean vision of history as a random succession of modes of violence …, attacks Enlightenment rationality, and finds no progressive movement in history” (Best, 1995, p. 258). In a further Counter-Enlightenment turn, “In a critical tradition stretching from Nietzsche and Weber through the Frankfurt School to postmodern theory, … critics linked advances in modern rationalization processes and ‘instrumental reason’ to increases in domination rather than Freedom” (Best, 1995, p. 8).

**Universalism**

One of the most contested areas of Enlightenment thought is perhaps the dispute around universalism. For Horkheimer and Adorno (2002), the power of Enlightenment itself lies
particularly “In the authority of universal concepts” (p. 3). Whether it is in the application of mathematics as the universal language par excellence, or scientific method as a universal path to ultimate truth, to the Universal Declaration of Human Rights, to Democratic Liberalism as a universal political system, the authority of universal Enlightenment concepts is held paramount by Enlightenment thinkers and their progenies.

This universality has been challenged in a host of different forms. Brian Rothman (1993), for example, wants to argue that mathematics, far from being a universal language, is like any other, embedded in culture and therefore presents only one aspect of a greater possible truth. Cultural relativism would suggest that because Enlightenment thought is embedded in culture, and all cultures have an equally valid claim to their own truth, Enlightenment universalism is, again, only one of many possible truths. And in the realm of political ideology, Fascism generalized [a] nationalism that proclaimed it as a universal truth that there is no universal truth. All that is left of the truth is a plurality of national truths…: a French truth and a German truth, a French justice and a German justice. And this is logical enough, for when all is subjected to a historical, cultural and finally a moral relativism …, universal values can obviously no longer survive (Sternhell, 2010, p. 313).

I will close this introduction by claiming that the battle of the universal versus the particular is an important and ongoing one. In his famous book *The Postmodern Condition: A Report on Knowledge*, Lyotard (1984) argues that the essence of our post-modern condition is the rejection of metanarratives, and by implication, Enlightenment itself:

… the rule of consensus … a possible unanimity between rational minds: this is the Enlightenment narrative…. Simplifying to the extreme, I define postmodern as incredulity toward metanarratives (p. xxiii-xxiv).

And yet…

[Postmodernism, deconstructionism and structuralism … [claim] that because all ideas, including scientific theories, are conjectural and impossible to justify, they are essentially arbitrary: they are no more than stories, known in this context as ‘narratives’. Mixing extreme cultural relativism with other forms of anti-realism, it regards objective truth and falsity, as well as reality and knowledge of reality, as mere conventional forms …. And it regards science and the Enlightenment as no more than one such fashion, and the objective knowledge claimed by science as an arrogant cultural conceit. (Deutsch, 2011, p. 314)
Admittedly, the above has been painted in rather broad strokes, but in what follows, and in my 3D artworks and discussion, I will examine the themes outlined here in greater detail.

Situating the project art-historically

**Dioramas**

The main body of works that constitute the project are dioramas. And, artistically and epistemologically, I want to juxtapose these dioramas with the natural history diorama (Fig. 1). These dioramas, I would argue, are a traditional presentation of scientific knowledge with an educational and entertainment purpose in the public space, perhaps most ubiquitously in the natural history museum. As Dohm et al. (2017) note, these dioramas have “been widely used by natural history museums” and are situated “between the didactic function of a scientific instrument and the social function of a popular entertainment medium” (p. 1). I would further argue that the natural history diorama is doxological. In this sense I mean doxa as commonly accepted conventional knowledge or wisdom received from authorities such as churches, schools, and, here especially, museums. Indeed, in relation to museum dioramas, “The decisions about what to display and how to display it [are] driven by assumptions that museum staff make about the community they serve” (Sherman & Rogoff, 1994 in Kerby et al., 2018). Thus, in this view, the museum diorama is produced through a relationship between those who would curate and present knowledge and those who would consume it — and thus the end product, I would argue, in the fact that it must ultimately please the general public, cannot be anything but entirely conventional by definition.

What I am rather interested in is interrogating and pushing this “genre” beyond the doxa into a Foucauldian epistemo-archaeological space — to unearth the philosophical machine that, as Foucault (1994) would say, “authorises” (p. 140) us to produce the doxa itself. For example, what would a diorama look like that questions or aims to expose the legitimising narrative that authorises the *Australian Aborigines, Yarra Yarra Tribe* diorama below (Fig. 1)? What kind of discourse allows us to see a non-Western, autochthonous group as specimens in a scientific display arranged for our education, entertainment and wonder? On the other hand, the artwork I have seen that most closely articulates a similar position to my own is a Leunig diorama at the National Museum of Australia (Fig. 2). This diorama doesn’t present a realistic scene, but rather operates on the plane of ideas and political critique, as well as evincing a tongue-in-cheek
humour. My work is very similar, but with a more explicitly philosophical bent.

Figure 1. Traditional Diorama - Australian Aborigines, Yarra Yarra Tribe (National Museum of Australia)

Figure 2. Modern take on the diorama – How Democracy Actually Works (National Museum of Australia)

Works based on a body of ideas

My work is predicated on a clearly articulated body of ideas, discussed above, rather than, for example, a realist’s celebration of the beauty of nature in itself — for example the type of naïve natural realism I have often seen at Takapuna library community art exhibits: *tui* or *kereru* in flaxes with a rainbow background (Fig. 3); boats on swing moorings on a sunny day at Devonport beach — as if we could return to an idyllic state in harmony with Nature. And then there is the more sophisticated but perhaps still rather naïve realism of the quintessential Enlightenment art of scientific illustration: as if one can capture the reality of the thing-in-itself, without being part of a vast encyclopaedic gathering of knowledge that can be used in the colonisation of foreign nations and peoples, and the natural world itself (Miller, 2010).

Figure 3. Tui - example of typical NZ community art

Figure 4. Turtles – early 19th Century scientific illustration. F. E. Guérin- Méneville - Paris, Muséum national d'Histoire naturelle
In the sense of going beyond pure naturalistic representation, then, I would place my work amongst the futurist and surrealist schools. These schools both had their own clearly articulated political, philosophical and artistic programmes, expounded in each case by at least one major manifesto (Breton, 1924; Marinetti, 1909). My work is, similarly, based on an explicit written body of ideas. One work I would count as a significant influence is Umberto Boccioni’s *Unique Forms of Continuity in Space* (Fig. 5), which saliently incorporates elements of Marinetti’s manifesto in the forward-looking mechanical cyborg of the work. Another example is Dali’s *Profile of Time* (Fig. 6), which perhaps examines a linear scientific analysis of Time versus a malleable Bergsonian vision affected by the subjectivity of the individual. Following these schools, I want to claim that my work is most of all conceptual (though of course they didn’t overtly identify as such).

![Figure 5. Unique Forms of Continuity in Space (1913) Umberto Boccioni](image)

![Figure 6. Profile of Time (1984) Salvador Dali](image)

**Duchamp**

Following on in a more explicitly conceptual vein, another great influence is Marcel Duchamp, perhaps the original conceptual artist. Duchamp’s popularisation of the urinal readymade (*Fountain – Fig. 7*) is a pure reification of ideas, addressing, among other things, what authority exactly constitutes art itself — and like my own work, certainly aims to interrogate the doxa at depth, as well as expressing a comic twist. In fact, perhaps for the reason that “Duchamp had introduced into the arts the notion of ‘provoking a meta-narrative’” (Matravers, 2007, p. 30), he is “often taken to be the father of conceptual art” (Kieran, 2007, p. 198).
Duchamp’s work *Étant donnés* (Fig. 8) is also of special significance, not just for the fact that it is a diorama, but rather what I would argue is a “meta-diorama”. It seems to question not only the diorama’s claim to knowledge, but the whole voyeuristic, scopophilic nature of the diorama itself, especially in Duchamp’s overt reference to Corbet’s *The Origin of the World*, which according to the Musee d’Orsay (2019) “still raises the troubling question of voyeurism”. In this regard, Dohm et al. (2018) conclude in relation to this work and its subsequent inspirations that “These considerations are part of a large-scale response to artistic academicism, namely the institutional critique that opposes the moralizing authority of the museums” (p. 2). It is precisely this “moralizing authority” and its cultural products themselves that I would define as doxa, and which, I would argue, lie at the heart of the knowledge/power nexus itself.

![Figure 7. *Fountain*. Marcel Duchamp (1917)](image1)

![Figure 8. *Étant donnés*. Marcel Duchamp (1946-1966)](image2)

*Kosuth*

Another artist of great relevance to my project is Joseph Kosuth. Kosuth was perhaps more explicitly engaged with philosophy than many artists. His work *One and Three Chairs* (Fig. 9) belies this thesis. First of all, being displayed with a dictionary definition of “chair”, it draws our attention to the “linguistic turn” in philosophy, underscored by Kosuth’s (1969) interest in the philosophy of language after Wittgenstein and the evolution of art as a “language” in itself, both before and after Cubism and Duchamp. Indeed, according to Kosuth (1969), “the propositions of art are not factual, but linguistic in character” (p. 10). Further, the photograph of the actual chair brings into question philosophical debates around representation and human sense.
perception and how they relate to “things in themselves”. Kosuth’s invocation of Kant (1969) perhaps points in this direction. The inclusion of the photograph is also reminiscent of Benjamin’s (1935) critique of the mass reproduction of the work of art in industrial society. Thus, the work has many philosophical nuances which I feel are relevant to the inspiration for my project.

![Figure 9. One and Three Chairs. Joseph Kosuth (1965)](image)

**Ai Weiwei**

Weiwei is also of particular inspiration. My ultimate goal is to progress to sculptures of this scale and ideological significance. This work (Fig. 10), I believe, confronts common beliefs about the refugee/migrant crisis in at least two important respects: it stirs us to examine the view, on the part of many in the West, that these unfortunate *journeymen* are attackers or colonisers; and also prompts us to consider our possible dehumanising of them. First, *Law of the Journey* (Fig. 10) portrays the vessel and its occupants as dark attackers in the manner of a navy seal attack craft full of black-clad marines. They are like an invading virus intent on sequestering itself in the body politic and multiplying to cause destruction and sow dissent.

Second, the occupants are portrayed as being extremely homogeneous, even dehumanised. This portrayal confronts our own possible dehumanising of these unfortunates. We see them as a mass of unified purpose and identity, whereas Weiwei is perhaps claiming they are all different, each with their own human narratives and histories of hardship, desperation,
alienation and much more besides. Thus, the work provokes us to critically consider the migrants as real people instead of just the pawns and objects of political ideologues and media pundits. In both these senses, then, Weiwei encourages us to question and refute conventional logic and wisdom, which similarly goes to the quick of the intentions embodied in the sculptures of my project.

Lastly, I would like to cite the work of Aki Inomata, who has recently produced compelling 3D prints inhabitable by hermit crabs. Besides the obvious technology/art/nature nexus embodied in these prints, the inspirations for me are the ideological implications of this work (Fig. 11) and the idea of pushing the function of 3D printing beyond the usual applications such as airplane parts, 3D-printed bones for medical operations, jewellery production, rapid prototyping, and the like. Rather, what inspires me here is the highly imaginative essence of the work.

I feel the work is also relevant to the global housing crisis, particularly acute in New Zealand, and its concomitant homelessness under the neo-liberal regime. Indeed, humans are just like hermit crabs, moving from house to house, apartment to apartment. And just like in the human world, there can be housing shortages in the hermit crab kingdom. A recent web page

![Law of the Journey. Ai Weiwei (2017)](image-url)
notes that “‘There are in fact many marine habitats where it is hard to find an empty shell ... [since] hermit crabs inhabit almost all of them.’ Indeed, it appears that shell availability is an ‘important limiting factor’ for the vagabond crustaceans” (Mancini, 2018). Further, in an ironic natural-world nod to reality TV, or perhaps the politics around housing more generally, hermit crabs may cooperate socially in the eviction of their less powerful competitors from their homes in order to obtain new shells (Sanders, 2012). Perhaps, then, Inomata is making an implicit reference to the possibilities of 3D printing homes in order to solve the housing crisis of late capitalism (see, for example, Biba, 2006). This political depth to her work is also inspirational to me.

![Figure 11. New York City. Aki Inomata (2018)](image)

**Methodology**

The methodology employed for the project is practice-based research. “Stated simply, practice-based research is an original investigation undertaken in order to gain new knowledge, partly by means of practice and the outcomes of that practice” (Candy and Edmonds, 2018, p. 63). Below I will outline the areas and methods used to gain this new knowledge and produce my work.
Text-based research

The largest component of the project has consisted of research into the philosophy of Enlightenment and Counter-Enlightenment. Most helpful has been the Unitec online library, which has allowed me to access a vast array of resources, with its access to many online databases such as JSTOR and Sage, among many others. Online searches in these databases yielded a trove of relevant literature. I have also found the philosophy section in the Unitec and Auckland public libraries helpful. Additionally, I have also purchased a number of relevant books from the “brainy stuff” section of Unity books as well as Bookmark in Devonport and The Open Book in Ponsonby, as well as some e-publications from Amazon.

Software

A significant part of the project also involved finding 3D resources and new software—and developing new skills in using this new software as well as other programmes I was already familiar with. First, I spent about a week looking for, and experimenting with different ways of publishing 3D content on the web, finally settling on Marmoset viewer.

I also spent a good deal of time searching the web for free 3D models I could incorporate into my work. I found a number of websites that enabled me to download so called “base meshes”, basic human figures that could be detailed, posed and clothed.

This posing and clothing also posed a number of problems. I tried rigging figures in 3D Max and also a website called Mixamo, which allows you to upload a human figure and instantly apply poses and animations. I discovered, however, that the easiest and fastest way to pose models was with the ZBrush transpose tools. I followed some online tutorials for these tools and ended up using them to pose most of my human figures.

Clothing the models was also a challenge. I tried Marvelous Designer, a specialist fashion design software package, but found it rather tedious. I also tried cloth simulation in 3D Max, which proved useful at times. However, I again turned to ZBrush, which allows you to mask and extract portions of a model, giving a basic shape which you can then easily manipulate and sculpt into original clothing items. A number of online tutorials were helpful in this respect.

For my final work, Terrain with Narrativising Apparatus, I decided to make a complete digital replica of the physical piece. This involved learning the game development package Unity,
including the C# programming language. I mostly used YouTube tutorials and the online Unity manual for this purpose.

**The 3D Printer**

Managing the 3D printing process myself was probably the greatest challenge, as previously I had only sent out 3D files to be printed by third parties on very advanced wax printers that don’t need supports for overhangs in models. I not only had to research how to generate adequate 3D files for my printer, but had to learn how to best set up the models in relation to these support structures the printer software generates. These supports are often hard to remove, leave a very rough surface, or tear off pieces of the model’s surface during removal. I found it best to set up the models so the support structures are built in places that are less likely to be seen when viewing the finished model.

I also investigated various methods for smoothing the finished models, including acetone treatment, spray painting and sanding. I didn’t like using the highly volatile acetone, and found spray painting blurred the detailed features of the models. Towards the middle of the project, I decided to buy a dremel, which proved fairly successful in refining the rough surfaces where required.

Finally, managing the printer itself was quite a task. It requires constant attention: cleaning, recalibrating, replacing parts as required, troubleshooting malfunctions and failed prints, and so on. The company’s website (XYZ printers) did provide a wealth of troubleshooting videos, though, and there were many online forums discussing my printer which were a big help in this regard.

In conclusion, then, my research has generated much new knowledge in the areas of philosophical discourse around the Enlightenment, software applications and techniques, 3D printing, and 3D printers. The production of a good number of artefacts for my project and the new knowledge gained echoes Candy and Edmond (2018), who claim that “Here, the artifact plays a vital part in the new understandings about practice that arise. Practice and research together operate in such a way as to generate new knowledge that can be shared and scrutinized” (p. 63).
Discussion

In this section, I will follow the trajectory of the project, linking the ideas behind the works to the design, aesthetic and material decisions made and changed along the way. First, the whole body of work aims to mirror the core dialectic by providing the viewer with both a typically scientific/Enlightenment and a Counter-Enlightenment experience. Firstly, the physical presentation of the sculptures is designed to replicate the scientific/scopophilic drilling down to ever smaller levels in order to discover the truth of things in themselves through reductionism.

In the six works presented in drawers, the viewer is “lured” in gradually to each work: first through a partial view from outside through a vertical slit window; next a normal perspective as the viewer removes the drawer and examines the work; then a magnified view with the magnifying glass provided; and finally a highly detailed one through a 10x jeweller’s loupe. Again, this process is designed to represent and highlight the so-called “scopophilic gaze”, the essential apparatus of Enlightenment, with its epistemological prostheses—from the telescope, microscope, and camera, to x-rays, CAT scans and ultimately to the “80 million pixel” (Yuhas, 2010) imaging detectors in the Large Hadron Collider, among other instruments.

I also want to emphasise the concepts of emergence and reductionism. A scientific epistemology often wants to claim that we can understand systems by breaking them down into smaller parts and using knowledge of their functions to understand how they affect higher level patterns and behaviours. Emergence on the other hand implies that although higher level systems emerge from lower level ones, the higher levels have a new internal logic of their own, no longer connected to the underlying structures. In providing viewers with the apparatus to view in extreme detail the 3D printing process, I want them to realise that the printer is simply a dumb procedural bot that knows nothing of what it produces — much as our DNA and cells know nothing of our higher order thinking or the dynamics of social interaction.

On the other hand, the viewer may also access a virtual rendition of each sculpture on its own web page linked from a QR code. The purpose of this version of the work is to emphasise the most salient organon of Counter-Enlightenment thought — that is, relativism, which, according to Sokal and Bricmont (1999), is no more evident today than in the discourses of postmodernism. Indeed, Sokal and Bricmont (1999), staunch defenders of Enlightenment rationality and anti-postmodernist warriors, make a number of interesting observations in this
respect. First, they identify the “general tendency of postmodernism as a school of thought to be the rejection of a comprehensible objective reality and the introduction of relativism into every field of thought and science” (Steinberg, 2000). Thus, in the virtual experience of my works, the viewer can twist and turn the object in order to view it from almost any angle, many a physical impossibility in the real world. Additionally, I have chosen the Marmoset Toolbag 3D web publishing software for presenting the models, as this not only allows for interaction, but provides several different choices for how to view the surface characteristics of the works: normal, albedo, topology, etc. (Fig. 12). Thus, I want to highlight the experience of relativism itself: there is no one truth, or “correct” view, but only a choice between alternative and equally valid ones. Finally, the discussion here relates to why I have chosen 3D design and printing for my project: not only are 3D technologies on the cutting edge of scientific and technological practice, but also provide the opportunity for both a virtual and material experience of the works.

As for the aesthetics of the work, at the outset, I chose a style reminiscent of films such as *THX 1138* (1971) and *A Clockwork Orange* (1971). These films favour a stark aesthetic composed of mostly black and white with little added colour. I felt this minimalistic style lent
itself to the emphasis on pure ideas rather than a focus on realism. For me, the vast white spaces of a film like *THX 1138* embody a kind of conceptual mindscape where ideas can play out in their full force. This was especially relevant to the main thrust of my thesis, and I portrayed this dialectic in the black and white colours of the printed figures, mimicking the countervailing forces being examined. Black could represent power and authority and white the subjectivity of the individual, for example.

![Figure 13. THX 1138. George Lucas (1971)](image1.png)  ![Figure 14. A Clockwork Orange. Stanley Kubrick (1971)](image2.png)

I had originally planned to do about fifteen drawers in this style. However, at a certain stage, I began to find the minimalistic colour space and paucity of materials quite restrictive. Accordingly, I began to tentatively integrate other materials into the works. First I obtained some tiny painted figures and began placing them in the sculptures. This seemed to work well, as it not only added a touch of colour, but introduced a vicarious subjectivity into the sculptures, as if one were looking through the figurines themselves at larger-than-life ideas in physical form. Further, the figures portray everyday “bourgeois” people such as shoppers and businesspeople going about their routine. This played in well with my purposes as it helped to highlight my belief that most people are unaware or don’t care about the colossal history of ideas that has shaped their consciousness.

In one work (*Landscape with Things in Themselves*), I also incorporated some small rocks which tower above they tiny figures. Rocks have special significance here as the work examines the discourse around materiality and Platonic essences. I wanted here to make an allusion to the rock of Plato’s cave, as well as juxtapose this quintessential natural materiality with the plastic of the 3D prints. The rocks are also reminiscent of ancient sites like Stonehenge and therefore highlight how disconnected the modern “bourgeois” figurines are from their primordial and tribal roots.
Later on, I became interested in the development of the map as a representation of Enlightenment thought and practice. This interest was precipitated by my reading of Harvey (1990, Fig. 15), particularly the juxtaposition of a medieval map with an early modern map (p. 243), reproduced below. Harvey (1990) notes how “The tradition of medieval mapping typically emphasizes the sensuous rather than the rational and objective qualities of spatial order” (p. 243). I found this quite striking. Indeed, anyone who has used Google Maps may realise how far mapping and GPS systems have come today. This fact, I believe, belies both the cognitive and literal Cartesian terrain upon which we all walk in the 21st century.

Accordingly, I began to integrate maps into my works, the first being a purely digital piece in which the user directs a philosophical avatar across a terrain map in order to reach “Telelogia”, the hypostasised end goal of human society. Interestingly, much of the coding used to create this work uses Cartesian coordinates to generate spatial effects on the screen, once again underscoring the rational Enlightenment approach to spatialisation discussed by Harvey (1990).

Figure 15. Two maps and commentary from Harvey (1990, p. 243)
Having published the Marmoset-generated versions to the web, I came to feel there was something missing, and that the digital works could be more immersive and interactive. This led me first to create the purely digital piece *Random Walk to Telelogia*. I framed this as a game rather than a presentation per se. I was interested here in Duchamp’s (1961) comments on how the spectator’s interaction completes the work of art. I wanted to run with this concept and have the “spectator” in a sense create something unique and aleatory with each participation. I decided to take this even further by creating a complete interactive digital replica, including a controllable robot brain in *Terrain with Narrativising Apparatus*. Finally, I also wanted to explore the age-old philosophical questions around the ideal/virtual as opposed to the real and material. If Plato’s ideal forms represent the virtual, then my actual printed sculptures represent their crude material instantiations.

**Key Works**

*Navy Seals Assault Can of Worms*

![Figure 16. Navy Seals Assault Can of Worms. Robb Armstrong (2019)](image)
The work consists of a navy seal landing party anchoring on a beach and attacking a large can of German “Counter-Enlightenment” brand worms. This work really sets the terrain on which my whole project is based, casting the Enlightenment/Counter-Enlightenment tension as more than a dialectic but rather as a war. The seals represent to me the embodiment and power dynamic of the rationalist, scientific “military-industrial” complex, while the proverbial “can of worms” is the intractable problem of relativism that Enlightenment universalism inevitably seems always to butt up against. Regarding the navy seals: where else, primarily, have the most significant technologies—atomic power, GPS, radar, the Internet, computers, jet engines, space travel—emerged from but military-based research? The pinnacle of this project today is perhaps DARPA, which is currently working on hyper-advanced robotics and AI, quantum computing, and neurotechnology, among other projects (DARPA, 2019) — all arguably the end result of Enlightenment Cartesianism “emancipat[ing] the mathematical sciences and physics from theology” (Sternhell, 2010, p.10).

In contrast to universal Enlightenment rationalism, on the other hand, Sternhell (2010) believes that

the beginning of the campaign against the Enlightenment … would undoubtedly be the summer of 1774, when the young Herder wrote … Another Philosophy of History for the Formation of Mankind … as a defense against the influence of the French Enlightenment in Germany … (p.10).

In this regard, and in support of Sterhell’s analysis, Kohn (in Wilson, 1973, p. 820) remarks that

the nationalism of the French Revolution … was the triumphant expression of a rational faith in common humanity and liberal progress. The famous slogan of ‘liberty, equality, fraternity’ and the Declaration of the Rights of Man and of the Citizen were thought valid not only for the French people, but for all people. [my italics]

Wilson (1973) further claims that Romantic Nationalism expresses

the idea that each nationality is a distinct organic entity different from all other nations and that the individual can fulfill himself only to the degree that he is true to that national whole of which he is merely a part. … In contradistinction to liberal nationalism, romantic nationalism emphasized passion and instinct instead of reason, national differences instead of common aspirations, and, above all, the building of nations on the traditions and myths of the past—that is, on folklore-instead of on the political realities of the present.
The man most responsible for the creation of this romantic nationalism was the German scholar Johann Gottfried Herder (p. 820).

This historical current, for me, is the beginning of cultural particularism and the preeminent Counter-Enlightenment apparatus of relativism. I feel there is no better symbol of this relativism than a seething, slimy, impossible-to-grasp mass of worms, again a perfect reification of an intractable problem, a product whose origins I have identified here with German philosophical roots. Sternhell (2010) again: “All that is left of the truth is a plurality of national truths…. a relative truth: a French truth and a German truth, a French justice and a German justice…. when all is subjected to a historical, cultural and finally a moral relativism” (p. 313).

**Random Walk to Telelogia**

![Image](image.png)

*Figure 17. Random Walk to Telelogia. Robb Armstrong (2019)*

Habermas (1997) neatly summarises the project of Enlightenment modernity:

> The project of modernity as it was formulated by the philosophers of the Enlightenment … consists in the relentless development of the objectivating sciences, of the universalistic foundations of morality and law, and of autonomous art, all in accord with their own immanent logic (p. 45).

Habermas (1997) continues:
But these almost intangible connections should not mislead us into denouncing the intentions of an intransigent Enlightenment as the monstrous offspring of a ‘terroristic reason’.

I believe that we should learn from the aberrations which have accompanied the project of modernity … rather than abandoning modernity and its project (p. 50-51).

Thus Habermas, against the Foucauldian aporia of the power/knowledge nexus, and the negative telos of Horkheimer and Adorno’s *Dialectic of Enlightenment*, buys into to the wager that Žižek (2012) declares must be taken, the ultimate goal of a “new figure of freedom” (p. 120) that Enlightenment promises. This is essentially the teleological view of history, that reason, freedom, equality, among other virtues, are the historical end goal of the forward-looking, progress-oriented impetus of our species-being. Indeed, although Habermas “is critical of philosophies of history that purport to see in history an immanent teleology … [a] central feature of his theory of social evolution is its assertion of a developmental logic of normative structures, which implies some sort of teleological unfolding of these structures” (Owen, 2002, p. 76).

Whereas Habermas may be somewhat of a crypto-teleologist, Kant, Hegel and Marx are emphatically teleologically oriented. Kant (1784) claims that:

> The history of mankind can be seen, in the large, as the realization of Nature’s secret plan to bring forth a perfectly constituted state as the only condition in which the capacities of mankind can be fully developed, and also bring forth that external relation among states which is perfectly adequate to this end (p. 8).

There seems to be no clearer indication in this quote of the notion of a teleological entelechy inherent in Enlightenment thought. The notion that nature has a secret plan to bring about a political State in which Enlightenment ideals can be fully realised is to me absolutely extraordinary.

Hegel (1837) goes further, apotheosising the entelechy of reason itself as the driving force of human history and its ends:

> The only Thought which Philosophy brings with it to the contemplation of History, is the simple conception of Reason; that Reason is the Sovereign of the World; that the history of the world therefore, presents us with a rational process.
Herein lies perhaps the apex of an Enlightenment teleology of history, that History itself is alive with a species of rational hylozoism that will lead us to a New Jerusalem, a Telelogia where an irrepressible rationality played out through the history of the human species-life itself must lead to the best of all possible States and worlds.

Marx (1848) takes Hegel’s thesis further, but in the service of his own teleology:

What the bourgeoisie therefore produces, above all, are its own gravediggers. Its fall and the victory of the proletariat are equally inevitable. (p. 21)

Communism is … therefore a real phase, necessary for the next period of historical development, in the emancipation and recovery of mankind. (1975, p. 358)

Likewise, then, Marx posits an Enlightenment teleology of freedom, an inevitable unfolding of history towards (in this case) a Communist end through deterministic phases of history. This inevitability is, in my estimation, yet another teleological organon following in the tradition of Kant and Hegel.

Opposed to this directional, progressivist teleological thinking is the notion of the random walk. In contrast to the linear, goal-oriented view of history, is the idea that at any point a random turn might plunge us once again into chaos and irrationality. This is no more evident than in Foucault’s appraisal of the historical process (Best, 1995).

Foucault rejects metanarratives because he believes they rely on … continuist, linear time schemes that posit a rectilinear march toward rationality and autonomy [and] … a teleological logic whereby history moves toward this predetermined goal (p. 230-31).

In my work “Random Walk to Telelogia”, then, I attempt to explicate and involve the viewer in this antithesis between a teleological and random view of history. The participant, if successful, may end up in the New Jerusalem of Telelogia, which is ruled by Saint Francis Fukuyama’s (1992) view that history has ended in the telos of liberal capitalist democracy:

… what I suggested had come to an end was not the occurrence of events, even large and grave events, but History: that is, history understood as a single, coherent, evolutionary process, when taking into account the experience of all peoples in all times (p. xii).
This work consists of a number of sub-projects around which the viewer can drive a remote-controlled brain. This piece addresses a number of questions and theories I have regarding the nature of cognition, Cartesianism, the Enlightenment notion of freedom, political economy, and AI, among others. These are described separately below:

Narrativising Apparatus

*Sometimes I think my brain has a mind of its own*

I am very interested in the theory and philosophy of cognition, mind/body duality, and cognitive idealism, which questions the mind’s ability to cognise reality and “things in themselves”. Questions I have around these ideas include:

1) If the brain/mind evolved as part of nature and reality, why shouldn’t it be able to perceive things as they really are? After all, if we couldn’t perceive reality as it really is, or at least a part of it accurately, would we be alive to even contemplate the question?
2) Would Descartes have revised his thesis that one cannot conceive of “half a mind” (Sorel, 2005, p. 89) if he had lived in the age of the lobotomy?

3) Is the subconscious not simply at its core a narrativising engine, producing explanations to help us navigate the world: myths, scientific discourses, narratives, metanarratives?

Principality of Cogitotemania

*Cult initiates gather around the master*

Was Descartes’ “emancipat[ing] the mathematical sciences and physics from theology” (Sternhell, 2010, p. 10) the decisive breakthrough into the modern? Has Cartesian rationality become our totem? This piece depicts Descartes in this totemic fashion, raising the question of whether Cartesian thought is the pinnacle of human cognition or our greatest shame.

Duchy of New Shamany

*Shaman administers ayahuasca to woman suffering from Cartesianism*

Is the new shamanism an example of what Žižek (2012) critically characterises as “the only way to retain human dignity, [salvaging] religious legacy by way of translating it into a modern idiom” (p. 119)? If Enlightenment means the “extirpation of animism” (Horkheimer and Adorno, 2002, p. 2), does the new shamanism mean to achieve the extirpation of the Cartesian subject? Is it even possible for one born into Cartesianism to eradicate it from the soul, or is it, rather, like a metastasised cancer, spread inexorably throughout one’s DNA?

Failed State of Nietzschenstein

*Freddy pulls over into the nervous breakdown lane*

I’ve always been fascinated with Nietzsche’s breakdown. Was it purely the result of syphilis, or did his nihilism and intensity of philosophical thought contribute to it? If it was the former, what does this say about Barthe’s (1967) “Death of the Author”? How should we look at Nietzsche’s oeuvre...
in this light? Was it Nietzsche writing, or, at some stage, the syphilis itself?

**Liberal Republic of Hiddenhandistan**
*Hayek’s Revenge*

Has Adam Smith’s hidden hand-market-knows-best philosophy been overplayed by neo-liberal ideologues in the service of financialisation as Foroohar (2016) claims? Or can Hayek’s (1944) central thesis — the spawn of Enlightenment concerns around individual freedom — that it is better to be ruled over by anonymous market forces than any State or individual actors, ever be taken seriously (p. 21)?

**Realm of Turingia**
*Turing gives himself Turing test*

The thoughts and work of Turing seem more relevant than ever, with extensive concerns around AI and Big Data. Moreover, what about the suicide apple? Was Turing leaving a last cryptic clue? From the poison fruit of the tree of the knowledge of good and evil to (hero of Enlightenment) Newton’s apple, has the gnostic search for salvation and emancipation through the pursuit of knowledge been nothing but a poison chalice (Gray, 2015)?

**Mt. Pseudoscientifica**
*Intrepid punters scale the Althusserian face*

Did Freud discover the Oedipus complex or cause it? Was his method really scientific or simply a form of hermeneutics? Did Marx discover a scientific principle in history — that of inevitable revolution, or did he rather simply instigate the revolution, a dangerous self-fulfilling prophecy? And what of Althusser? Did a life caught between Freud and Marx drive him to psychosis?

** Territory of Aporiaville**
*Also known as Panopticonia*

Is the current reign of Big Data and the neoliberal techno-elite really the aporia that philosophers like Byung-Chul Han (2017), following in the tradition of Horkheimer and Adorno (2002), expound? Or with Negri and Hardt (2018), can we nevertheless hope that the multitude can “harness these powers for projects of
“liberation” (p. 221). Or, perhaps the open prison of the digital panopticon is the true “end of history”, and the digital subject the real “last man”.

[8780 words]
References


[Manifesto] Retrieved March 16, 2019 from [link redacted]


Appendix A — Other works and exegeses

*Brain in Jar Surveilled by CCTV*

Besides the obvious references to Cartesian mind/body dualism, Putman’s famous thought experiment, and *The Matrix*-inspired “Am I living in an AI induced simulation?”, this work is rather focussed on the mind/power/technology nexus. Above all, it addresses the perceived disaster of the emancipatory project of Enlightenment through science and technology.

Regarding this teleology, Horkheimer and Adorno (2002) quote Bacon: “The ‘true end, scope or office of knowledge’ [exists] ‘in effecting and working, and in discovery of particulars not revealed before, for the better endowment and help of man’s life’ [my italics]” (p. 2). However, foreshadowing Foucault, the above authors (2002) conclude that “Power and knowledge are synonymous” and the technology/knowledge nexus “aims to produce neither concepts nor images, nor the joy of understanding, but method, exploitation of the labor of others … capital” (p. 2).

The irony exposed here is that the entelechy of the mind/technology symbiosis has not lead to, in Žižek’s (2012) phrase, “a new figure of freedom” (p. 120), but conversely a new figure of slavery: if nature wants to know itself through the evolution of the human mind, and the
mind itself works towards a (arguably Heideggerian) teleology of knowing itself through technology, it has only succeeded in enchaining itself.

Massively distributed CCTV and drone-based surveillance networks with advanced AI and facial/gait recognition technologies steadily advance and encroach upon our privacy and freedom in the guise of greater public security, but are really serving the colluding state-cum-private masters of this technology in the interests of Capital. The NSA techno-dragnet scoops up data in the yottabytes from Google and the like (Zetter, 2013). There is perhaps no clearer expression of this train of thought today than Byung-Chul Han’s (2017) *Psychopolitics: Neoliberalism and New Technologies of Power*:

Freedom will prove to have been merely an interlude. Freedom is felt when passing from one way of living to another — until this too turns out to be a form of coercion. Then, liberation gives way to renewed subjugation. Such is the destiny of the subject; .... (p. 9)

Digital surveillance ... is aperspectival .... it can peer into the human soul itself. (p. 50)

Big data has announced the end of the person who possesses free will. (p. 17)

Following Han (2017), then, contemporary technology has not enhanced, but rather erased “the self as an autonomous subject … rooted in the Enlightenment” (Foucault, 1984, p. 40). Again: “Every road from Rousseau leads to Sade (Paglia, 1990, p. 14)”.
This work is a reification of Barthes’ “Death of the Author” (1967), which announced a critical turn from structuralism to post-structuralism. I would argue that structuralism was a species of Enlightenment positivism and that Barthes’ essay signifies the linguistic turn in the humanities away from Saussurean positivist analysis towards a pure hermeneutics. Whereas traditional literary criticism might look for signs of the author’s intentions based on their life history, and structuralism might look to recover a system of differentiated signs akin to phonemic analysis in linguistics to reveal the positivity of the author’s message in a text or film, this new method would seek to characterise the text as a channelling of language itself through the author, with only the language games interior to the text itself available for interpretation — according to Barthes (1967):

> literature is precisely the invention of [a] voice, to which we cannot assign a specific origin: literature is that neuter, that composite, that oblique into which every subject escapes, the trap where all identity is lost, beginning with the very identity of the body that writes (p. 1).
… for Mallarme, as for us, it is language which speaks, not the author: to write is to reach, through a preexisting impersonality … that point where language alone acts, “performs,” and not “oneself”…. (p. 2)

The author is a modern figure, produced no doubt by our society insofar as, at the end of the middle ages, with English empiricism, French rationalism and the personal faith of the Reformation, it discovered the prestige of the individual…. (p. 1)

Thus Barthes ties the notion of the author to the rational, emancipated bourgeois individual of the Enlightenment. By seeking to extirpate this subjectivity, I would argue, he takes a clearly anti-Enlightenment position. This position, I would further claim, results in a relativism homologous to that of Romantic Nationalism discussed above. Just as there is no one universal truth applicable to all nations, so there is now no definitive interpretation of the text: there are as many truths as readers. In this sense, as portrayed by Barthes, and in my work here, the author has become like the figure of the grim reaper, no more than a hypostatisation of an abstract concept. Also, ironically here for Barthes hypothesis, however, is that death (beside birth) is certainly the one incontrovertible universal in human experience.

Motorcycle Cops Escort Zeno’s Paradox

Figure 29. Motorcycle Cops Escort Zeno’s Paradox. Robb Armstrong (2019)
This work interrogates the putative hegemony of Enlightenment mathematical thought. The work depicts a motorcade, with two motorcycle cops, symbols of coercive state power, protecting the paradox, an early precursor to Enlightenment mathematics and its dispersion throughout the world.

First of all, how is Zeno’s paradox of Achilles and the Tortoise (one among other of his paradoxes) related to Enlightenment mathematics? Wilczek (2015) makes this connection clear, quoting Russel: “After 2000 years of continual refutation, [Zeno’s] sophisms were reinstated, and made the foundation of a mathematical renaissance” (p. 59). Wilczek (2015), goes on to note that “Indeed a proper physical answer to Zeno only emerged with Newton’s mechanics and the mathematics it embodies …” (p. 59). As discussed above, according to Isiah Berlin, Newtonian thought was one of the lynchpins of Enlightenment inspiration, leading in its train the likes of Maxwell, Gödel and Einstein, among many others. Thus, a writer like Wilczek (2015) can claim that “the equations nature likes to use in her fundamental laws have enormous amounts of symmetry” (p. 136), and Bertrand Russel (in Wilczek, 2015) can likewise state that “Mathematics, rightly viewed, possesses not only truth but supreme beauty” (p. 189). In light of this kind of apotheotic thinking, I want to argue that mathematics has become today the royal road to positivist truth, and according to a scientistic view, in fact constitutes reality itself.

On the other hand, various commentators aim to attenuate this epistemological hegemony. Guattari (1995), for example, writes that “The moment mathematical Universes started to appear, it is no longer possible to act as though the abstract machines which support them had not always existed everywhere and for all time and as though they do not project themselves onto future possibles” (p. 27). Whereas mathematics may be seen as existing in a neutral, Platonic and acultural realm, projecting its poiesis eternally through time and materiality, Guattari implies that it is really a human creation retroactively applied to our understanding of the universe through scientific discourse.

In an even more explicit attack on Western mathematics, Bishop (1992) insists that Western “Mathematical ideas, like any other ideas, are humanly constructed. They have a cultural history”, and constitute “The Secret Weapon of Cultural Imperialism” (p. 71-72). According to Bishop (1992), the imposition of colonial power through mathematics was employed against indigenous cultures by “three major mediating agents in the process of cultural invasion of colonised countries … : trade, administration and education. … In particular the
numbers and computations necessary for keeping track of large numbers of people and commodities would have necessitated western numerical procedures being used in most cases” (p. 73). A similar argument is proposed by Rotman (1993), who argues, in a postmodern vein, that mathematics is a language like any other and because it is embedded in culture, cannot be considered universal. Rotman’s and Bishop’s analyses, then, represent a classic Counter-Enlightenment narrative, conceiving of mathematics as an effect of Foucauldian power — culturally specific, non-universal and hegemonic.

Landscape with Things in Themselves

This work deals with the scientific, Enlightenment concern with discovering the “true” essence of “things in themselves”, and the Counter-Enlightenment, postmodern contention that there are no true essences of things. The geometric objects are the Platonic solids with copies of themselves inside, referring to Plato’s notion that materiality reflects only a partial, imperfect copy of ideal
objects that exist in a transcendental realm and are at the true heart of all reality. The small rocks are intended as slivers of the original Platonic cave where humans (embodied in the tiny bourgeois homunculi in the work) can perceive imperfect material instantiations of these ideal forms.

Nobel prize-winning physicist Frank Wilczek (2015), for example, makes explicit the project of science in uncovering these “true” essences: “Along the outward [scientific] path, we engage appearances critically, and try to strip them of complications, to find their hidden essence. This is the way of science and physics” (p. 62). Wilczek (2015) ties this project to the Enlightenment teleology of progress, improvement, and liberation of humankind: “The outward path does in fact lead to liberation” (p. 62), and “Can we understand the human mind molecule by molecule, and systematically improve it?” (p. 277). Another Enlightenment end Wilczek (2015) alludes to in relation to the scientific project of uncovering true essences of things is the control over nature (discussed above in relation to Horkheimer and Adorno’s *Dialectic of Enlightenment*): “a theory’s ability to predict new phenomena [gives] us power over nature” (p. 318). Thus, Wilczek, a scientist at the forefront of human explorations of “reality”, baldly articulates classic Enlightenment conceits in regard to this discussion.

Further, this fetishisation of the essence appears not just in the hard sciences, but also in the humanities. One highly contested area of particular relevance here is the study of history, which traditionally sees “time [as] nothing but an accidental veneer to be peeled away in order to find the essences and identities that abide throughout the flux of history” (Best, 1995, p. 110). Keith Windshuttle (1994) articulates and echoes these sentiments exactly in his defence of traditional historiography, citing the benefits of a positivist, Enlightenment method in uncovering historical truth: positivism “supported and justified the scientific method that rose to prominence in the Enlightenment. This scientific method, based on drawing conclusions from empirical observation and experiment, provided the apparatus for all our subsequent knowledge of the physical and biological worlds and has been the engine of [our] industrial and technological societies … ” (p. 187).

It is perhaps no surprise, then, that Windshuttle reserves special bile for Foucault, and this surely relates to the discourse around truth and essences in Foucault’s oeuvre: For example, I believe an important aspect of Foucault’s project, as summed up by Best (1995), is that “Part of his objection to the hermeneutical dimension of … thought [is] that [it] seeks to grasp forces
constituting the appearance of reality. For Foucault, hermeneutics belongs to an antiquated Renaissance epistemology and is bound up with an essentialism that seeks the underlying essences of reality” (p. 106). Jay’s (1984) analysis of postmodernism in reference to Foucault reiterates Best’s thesis: Foucault expresses a “disdain for essential levels of reality beneath apparent ones” (p. 522). Perhaps this is why Windshuttle (1994) scathingly paraphrases Foucault, and postmodernists in general, as declaring that traditional historians “are only deluding themselves if they think that when they undertake research and write about society they are engaged in the pursuit of truth and knowledge” (p. 8).

Harvey (1990) is another writer who detects and examines this current of thought in postmodernism. He quotes Eagleton, who notes that postmodernism is characterized by “contrived depthlessness” (p. 7), a purposive extirpation of any essential and abiding human subjectivity. Relevantly here, Harvey (1990) also examines Cindy Sherman’s creative practice, characterising it as quintessentially postmodern, noting that she wants to claim that there are only masks, masks that conceal or erase the notion of an essential subjective human identity (p. 101). This all plays into Foucault’s (1994) notion of the “Death of Man”: there is no essential human essence, rather that essence is being erased like a face in the sand by the oncoming rush of the tide (p. 387).
This work examines the fight back against the behemoth of the Enlightenment application of instrumental reason and its project of the “extirpation of animism” (Horkheimer and Adorno, 2002, p. 1). Harvey (1990) echoes this thesis, claiming that Enlightenment was “above all a secular movement that sought the demystification and desacrilization of knowledge and social organisation in order to liberate human beings from their chains” (p. 13, my italics). Further, in one of Marxism’s overtly Enlightenment components, “Mythology is, in short, a humanly constructed, intermediate, and historically determined link, which disappears when human beings acquire the capacity to make their history according to conscious choice and design” (Raphael, quoted in Harvey, 1990, p. 110). This view is alive and thriving today. Windshuttle (1994), for example, claims that the Enlightenment “has freed our culture from the shackles of superstition, mysticism and quackery” (p. 187). This discourse spills over into the political realm, with Don Brash, declaring: “Most Māori have benefited enormously from colonisation…. Let’s face it, pre-1840 Māori were cannibals. They had no written language, they had not invented the wheel, they were a primitive, stone-age society” (Moses, 2018).
Thus, according to such Enlightenment-related claims, tribal, shamanistic indigenous societies represent a backward, primitive stage in human development towards rational universal principles. Best (1995) summarises these views succinctly in his analysis of Enlightenment teleology:

… the structure of human time is unified and continuous; different cultures and nations ultimately belong to one and the same historical process …. The continuity of time is governed by a purpose, by a teleological movement where human beings advance from a state of potentiality to a state of actuality. History is seen to be the process of the civilization and education of the human species, of the realization of universal norms such as freedom, equality, reason (p. 4).

Under this regime of Enlightenment hubris, those who are without Western rationality are not full human beings—they are merely as “apes” in an evolutionary progression on their way to gaining human ontological status. In my work, the aircraft carrier, based on photos of the USS Ronald Reagan, is named “HMS Hubris” in reference to this view.

In reaction to the perceived loss of a more vital, mythological, even spiritual dimension to life at the hands of Enlightenment rationality, with its concomitant “extirpation of animism” and desacrilization, many today are seeking to “resacrilize” and decolonise in order to gain a more authentic element to life, or reassert the relevance of their indigenous roots. This is evident not just in the resurgent interest in, and aspirations of, indigenous cultures, but among academics as well. Best (1995), for example, highlights how “postmodern theorists reject the devaluation of premodern cultures … sometimes [evincing] nostalgia for past eras uncorrupted by instrumental reason” (p. 23). In this vein, John Gray (2015), an eminent critic of the Enlightenment, declares: “Less perceptive than the shaman, those who aim to fashion a higher humanity with the aid of science think they are bringing purpose into the drift of matter…. The modern scientific shaman and a new human species are both of them dreams” (p. 44). This view is strongly indicative of the turn towards, and revalidation of, mythological thought.

Finally, again, the Enlightenment project has not led to freedom from “chains” and “shackles”, but new forms of subjugation. As Gray (2015) notes “… the Panopticon is an example of the cult of reason in action” (p. 124). In this regard, in the New Zealand context, in 2012, Stats NZ indicates that 51% of prisoners were Maori, whereas they made up only 15% of the population (Stats NZ, 2015). Most ironically, according to World Prison Brief, the United
States, the country perhaps most explicitly founded on Enlightenment principles, maintains the highest incarceration rate in the world. It’s no wonder, then, that some may see the results of the Enlightenment project as no more than a stupendous train wreck. Gray (2015) again: “What Leopardi called ‘the barbarism of reason’—the project of remaking the world on a more rational model—was the militant evangelism of Christianity in a more dangerous form” (p. 32-33).

\[\text{Bounce-back Zarathustra by Brand Nietzsche Inc.}\]

In this work I want to link Nietzsche’s \textit{Ubermensch} or Overman with branding. The philosophy or teaching of the Overman is first promulgated by Zarathustra, after coming down from his isolation on the mountain, in the town’s marketplace (Sedgwick, 2009, p. 110). This, I believe, cast’s the Overman’s teaching in the form of a product, available among consumers in the economic hub of the town. What exactly is this teaching? According to Sedgwick (2009), “The Overman exemplifies the self-possession, autonomy and uniqueness of the sovereign individual in a modernity dominated by the impersonal forces of mass production and consumption” (p. 111). Thus, the Overman presents a vision of the individual who defines his own path, his own
set of unique values, his own \textit{brand} if you will, apart from and in contradistinction to the herd, the culture of mindless consumerism and mass philistinism. Thus, in a bourgeois, post-aristocratic, post-French revolutionary, and burgeoning industrial-capitalist age where God is dead, and one’s identity is no longer defined by Estate, heredity, religious belief or function, or guild, one can only bounce back (and herein is the title of this work inspired) by following the Overman’s teaching and creating one’s own unique “brand” — or perhaps, ironically, by \textit{not} following the Overman, since that would be to fall into the same trap of letting others dictate your identity (Sedgwick, 2009, p. 112).

This connection with branding may seem overcooked, but Nietzsche has in fact inspired branding theorists to a great extent. Launching off from the discourse around values, Braun (2004) claims that “For Nietzsche the solution was obvious. Either we find a way of making existing values relevant to the current situation – or we invent new ones. New values would serve us better overall” (p. 133). What branders have taken from this, according to Braun (2004), is that “Nietzsche’s point can be expressed in the following terms: brands will need to stand for values that truly reflect the way we are…. Brands are, after all, largely about communities of interest – ie values – and … what people are buying into is membership of one of these communities (or ‘clubs’)” (p. 134). Thus, personal alignment with a particular brand is part today of how many have come to identify themselves. This fact is saliently exposed in the documentary series \textit{The Century of the Self} (Curtis, 2002), which highlights how marketing gurus, advertising, and brands have stimulated and tapped into the need of consumers to identify themselves through the brands they purchase, supposedly creating a unique personality by combining brand adherence in unique ways. The most successful brands, Braun (2004) concludes, are actually \textit{ubermensch} in themselves, with their own unique values and will to power (p. 135-137).

The sad irony, of course, is that the nexus of the contemporary marketplace, identity, and branding is likely totally antithetical to the philosophy that Nietzsche expounded through \textit{Zarathustra}. 
While Foucault may have been canonised by the “super-chic academic crowd that fell for deconstruction” (Kimball, 1993), he has also had a wide array of criticism levelled against him. Thus, while Foucault may be the Golden Child of post-structuralism to some, he also serves as the pre-eminent whipping boy for contemporary Enlightenment commentators. Kimball (1993) echoes and enumerates these criticisms in detail, describing how Foucault exhibited flawed historical research and poor prose; held a dubious attitude to Truth; was a poor imitator of Nietzsche; was a crypto-conservative and a dandy; was a deviant in the disguise of a philosopher; may have intentionally spread HIV in the search for a murder/sex “limit experience”; a sexist and Machiavellian politician in the academic context; was arrogant and obfuscating in his life and writing …. The list goes on.

This work, accordingly, depicts Foucault as Saint Sebastian in glitter paint, playing on the theme of Foucault as Golden Boy and criticisms of Foucault’s supposed addiction to sadomasochistic practices (Kimball, 1993) as well as his erstwhile canonisation (Kimball, 1993; Miller, 1994). The viewer is invited to vicariously join in on Foucault’s long list of criticisms by sticking a pin into the 3D printed model.
Home Homunculus Kit

Let the semen of a man putrefy by itself in a sealed cucurbite [glass vessel] with the highest putrefaction of the venter equinus [horse manure] for 40 days, or until it begins at last to live, move, and be agitated, which can easily be seen. After this time it will be in some degree like a human being, but, nevertheless, transparent and without body. If now, after this, it be every day nourished and fed cautiously and prudently with the arcanum of human blood, and kept for 40 weeks in the perpetual and equal heat of a venter equinus, it becomes, thenceforth, a true and living infant, having all the members of a child that is born from a woman, but much smaller. This we call a homunculus; and it should be afterwards educated with the greatest care and zeal, until it grows up and begins to display intelligence.

This mode of alchemical thinking may be laughable to us today, and it seems to have died out along with the rise of Enlightenment. Or has it? According to John Gray (2015), the perception of Enlightenment as a vast movement of secularisation is an illusion. According to Gray (2015), Enlightenment is not a turning away from religion, but rather a move away from Christianity...
towards Gnosticism, which espouses the notion that greater and greater knowledge of the universe and humankind will lead ultimately to our salvation. Gray (2015) further argues that the far-reaching modern-day obsession with AI and the creation of a human-like robot is the modern, gnostic version of the homunculus. Thus, Gray (2015) sees the Enlightenment not as a rupture with the past, but as a continuation in modified form.

I’m not sure whether I agree with Gray or not, but I do find this whole line of argument absolutely fascinating. And so I decided to create this work, *Home Homunculus Kit*, in appreciation of Gray’s hypothesis, and in an effort to further explore it. For example, might this be the kind of product for sale at, say, The Warehouse, if capitalism had arisen without the concomitant rise of Enlightenment rationality?