AI and Anthropology: A Path away from Disenchantment and towards Re-enchantment Harry Collins, 2022

Dissertation submitted as partial requirement for the degree of MRes in Theology at the University of Nottingham.

Abstract

This dissertation endeavours to dismantle the idea that Artificial Intelligence is a threat to our anthropology. Arguing, instead, that any such threat is a product of two main conceptual stances that we term 'Gnosticism' - a stance that entails a negative view of matter, and 'Pelagianism', a metrics-based criterion of importance. Both are argued to be erroneous when understood through the idea of the *Imago Dei* as our proper anthropology. Negative inferences that are thought to follow from A.I, are exposed as lacking all analytical motivation, doing so because they are ungrounded, indeed fallacious. To the contrary, A.I can be interpreted positively in relation to human flourishing, properly construed, intimating possible modes of re-enchantment.

Contents

Introduction – p.4

Chapter 1: Artificial Intelligence - A New Disenchantment or A New Re-enchantment? – p.7

Chapter 2: Dismantling the Pelagianist View – p.22

Chapter 3: Dismantling the Gnostic View – p.35

Chapter 4: A Reflection From the Imago Dei – p.42

Chapter 5: Fake and Potential Issues of Technology – p.59

Conclusion – p.77

Introduction

First, AI cannot, on pain of logical contradiction, offer any threat to Christian anthropology, as it cannot be. But it, like Metzinger, is a threat to 'humanist anthropologies' ideas that encapsulate the human as grounded on a purely material base. The idea that it can amounts only to a sociological, cultural, or psychological disclosure of ideology, most likely that of Late Capitalism, rather than any theological or metaphysical argument, which it is decidedly not; again, because it cannot qualify as one. Put another way, any threat that AI poses is one of diagnosis, or exposure, and not causation, which is impossible. Why? Simply put, if Christian anthropology was ever true, it is always so, being a state of being (a natural kind, so to speak) and not a state of affairs: material, political, psychological, sociological, or whichever other register may prove relevant.

One need only ask the question; how AI could cause any change in an anthropologicalcum-metaphysical principle? All that AI can do is contribute to an argument that Christian anthropology was never true, exposing the emperor as having *always* been naked, and in so doing it is but an historical variant of arguments for disenchantment that have long been in fashion. Yet, despite any contribution, it adds nothing to the principled argument for or against the veracity of this anthropology, namely, the *imago Dei*.

The appearance of any such argument stems, I argue, from two prevailing logics, which I name Pelagian and Gnostic. These are umbrella terms, and not precise historical categories; though there is a family resemblance with past heretical groups, schools of thought, or stances. Pelagian and Gnosticism are employed to signal two hermeneutics

employed to interpret the significance of AI. The former being a performance-based metric: *you do better, you are better*, whilst the latter entails the veneration of the immaterial, and the denigration of the material: That which is good floats free of vulgar, indeed evil, materiality, escaping embodiment. Culturally, both these may carry weight, again in other registers, but fail on all counts theologically. For example, regarding a performance-based metric, according to which AI offers a threat, but for Christian anthropology this is risible, as angels -supra cognitive beings - have always outperformed humans. Yet in so doing they do not carry the day, theologically speaking, as humans will judge the angels at the end of time, and more crucially, God did not become an angel, but a human. As for Gnosticism, and it worship of the immaterial, so to speak, here too, this misses its mark, being irrelevant to Christian anthropology. For, as said, God became human, undergoing the birth, life, and death of a mammal. From Ash Wednesday wherein all are reminded that from dust them came and to dust they shall return, to the Eucharist in which recipients are fed God's body and blood. Hardly a veneration of the immaterial, and a denigration of embodiment.

To repeat, AI cannot threaten Christian anthropology, this is impossible, except as one more contribution of disenchantment, which to be true, must already be the case. That is, it may be the case that Christian anthropology is wrong, but in so being, it has always been erroneous – AI does not change anything. Hence, again, it is a matter *of revealing, not causing*. Regarding the latter, AI does offer a threat to humans in terms of ethical questions, stemming from material arrangements, just as the Industrial Revolution did – same threat, different label. But these are second order questions and are thus derivative. Quite plainly, for AI to threaten harm, there must be *someone* to be harmed, thus the anthropology is a necessary condition, without which there is no one to hurt. Put another way, the very harm AI might cause, reveals that AI is parasitic on a pre-existing

anthropology, without which there is only hand waving. By contrast, what is a threat, is the arguments that contribute to philosopher of mind, Thomas Metzinger's view when informing is that no one has ever had a self, that there never has been a self.¹ This stance is a threat, not specially to Christianity, but, rather, to anthropology *tout court*.

Given that the above is demonstrable, we must then examine AI as a threat, not anthropologically but sociologically and economically for example. We must examine how we use these new instruments we have created to benefit humans rather than harm them. AI is a fruit of our anthropology if anything, a creation that comes from our altriciality: Our antenatal, and especially, and species specific, post-partum zoological vulnerability that gives rise to massive neurological development affording us the ability to write King Lear, invent mathematics, get us to the Moon, and invent AI. We will use AI to make up for our lack of natural defences and capabilities like we have done with so many other tools in the past. Therefore, I argue we must totally resist arguing for or against any negative anthropological claims, as that is to indulge in futile misdirection, and realise that the issues are societal, and not metaphysical or theological, thus such concerns are fittingly delegated to the sociological, psychological, economic, and political registers, the effects of which, to be noticed, require that, ontologically, the human remains and is subjected, for good or bad, to any perturbations.

¹ Thomas Metzinger, *Being No One: The Self-Model Theory of Subjectivity* (Massachusetts: MIT Press, 2003), 1.

Chapter 1: Artificial Intelligence - A New Disenchantment or A New Re-enchantment?

AI development - A brief history and potential future

To understand why such fears are prominent in the modern world it is important to examine the history of AI, particularly what was hoped to be achieved during the early stages of its development. Although nearly omnipresent in the average person's daily life, AI is not really acknowledged by its users, other than perhaps unconsciously when it brings an added ease to our lives (e.g., by giving us the news on our phones). AI is the branch of computer science that deals with the simulation of intelligent-like behaviours in computers such as recognition and translation activities for examples.² John McCarthy first coined the phrase Artificial Intelligence at the 1956 Dartmouth conference, the event often regarded as the start of AI as a research discipline.³ AI can also be generally split into the two categories of weak AI and strong AI. Weak AI is the majority (if not all) of AI machines. These provide algorithms and narrow specific results through very clever and impressive coding, yet there is no 'actual' human intelligence to such systems. However, in the case of strong AI, a threat to our anthropology begins to emerge. Strong AI are machines that do in fact share consciousness and intelligence like that of a human being, which understandably some are fearful about. Indeed, strong AI raises many questions not just from an anthropological viewpoint, but also from ethical and economical perspectives too. However, this strong AI is very much still a science fiction dream in our modern age, though it is not to say this may be the case forever; as the

² Arthur Herman, "Who Will Control the Machines?," *Commentary*, Accessed April 15th, 2022, https://www.commentary.org/articles/arthur-herman/age-of-ai-kissinger-schmidt-huttenlocher/

³ James Moor, "The Dartmouth College Artificial Intelligence Conference: The Next Fifty Years," *AI Magazine 27,* No.4 (2006), 87 -91.

father of AI, Alan Turing, quotes: "We can only see a short distance ahead, but we can see plenty there that needs to be done."⁴

Alan Turing was one of the earliest scientists of AI and in his 1950's work Computing Machinery and Intelligence Turing argued that if one day a human could have a conversation with a machine, we should regard that machine with the ability to think. In his paper, Turing offers a scenario which he calls 'the imitation game", now better known as the Turing Test.⁵ In this test there are three participants consisting of an AI (A), a human (B) and a human judge (C). The aim of the game is for (A) to have written answers indistinguishable from (B) when (C) gives both of them the written question. If (C) cannot tell which participant is the man and which one is the AI then the AI wins, thus surely there is an argument to be made that the machine is in fact intelligent, however it should be mentioned that no AI has passed yet. Nevertheless, it is impressive that Turing's vision of intelligent machines sparked such large developments with AI. This was because of Turing's focus on the concept of the brain and trying to apply machines to performing tasks such as games, language learning, translations and mathematics for example.⁶ These aspirations turned out to be what occupied AI development and research for the next two decades. Despite the Turing Test remaining unsolved, imperfect participants in this game are still widely used in everyday life. An equivalent to the AI participant of the Turing Test for the average person would be that of SIRI, the built in AI of Apple smart phones.

⁴ Alan, Turing, "Computing Machinery and Intelligence." *Mind 59*, No. 236 (1950), 433-460. ⁵ Ibid, 433.

⁶ Pamela McCorduck, *Machines who Think – A personal Inquiry into the History and Prospects of Artificial Intelligence* (Massachusetts: A K Peters, Ltd, 2004), 69.

As mentioned before, the 1956 Dartmouth conference was the first big step into creating AI as an official research discipline, however instead of creating a general theory for AI, it created a shared vision that computers could indeed perform intelligent tasks.⁷ The four main contributors to the 1956 conference were John McCarthy, Marvin Minsky, Claude Shannon and Nathanial Rochester, who all discussed various topics in the field of research.⁸ Following this, another Dartmouth Conference proceeded in 2006, with another to happen 50 years later in 2056. The purpose of each conference is to assess how AI has progressed and where AI is heading.⁹ The 2006 conference discussed how AI and robotics were used in numerous sectors, with David Rus arguing that the future may entail us all having our own personal robotic aids.¹⁰ The conference also allowed predictions of human level AI, or superintelligence, with varied opinions. McCarthy reasoned that it was likely by 2056 but not assured, while Ray Kurzwell argued that it would appear as early as 2031.¹¹ Though this essay will focus primarily on supposed anthropological issues AI presently brings, it is also important to outline the potential of AI in our future.

Presently, AI has been equipped with machine learning, deep learning, image recognition and so on, so that it can continuously develop. The result of these advancements leads to what is known as superintelligence. Nick Bostrom defines superintelligence as "Any intellect that greatly exceeds the cognitive performance of humans in virtually all domains of interest."¹² Many respected members of the AI community such as Tegmark and Bostrom worry about the possibilities of superintelligence and its potential

⁷ Moor, "The Dartmouth College," 87.

⁸ McCorduck, *Machines who Think*, 111.

⁹ Moor, "The Dartmouth College," 87.

¹⁰ Ibid, 88.

¹¹ Ibid, 90 – 91.

¹² Nick Bostrom, *Super Intelligence – Paths, Dangers, Strategies* (Oxford: Oxford Press, 2014), 410.

consequences for the world when combined with an autonomous system (AI that act differently depending on their situation). It does not take much imagination to indulge in a fabricated world where an AI has the trait of the previously described superintelligence and how this could affect humanity. In *Life 3.0* Tegmark begins his book by outlining a fictional what-if scenario of an AI development company called 'The Omega Team''. The team create the world's first AI superintelligence called 'Prometheus' which is constantly developing and adapting itself so that The Omega Team becomes the sole ruler of our planet.¹³ Omega Team and Prometheus manage to bring about world peace with all roots to prior conflicts dismantled, the result being an Earth that was to flourish throughout the universe.

Of course, there is also reason to believe that such a powerful instrument could simultaneously be the downfall of humanity. Something as seemingly simple as a superintelligence whose only role was to create paperclips could be the catalyst for our planet to be reduced to ruins.¹⁴ This paperclip AI may begin to turn all material on the planet into paperclips, resulting in a dystopian world that resembles the storage cupboard of an office. Even certain restrictions such as "only use the given materials" or "only create X many number of paperclips a day" would be inefficient guidelines for an AI of such powerful magnitude. Self-preservation might be one of the designed innate traits for the AI, and if we ordered it to pursue its goal of making paperclips using X material in X quantities like we envisioned it, it may conclude that it will achieve its goal more efficiently if it eradicates any potential human beings that could shut the AI down.¹⁵ The importance of outlining these scenarios is to highlight the potential of AI, be it good or

¹³ Max Tegmark, *Life 3.0: Being Human in the Age of Artificial Intelligence* (London: Allen Lane, 2017), 3 – 21.

¹⁴ Bostrom, *Super Intelligence*, 150.

¹⁵ Tegmark, *Life 3.0*, 265.

bad, in order to demonstrate the value of research and evaluation towards methods of AI goal alignment. It is important that these autonomous systems follow goals closely aligned to our own.

Arthur Herman argues that the real break through with superintelligence will come when operators finally understand how they may install their own general intuitive sense into these AI's.¹⁶ However, nobody has figured out how to do this and there is no indication right now that anyone ever will. So whilst the realities of these scenarios are admittedly not imminent, it is nonetheless vital that such issues are addressed. By doing so we will prepare ourselves for if and when AI scenarios like the one above become more than hypothetical. Indeed, as AI becomes more impressive, so will its blunders; just because something is powerful, does not automatically mean it is intelligent. Following this, the scepticism that powerful AI will never be achieved at such a level is betting against human ingenuity, a bet we lose time and time again. Physicists established in the early 1930's that extracting atomic energy was impossible, with added certainty from the father of nuclear energy, Ernest Rutherford.¹⁷ Three years after this claim, Leo Szilard disproved this notion following his invention of the neutron-induced nuclear chain reaction.¹⁸

This kind of situation is worrying, but these sorts of hypothetical issues based around the ethics and the abilities of AI need to be questioned. However to do so, we must diminish arguments that need not be mentioned in the future. The goal of this thesis is to show that arguments of AI as a threat to our anthropology is a misplaced fear and should not

¹⁶ Herman, "Who Will Control the Machines," 47.

¹⁷ Stuart Russell, *Human Compatible, A.I and the Problem of Control* (London: Allen Lane, 2019), 150.
¹⁸ Ibid. 150.

be a primary focus in the field. Now that AI application has been touched upon, we will now focus on the area of disenchantment and how AI perhaps plays a role.

Disenchantment - Our Corroded World

The idea of *Entzauberung der Welt* (Disenchantment of the world) was popularised by Max Weber in 1918 in his work *The Vocation Lecture* and was used to describe a world where technical means and calculations are the sole motive force for explaining the conditions of our existence.¹⁹ Additionally, disenchantment can be explained as the appearance of the cruel rational world and the dismissal of all things mystical, namely religion. For this section we will focus marginally on the examples of disenchantment on religion and our anthropology. AI could be identified as the next chapter of humanity's disenchantment as we will now explore.

To show how AI may warrant this fear, let us account the example of an AI beating South Koreas world champion 'GO' player Lee Sedol in 2016.²⁰ GO in an extremely simple term is a bigger game of chess, with 10^7 possible layouts to chess' 10^{50} . The AI named AlphaGO, created by the company known as DeepMind, uses a database consisting of over 30 million moves made by expert players. It then challenges different versions of itself to create a 'value' network that conditions which moves in which scenarios are the best to do using what is known as the 'Monte Carlo tree search' to see the most potential outcomes of moves, right up until the end of the game.²¹ AlphaGO managed to beat Sedol 4 – 1, just after Sedol predicted he would win 5 – 0. AlphaGO's incredible technical side is not the only advantage it had against Sedol; AlphaGO of

¹⁹ Max Weber, *The Vocation Lectures*, (Translated by Rodney Livingstone, Indianapolis: Hackett Pub, 2004).

 ²⁰ NewScientist, *Machines That Think*, (London: John Murray Learning, 2017), 71.
 ²¹ Ibid, 74.

course shows no emotion, no tells and has no bodily features. Consequently, Sedol was already at a disadvantage being unable to use any of his psychological strengths like he had done with human opponents.²² It came as a shock to the people of South Korea who saw the loss of their champion at the country's most culturally significant game as a danger.²³ The fear came from how well AlphaGO played, demonstrating that a machine could seemingly surpass intuition, creativity and communication. In fact, for Koreans it sparked a phobia that AI would destroy human history and culture. It is not spectacular for a human to lose any logical task to an AI; an AI is not only going to be quicker due to having the functionality of all logical systems built in but also it's free from human limitations such as reaction time, and overconfidence. This is one of the initial fears cast upon our anthropology, this being a pelagianist fear of performance. This idea leads us to question our significance in the world, that though we are the most capable species now, we could lose such a title in the future if AI starts to outperform us. We will evaluate the persuasiveness of this primarily in chapter two. For now, we are just exploring the different examples of disenchantment, as we will now account for previous attacks on our anthropology.

Disenchantment has been a significant factor for humans as early as 1543, where Copernicus reintroduced the discovery that the Earth orbited the Sun rather than the other way around. This new heliocentric model of the Solar System was seen as an attack on the significance of our species – if we were not at the centre of the Solar System then we were not special. This led to the Copernican Revolution where more and more discoveries attributed and reinforced this heliocentric worldview, destroying our previous geocentric model and making people question the cosmology of their time and their

²² Ibid, 75-6.

²³ Ibid, 72.

place in the universe.²⁴ However this cosmological vulnerability, the notion that we were not seeing the beauty in nature anymore, that it was becoming all meaningless as are we, was seen to be fully realised with Charles Darwin's work *On the Origin of Species by Means of Natural Selection*.

Darwin's evolutionary theory may be classed as the highest form of disenchantment, seemingly eradicating any stories of creation and therefore a personal relationship with our God. Darwin's theory also seemed to be 'looking through' a Malthusian lens, which is the idea that population increases faster than a means of substance, based on Thomas Malthus' work *An Essay on the Principle of Population*. Darwin offers a great summary that encapsulates our feeling of disenchantment: "We forget that the birds which are idly singing round us mostly live on insects or seeds, and are thus constantly destroying life."²⁵ Darwin continues to mention that other animals will also destroy those bird eggs and nests, referencing the food chain. This leads us to recognising our world as not controlled by a great being where angels and devils fight, but a world where it is eat or be eaten – we are nothing but flesh and blood.²⁶ Daniel Dennett shows how Darwin's idea of evolution has led to what he calls a 'universal acid.' However, unbeknownst to Dennett, it was already articulated by John Dewey's remake of Darwin's theory of evolution being the "great dissolvent."²⁷ The universal acid theory eats and dissolves all our understanding, spreading to our cosmology and authorship over our own divine

²⁴ John Gurmin, "A Study of the Development and Significance of the Idea of the 'Image of God' from its Origins in Genesis through its Historical-Philosophical Interpretations to Contemporary Concerns in Science and Phenomenology," PhD diss., (Maynooth University, 2010).

²⁵ Charles Darwin, *The Origin of Species by Means of Natural Selection* (New York: D. Appleton and Company, 1859), 62.

²⁶ Conor Cunningham, *Darwin's Pious Idea: Why the Ultra-Darwinists and Creationists Both Get it Wrong* (Michigan: WM. B. Eerdmans Publishing Co, 2010), 4.

²⁷ John Dewey, *The Influence of Darwin on Philosophy and Other Essays* (New York: H. Holt and Co., 1910), 19.

spark, creativity and mind.²⁸ The additional aspect of AI seemingly fits comfortably with Herbert Spencer's famous phrase 'survival of the fittest,' (one adopted by Darwin for the 2nd edition of *Origins*) though this should rather be understood as "fitter" as nothing is truly understood to be so definite as "fittest."

Additionally, Michel Henry speaks about the disenchantment of our world, but specifically using the term 'barbarism'. He defines this as the reverse of culture, describing practices of barbarism as "all the modes of life in which life is carried out in a crude, coarse and rudimentary way."²⁹ Henry argues that our modern technology is the new barbarism of our time, finding it to be the most extreme and inhumane form we have ever known.³⁰ A frequent argument Henry raises is to do with humanity's constant ambition for progress and practicality. The progress he takes issue with is technological progress that is no longer a service for an end, but now just an end in and of itself, seemingly destroying any sense of sensibility in life.³¹ Henry reasons that in sensibility everything is connected in unity, but now this is being affected by the barbarism of science.³² Following this claim, he gives an example of an old 6th century fortress in Eleusis, Greece.³³ Above this beautiful piece of architecture and history are power lines that sprawl across the building, that in the mind of the engineers, was the most practical and efficient location for their purpose. For Henry, this is but one of countless examples of barbarism ravaging sensibility.

²⁸ Daniel Dennett, *Darwin's Dangerous Idea, Evolution and the meanings of life* (London: Penguin Group, 1995), 63.

²⁹ Michel Henry, *Barbarism* (Translated by Scott Davidson, London: Continuum International Publishing Group, 2012), 95.

³⁰ Ibid, 52.

³¹ Ibid, 43.

³² Ibid, 27.

³³ Ibid, 27.

We can see in these examples that our world is already obliterated by the conditions of disenchantment, and that we can just treat AI as an addition to our already disenchanted world as perspective reduction to all previous topics of disenchantment. Surely the improbable result of an all-powerful AI is nothing compared to the realisation that we are just evolved primates who hold no origin to a divine presence like God, let alone a personal relationship with Him in a world that holds any kind of sensibility for us anymore. AI is not an issue in our Cotard's syndrome world, the feeling of already being dead, that we have always been deflated and under constant deflation. Thomas Metzinger already argued that "Nobody ever was or had a self"³⁴ so what harm could AI possibly have at this point, as such a quote implies Docetism, in that we only seem (dokein) to be human, therefore, there's no anthropology to be threatened, as there is no Anthropos, already. The next part of this chapter will focus on two main aspects of AI disenchantment, generated by two 'heretical' stances: Pelagianism and Gnosticism - a performance-based metric, as criterion of importance, and a negative view of matter, respectively. For now, we will explore an introduction into these two arguments and why they are both misplaced fears that hold little weight in the big picture of AI.

I – AI as an act of disenchantment is nothing but historical fashion, mirroring previous examples that have had a much more significant impact.

A Glimpse of Re-Enchantment

Previously we mentioned superintelligence as a potential threat to our anthropology. The way this AI superintelligence may come about is by an "Intelligence Explosion," which can be defined as "A hypothesised event in which an AI rapidly improves from "relatively modest" to a radically superhuman level of intelligence."³⁵ AI scientists mostly

³⁴ Metzinger, *Being No One.*

³⁵ Russell, *Human Compatible*, 150.

agree that this Intelligence Explosion is indeed inevitable and possible, however the time in which it could happen is completely unknown. As a prediction, respected individuals on the topic of superintelligence estimate that this phenomenon could happen as early as a hundred years or conversely take in excess of a thousand years.³⁶ What is considered certain is the development of technology from the 1900's to 2020 has been following "Moore's Law," an empirical observation that the number of components on a chip doubles every two years, though this is set to end sometime in the 2020's.³⁷ This will of course pave way for new methods of improving technology, but the clear observation is that there have been vast innovations in technology over the last twenty years. Our standards for what is impressive in our societies rapidly keeps adapting to the ever developing advances being made.³⁸ Our involvement and acceptance of AI is now pretty much unconscious to the average person, with algorithms technically influencing us on what we watch (YouTube), what we buy (Amazon), where we go (Google Maps) and even to some degree, who we eventually love (Tinder).

We can outline a possible future where through an Intelligence Explosion: AI gains the trait of superintelligence and eradicates human autonomy, outperforming us in almost every way while also being unconfined by a material casing. So, if we understand the argument from a Pelagianism perspective of performance and the Gnostic disdain for material bodies, humanity is in great danger. But perhaps this is not the case, as another outlook may be that we have essentially already lost our autonomy and AI has won. Indeed, it is arguable that our autonomy is already terrible if we are using AI to dictate how we live our lives, may this be by letting it choose our route to work or being provided with potential partners on dating apps. This follows neatly from Henry's views

³⁶ Tegmark, *Life 3.0*, 40-42.

³⁷ Russell, *Human Compatible*, 34.

³⁸ Bostrom, *Super Intelligence*, 14.

of the barbarism of science, how this new technology is affecting human sensibility. Although his gripe was mainly with that of the television, I am sure Henry would observe the examples above and see AI as barbarism's newest tool. However, it is not AI's fault for how we act; naturally humans have poor autonomy and we can see this in human culture. For example, the average person follows a routine every day for work: following specific times of waking up, taking the same route to work, working a specific number of hours and then to go home and spend their leisure time as they usually do and then sleep at a coordinated time. Usually, no matter how free willed we are, we follow a light predetermined path in our lives due to the consequences and factors we have to abide by in society.

As mentioned before, AI cannot hold a candle to the discovery of how little we actually are in the context of our universe. So keeping this in mind, it seems that the issue of AI is no bigger than any of the other issues raised by disenchantment, perhaps arguably even smaller than previous difficulties. We are living in a post Feuerbach world, where Christian theology has been stated as our anthropology. In *The Essence of Christianity*, Feuerbach reconciles the two as the same entity, arguing that "Christianity is the relation of man to himself or more correctly to his own nature."³⁹ This is what is known as the 'Projection Theory' – the claim that theological truths are actually that of an anthropological basis. The predicates that we apply to God are actually predicates that humans themselves wish to achieve, essentially using God as a manifestation of the perfection of humanity. Feuerbach reasons this is an occurrence that has transpired throughout history, comparing our reflection onto the Judeo-Christian God with that of the Greeks reflecting onto the Homeric Gods. These Gods where physically fit and ate and drank regularly, this is because the Greeks regarded these attributes in society as

³⁹ Ludwig Feuerbach, *The Essence of Christianity* (New York: Prometheus Books, 1989), 14.

good and pleasurable and so would be inclined to worship Gods that withheld these traits.⁴⁰

Following Feuerbach's projection theory, we can once again see how disenchanted our world, especially for Christians, has become. AI cannot affect our *Anthropos* because it is already seemingly dead; the Gnostic and Pelagianist ideas relating to AI hold no weight when damaging our anthropology if this is to be taken as true. What AI may still impact is our societal issues.

Max Weber talks about the idea of the '*stahlhartes Gehäusein*' (The Iron Cage) in his work, *Protestant ethic and the spirit of Capitalism.* This 'cage' represents the binds placed upon people in our modern organisations that focus on the principle of efficiency, rationality and control. Individuals are then conditioned to act in certain ways and to mold their thoughts into believing this is the only beneficial strategy to build our society. The iron cage not only describes the shackles we bare in a job we dislike but have to do, it also emphasises the idea that work becomes so rational that we feel eventually no enjoyment and no pride in what we do. Weber describes such a fate as the "Specialists without spirit, sensualists without heart."⁴¹ Weber also notes that "No one knows who will live in this cage in the future" and I would like to believe that this will not be the case for the majority of humans thanks to the genius of AI.

Perhaps technology does not have to lead us further into Barbarism as we previously discussed, but actually break us out of the 'Iron Cage'. There may be a future where AI becomes so well equipped that it surpasses most human feats, as we previously

⁴⁰ Ibid, 21.

⁴¹ Max Weber, Protestant ethic and the spirit of Capitalism (New York: Charles Scribner & Sons, 1958), 182.

discussed, and takes over all the menial and monotonous work we do today. Following this, we could advance our society through the use of a 'Universal Basic Income' (UBI) and allow humanity to focus on the arts, philosophy and other passions more frequently, regaining our sensibility and improving our damaged anthropology. This will only be achieved through the use of ethical and concise planning towards this future, which need be achieved through the use of good interdisciplinary action, a topic we will discuss later on.

So while our world may seem disenchanted and AI will most definitely change our lifestyles as it already has done, I do believe that the future we proceed into has the potential to be great. The Christian *Anthropos*, despite its challenges, still holds together as we will explore in the final chapter about the *'Imago Dei.*' But for now we will account for John Kilner's thoughts on the image of God and what it means for humanity to understand and better itself. To be in the image of God is to exemplify, and thereby embody, irreducibly, both dignity and sacredness.⁴² Kilner goes on to state that the Church should lead as a focal voice as the inspiration for humanity's future, to champion the image of God and help resolve any new ethical dilemmas.⁴³ I wholeheartedly agree; the Church should aid in the advancement of our future and help keep science on course for advancements to humanity that are ethical and focus on promoting human dignity and liberation.

For me, AI is the perfect tool to achieve such a future. It has near unlimited capabilities if developed fully and could offer a brand-new societal framework that puts the good of humanity and our planet first. Through the next few chapters this thesis will further

 ⁴² John Kilner, *Dignity and destiny, humanity in the Image of God* (Michigan: Wm. B. Eerdmans Publishing Co., 2015), 327.
 ⁴³ Ibid. 330.

challenge the argument that AI is a threat to our anthropology. AI, with the disenchantment fear dismantled and the real dangers understood, can be humanity's greatest achievement and the real step forward to regaining our sensibility. Pamela McCorduck acknowledged complaints about AI may diminish our sense of self, but argued that it's the complete opposite. Regarding AI, she goes on to say "The efforts of the last 20 years... should inspire in us nothing less than awe at the potent elegance of the human brain."⁴⁴

II - So though we have argued that this "threat" towards our anthropology is redundant already, I wish to totally deflate any thoughts on the matter by attacking contentions that could potentially be set out by Pelagianist and Gnostic schools of thought.

⁴⁴ McCorduck, *Machines who Think*, 118.

Chapter 2 – Dismantling the Pelagianist view

An Introduction Toward Pelagianist and Gnostic Views

We touched on the matter that the Pelagianist and Gnostic views involving AI hold little relevance when scaled next to the other examples in history that display our world as disenchanted. I want to show that AI does not play a role in this scenario and that it can in fact be a method of re-enchantment. But first, we must eradicate the arguments that stem from the roots of Pelagianist and Gnostic thought. The Pelagianist view is based on performance, due to the flawed ideology that salvation depends on the strength of the individual.⁴⁵ The challenge AI brings is that these highly capable machines will perhaps outperform us in most walks of life, seemingly deflating human purpose. The Gnostic view can be understood as a presumption to liberate humanity's physical form from the material universe.⁴⁶ This dangerous method of thinking leads to a belief that AI will be far superior to us, as matter does not restrict AI, at least when compared to humanity. The two follow into the idea that in the future, AI may outclass humanity and become the primary species. Through this chapter I will give a multitude of reasons of why such a view is misguided, primarily using the Bible as the focus of my counter argument.

Christ and Angels - A Biblical Counter

So, humanity's centrality in the universe has always been under threat ever since the rise of disenchantment; may it be the Copernican Revolution, evolution and the theory of our origins, or the now apparent modern threat of AI consuming us. Even our very own

⁴⁵ Reinhard Hütter, "The Wisdom of the Cross Is the Wisdom of Charity: Thomas Aquinas's Soteriology—an Anticipatory Refutation of Neo-Pelagianism and Neo-Gnosticism." *Nova et vetera* 19, no. 1 (2021): 135-161.

⁴⁶ Hütter, "The Wisdom of the Cross, "137.

concept of "world" was changed by post-Galilean Physics.⁴⁷ This is due to many philosophers theorising what our world was. For example, Descartes argued it was in contrast with chaos and Leibniz suggested the notion of many possible worlds, both leading to extremely early confusion and doubt of our perfectly centred significance. "That which is done is what will be done, And there is nothing new under the sun," (Ecclesiastes 1:9) holds truth even now. Indeed, this 'new' threat of a more important being has already been feared over in the medieval era, the fear being that of angels supra cognitive beings.⁴⁸

Angels, in medieval understanding, was the biblical term for the hierarchy of supernal intelligences connected with the celestial spheres.⁴⁹ This all stems from the *'Scala Naturae'* (The Great Chain of Being), a hierarchal view of existence which positions the Divine at the top followed by angels, then by more physical creatures in descending order of importance; humanity, animals, plants and finally minerals. With our ultimate goal being closer to God, it would seem reasonable to fear that angelic beings are more important than us, due to them being connected closer to God on the chain. Upon reflection, they are superior to humans and are free from physical bodies just as God is.

This previous issue with angels is analogous with our "issue" with AI who are also superior and free from the physical. But then if we accept that God values the angels more than us, then why did He not come down to our world in an angelic body and instead approach us as Jesus Christ, a regular finite man who is susceptible to sin? This action surely speaks volumes for the relationship between God and man. In dying on the

⁴⁷ Remi Brague, "The Wisdom of the World, The Human Experience of the Universe in Western Thought" (Chicago, University of Chicago Press, 2003), 188.

⁴⁸ Here and all following Biblical references are taken from KJV.

⁴⁹ Alexander Altmann, "Homo Imago Dei" in Jewish and Christian Theology," *The Journal of Religion* 48, no.3 (1968), 235 – 259.

cross God saves all of his creation from sin; humiliatingly He dies on display to everyone, with his arms outstretched, symbolising the unification of all people within his death and his true connection to man.⁵⁰ Psalm 24:7 reads: "Lift up your heads, O ye gates; and be ye lift up, ye everlasting doors; and the King of glory shall come in." This verse explains the process of Jesus dying on the cross so that the gates of heavens open up for humanity; Jesus's death was our path to heaven.⁵¹ The fundamental mistake Pelagians make is evaporating the necessity of Christ as a saviour when concerning Christian anthropology.⁵² Instead they argue that Christ sacrifice liberates a scapegoat mechanism for humans, creating the ideology of individual strength.⁵³

Saint Athanasius also argues that angels could not have been the saviours of humanity, or appeared as human, because they are not the images of God.⁵⁴ Athanasius continues by giving an analogy of a painter's canvas. He reasons that when an artist's painting that he adores is damaged through external stains, the artist does not throw away the painting, he works and mends said painting to fix the canvas.⁵⁵ This analogy highlights the relationship between God and man; we are seen as the most important part of His creation due to our *Imago Dei* and God even sacrifices Himself in order to remedy us from the unnatural traits of death and corruption. Interestingly, theologians such as Saint Athanasius and Saint Anselm see death as completely unnatural to our human nature, and argue that the resurrection of Christ saves us from this condition. Saint Anselm sees mortality as a result of our corruption and rejects mortality as an essential attribute of

⁵⁰ Saint Athanasius, *On The Incarnation, De Incarnatione Verbi Dei* (Poland: CreateSpace Publishing, 2017), 38.

⁵¹ Ibid, 39.

⁵² Stuart Squires, "The Reception of Pelagianism in Contemporary Scholarship," *Annales theologici 35*, no.1 (2021), 135 – 152.

⁵³ Hütter, The Wisdom of the Cross, 137.

⁵⁴ Saint Athanasius, *On The Incarnation*, 25.

⁵⁵ Ibid, 25.

human nature because if this was the case, the immortal God could not of become man.⁵⁶ Saint Athanasius reasons that all the Disciples of Christ despised death and that before the divine sojourn of the saviour, all men were afraid of death.⁵⁷ However, after Christ arose from the grave, everyone became equipped with the knowledge that death was not the final act of human life, you do not perish and instead rise towards heaven and so death lost all its terror. To quote Corinthians 15:55, "O death, where is they sting? O grave, where is thy victory?" So, through the resurrection of Christ, God obliterates the biggest fear of man, the fear of death.

From this we can recognise that no matter the "superiority" of humans, we will always be the most unique and important part of God's creation, and that through understanding the *Imago Dei* we can see the unification between God and man. We may understand the relationship between God and man and why we are closer to Him than Angels are with an analogy that rings true for our modern world. It is common knowledge that a Ferrari Supercar is faster, stylish, more comfortable, hygienic, more technologically advanced and overall out classes public transport motors such as the bus. But then, if given the choice, the average person would rather have the bus still exist over the Ferrari due to practicality, efficiency and cost. Hence, something "better" does not necessarily mean superior, a point we will touch on in the next section with AI.

Risen Christ is the point of reference for the proper understanding of the human being that despite our weakness and mortality we are something significant in the world and that human beings will always remain as a central icon.⁵⁸ We can see this in Mark 16:6 when the women enters Christ's tomb, they are told, "Don't be alarmed... You are

⁵⁶ Saint Anselm, *Cur Deus Homo* (Texas: RDMC Publishing, 2005), 101.

⁵⁷ Saint Athanasius, *On The Incarnation*, 41.

⁵⁸ Antje Jackelèn, "The image of God as Techno Sapiens," *Zygon 37*, no.2 (2002), 289-302.

looking for Jesus of Nazareth who was crucified." Even after resurrecting, Christ is being referred to by his human name and with reference to geographical locations, not a member of Heaven. When Jesus is seen, he still bares his wounds and is seen eating, with no real fanfare or shining entrance. This reinforces the importance of normalcy in humans, that even after death, Jesus is still just that, a human. Although humans are lower in regards to the great chain of being, it will be humans who judge the angels as told by Paul in 1 Corinthians 6:3. Our relationship with God is a clear indicator for the significance humanity holds and this will be explored further in the final chapter of the thesis. For now, we will continue the argument following from this idea of 'significance,' and what it means within the topic of AI.

III – A performance-based threat to our anthropology is theologically flawed due to God not becoming an angel, but human. Our anthropology holds regardless if angels or AI out performs us.

The Power of Human Uniqueness

We briefly mentioned the power AI is capable of, giving an example of Deepmind's AlphaGO and how its actions shocked South Korea that an AI could outplay their best champion. This is but one of many examples of AI outperforming humans at tasks that we deemed unique to ourselves. This has been the case since 1996, where the AI Deep Blue was created by IBM to be on par at the game of chess, to that of a grandmaster. This resulted in the defeat of chess champion Gary Kasparov the following year.⁵⁹ The point being that, AI can indeed outperform humanity at a range of topics, and whilst this may show AI superiority, it does not undermine humanities uniqueness.

⁵⁹ Nigel Cameron, *The Robots Are Coming: Us, Them & God* (London: CARE, 2017), 38.

AI is more functionally superior to us in many ways, but to then take this to mean AI is more significant than man is simply wrong. This is just a categorical failure; though AI outclasses us in factual intelligence and overall efficiency, it fails to defeat us on a wide array of categories such as intuition, imagination, interaction and so on. You would not reason that a cockroach is superior to a human just because a cockroach has a better chance of surviving a nuclear explosion. As humans, we cannot naturally fly, or breath underwater, our strength is pitiful compared to other animals and we have no real offensive or defensive capabilities. However it is due to our unique traits of intelligence and intuition that separate us from the rest of creation and AI today. To use Deep Blue as an example, its computer program could put values on specific objectives in the game such as pieces and spaces, but it could not put values on the overall structure of a position with the same uncanny insight provided by human experience.⁶⁰ Another huge unique point of humanity is our consciousness and for the sake of simplicity I will be taking a pragmatic approach adopted by David Levy and regard consciousness in the general understanding of "being aware of the world."⁶¹

Although AI can learn from experience, as explored with AlphaGO, its entire structure is still just based on algorithms designed to fit certain tasks. The brain should be described as a mediating organism, developing itself through structures of lived experiences that are all inherently mental.⁶² These include logical, temporal, symbolic and other patterns that are all produced by organism-environment experiences, which are then ingrained into microstructures of our brain creating neural networks that allow us to make meaningful

⁶⁰ Alex Hankey, "Kasparov Versus Deep Blue: An Illustration of the Lucas Gödelian Argument," *Cosmos and History: The Journal of Natural and Social Philosophy 17*, No. 3 (2021), 60 – 67.

⁶¹ Elisabeth Hildt, "Artificial Intelligence: Does Consciousness Matter?" *Frontiers in Psychology 10*, No. 1535. (2019), 1-3.

 ⁶² Thomas Fuchs, "The Brain – A Mediating Organ." *Journal of Consciousness Studies* 18, No. 7–8.
 (2011), 196–221.

decisions in life.⁶³ This flexibility we have over AI due to our consciousness is most certainly one of our greatest strengths over machines. Logically we may falter, but cognitively we excel, and we can use an analogy regarding Deep Blue as an example. Deep Blue may have been built and succeeded in defeating Gary Kasparov at chess, but to build an AI that could identify Kasparov at a party and then invite him to participate in a game of chess is a whole other complicated matter for AI development.⁶⁴ This is because AI struggles so much with concepts that are so simple to us, like movement and perception. We take simple things like this for granted; walking down stairs actually requires huge amounts of complex processes from our brain in order to carry the action out.⁶⁵

In regards to perception, we can identify an object as a cup, even if it has a peculiarity such as a crack or an odd shape. But for an AI, this is a huge struggle to overcome.⁶⁶ This is because of the issue of object recognition in AI systems, as they try to match the pixels of a stored image of a cup with the pixels of the newest perception of cup.⁶⁷ Again, while simple to us, this completely baffles AI as it tries to use its logical algorithms to identify the object to no avail. It is important to reiterate how impressive our unconscious mental states are.

Though we take them for granted, the examples above demonstrate that no matter how basic to us, these mental processes are much too complicated for feebler intelligence to

⁶³ Ibid, 197

⁶⁴ Andrew Smart, *Beyond Zero and One: Machines, Psychedelics and Consciousness* (London: OR Books, 2015), 211.
⁶⁵ Ibid, 51.
⁶⁶ Ibid, 52.
⁶⁷ Ibid, 179.

even begin to apprehend.⁶⁸ The mental feats that some humans have accomplished that we regard as impressive are almost trivial compared to our everyday capacities.⁶⁹

Another act we may disregard but shows our complexity is our use of language. Human communication is known as 'hierarchical syntax' that allows us to have the capacity to generate such complex sentences as we know some words have a 'hierarchy' within them in certain sentences.⁷⁰ This is performed via a "Merge," this being two or more syntactic elements combined into a larger hierarchy structure.⁷¹ For example, "How many cars did you tell your friends that they should tell their friends that they should tell the mechanic to fix?" We know there is a connection between fix and car rather than fix and friend or mechanic because we know that fix and car are at the same level of the sentence's hierarchy. No other species holds this level of communication; AI lacks this hierarchy structure and any creativity within language.

The use of scripting is the main issue within AI's ability to try and match human language. An AI sticks strictly according to its scripting, the code that runs the machines program. Human beings rely and use what is known as 'Conceptual integration' or the 'Blend.'⁷² The blend can be described as the new space we create from two separate input mental states, the two projecting or 'blending' them together.⁷³ This enables us to use language such as "getting ahead of yourself" as we create a blend between ourselves in the present and ourselves in the future to project meaning and analysis into the current situation.

 ⁶⁸ Gilles Fauconnier and Mark Turner, *The way we think: conceptual blending and the mind's hidden complexities* (New York: Basic Books, 2010), 33.
 ⁶⁹ Ibid. 33.

⁷⁰ Robert C, Berwick and Noam Chomsky. *Why Only Us* (Massachusetts: The MIT Press, 2015), 8.

⁷¹ Berwick, Chomsky. *Why Only Us*, 10.

⁷² Fauconnier, *The way we think*, 47.

⁷³ Ibid, 47.

What is really incredible is how early humans gain these types of complex conceptual systems, with children no later than 18 months being able to clearly construct double-scope integrations.⁷⁴ Double-scope integration is two different organising frames in input spaces, with the blended space containing parts of each of those two frames from within both input spaces.⁷⁵ An example being, "computer virus." One input is organised by the frame of an engineered material product, computer. The other input organised by the frame, biological virus.⁷⁶ It is extraordinary that our species is able to understand this kind of framework of blending so young, but it goes to show the complexity of our consciousness. Through our consciousness we are able to reflect and act upon the information we receive, and this ability to consciously choose how to act is what makes our species so unique. Additionally, our consciousness does not operate solely in response to the environment like other animals; we anticipate the environment and the limits it presents to us.⁷⁷

But let us try and imagine that there was an AI that really seemed to match our consciousness in seemingly everyway, this would still not cause issues in terms of uniqueness. Thomas Nagal's work *What is it like to be a bat* brings up an interesting point: despite knowing the majority if not all the workings of a bat, we will never understand the true feeling of being a bat. Nagal argues that different types of consciousness have subjective experiences.⁷⁸ Surely even if AI gained consciousness, without just mimicking or implementation by a developer, then it would surely be different to our own consciousness, much like how a bat is different to ours. So there is no threat to our

⁷⁴ Ibid, 215.

⁷⁵ Ibid, 255.

⁷⁶ Ibid, 274.

⁷⁷ Smart, *Beyond Zero and One*, 147.

⁷⁸ Thomas Nagal, "What Is It Like To Be a Bat." *The Philosophical Review 83*, No.4 (1974), 435-50.

anthropology because our consciousness is always going to be unique. Our uniqueness just comes from us being human.

As well as our unique consciousness, regardless whether or not our abilities will compare to that of future AI, just having the ability to realise our comparison is still extremely unique. Besides, this begs the idea of categorical failure; just because something outclasses us in an area, it doesn't mean it falters our uniqueness. Pascal's explanation of man as a "Thinking Reed' gives an example of how our own thoughts confirm our significance. He argues "Man is but a reed, weakest in nature, but a reed which thinks."⁷⁹ We are not perfect and see ourselves as insignificant, but just having our own thoughts and consciousness, even if it realising we are insignificant, highlights our autonomy giving us significance. David Hume argued that a human life is no greater importance to the universe than an oyster's.⁸⁰ Well of course this is true, in the grand scheme of things, everything is insignificant, if put into true scale, even our planet. However, just knowing that we are indeed an insignificant spec in the universe gives us a great deal of significance, with Pascal concluding "The whole dignity of man lies in thought," alluding to the previously mentioned uniqueness of our consciousness.⁸¹ Our own thoughts can never be truly mimicked; we will always be unique with our own consciousness.

Though I have argued for the uniqueness held through human consciousness and our abilities that we can outclass AI on, I think it is important to present why we hold these factors so dear. I would argue that human normalcy is our greatest strength when displaying what it means to be human. Lionel Messi is arguably one of the greatest

⁷⁹ Blaise Pascal, "The Thoughts of Blaise Pascal," Online Library of Liberty, Accessed August 30th, 2021, <u>https://oll.libertyfund.org/titles/pascal-the-thoughts-of-blaise-pascal</u>

⁸⁰ David Hume, "Of suicide," *Hume Texts Online*, Accessed May 13th, 2022, https://davidhume.org/texts/su/

⁸¹ Pascal, "The Thoughts of Blaise Pascal,"

football players in the world, but if it were revealed that his incredible skills came from his boots and not the hundreds of hours he spends training, then it would be a betrayal to all his fans. We adore these individuals who excel in their fields because they're impressive but still like us. This is because the exceptional can only be done by the unexceptional. Similarly when we find out athletes have taken performance-enhancing drugs, the devastation comes from that this person did not break limitation, they cheated limitation. I believe that more people would be impressed if a child chess prodigy defeated the current world champion, than if an AI defeated the champion. Our normalcy is what makes us exceptional; AI should not diminish our anthropology because it does not define our own limitations.

Our creation of AI and its capabilities should be seen as an accomplishment via our ingenuity, intellect and nature. AI again should not be seen as a threat our anthropology but used as a way to accomplish bigger stretches of our limitations and go beyond said limitations. AI and future machinery should be properly utilised so that we may improve humanity for all, something that will be touched upon later. For now, we will conclude the debate on this purely performance Pelagianist mind-set, arguing that it also leads into a dangerous method of thinking, deflating the point further.

IV – If anything AI is a fruit of our anthropology being a creation that comes from our altriciality. To compare ourselves to AI performance wise is just to commit category mistake.

The Sad Issue of Human Ingenuity

An issue with this Pelagianist and also Gnostic methods of thought is the dangers of these thought processes slipping into Utilitarian reductionism. The evaluation due to performance is unreasonable as we have explained throughout this chapter, but it is obscene to apply this on a human-to-human evaluation too.

The criterion is faulty because performance is not what we value most in life; we abide by a set of moral codes first. If we were to argue that AI was more significant due to its performance over us then we should, by reason, argue that we kill all humans who cannot perform the average activities in life. This method of thinking is dangerously on the cusp of eugenics, the practice of engineering humanities species through selective breeding. The Nazi party held this philosophy, with Hitler writing in *Mein Kampf* that weaker members of society needed to be cleansed from the strong.⁸² Hitler held the idea that the stronger members of society were "images of the Lord."⁸³ This type of performance-based thinking is morally corrupt and deflates the position further, but there is an additional point to be made about the corruption humans can infect ideas with.

Through this essay I have so far argued that the application of AI, along with being no threat anthropologically, needs to follow a path towards prosperity for humanity's future. There is always an unwavering fear of what could go wrong with AI if used immorally and the *Imago Dei* has fallen victim to this as well. In the past, people have taken "significance" as the primary attribute of humanity in regards to the *Imago Dei*; the same performance motif we have been debating against within the discussion of AI.⁸⁴ This has lead to corrupted views involving the *Imago Dei*, twisting it to promote colonisation by

⁸² Adolf Hitler, *Mein Kampf* (Boston: Houghton Mifflin, 1999).

⁸³ Kilner, *Dignity and destiny*, 20.

⁸⁴ Ibid, 18.

arguing that other races are not in the image of God as they are different from the colonisers.⁸⁵

Another example is how our "Regency" over Earth was only meant to mean that our job was to protect and serve the planet. Humans are called into participation in His creative work, maintaining and developing the Earth to form civilisations but also to enact environmental upkeep.⁸⁶ But following from the 18th Century it began to corrode into an excuse for exploiting the Earth.⁸⁷ These kinds of manipulation of the understanding of God's image are disheartening, especially when compared to the good the concept has achieved. Utilised by African American activists during the Atlantic slave trade period, the *Imago Dei* was used to discourage slaveholders from practicing slavery and to encourage the enslaved to resist subjection.⁸⁸ This followed from the idea of all humans being created in God's image, as accounted in Genesis 1:26. The *Imago Dei* will be developed upon further in chapter 4, these points highlight the similarities that the *Imago Dei* and AI have, both being catalysts for good and bad actions. *Imago Dei* and AI cannot be manipulated to suit the select; they must be employed to aid all of humanity. The aspect of performance cannot dictate how we utilise these two.

V - We must then examine AI as a threat, not anthropologically but sociologically and economically for example. We must examine how we use these new instruments we have created in order to benefit humans rather than harm them.

⁸⁵ Lisa Cahill, "Toward a Christian Theory of Human Rights," *The Journal of Religious Ethics 8,* No.2 (1980), 277 – 301.

⁸⁶ Gurmin, "A Study of the Development," 39.

⁸⁷ Kilner, *Dignity and destiny*, 16.

⁸⁸ Ibid, 12.

Chapter 3 – Dismantling the Gnostic view

Points to Explore

Gnostics view the body as inferior, regarding it as a prison from which our soul is only mercifully freed upon death.⁸⁹ This may lead to a deconstruction of our anthropology as we could reason that AI is more superior as they are not restricted by matter to the same extent humanity is, therefore weakening our anthropology. In the previous chapter, by appeal to Biblical accounts of angels -supra cognitive beings - and Jesus, we argued against a Pelagian performance-based metric for judging human worth. The prior arguments also hold weight against Gnostic thoughts on matter, as we can acknowledge the importance of matter for humanity as God created us with this a body in mind. Not only does the physical body play such a large role in human salvation (as demonstrated by Jesus' suffering on the cross), other biblical scripture explains the significance of the material body too. For example, showing the relevance of our matter from birth to dirt, Ecclesiastes 3:20 states "All go to one place: all are from dust, and all return to dust". I mention this now as to not repeat the same arguments but to acknowledge their significance in this chapter as well. We will however expand on the biblical arguments for matter later on in the chapter. Before that, we will focus on the necessities of our material bodies and how they are vital for communication and emotional understanding with one another. This will then be expanded with the evidence that AI robots are being developed with significance thought being put into the design of the robot's body, as an attempt to connect to humans and improve performance.

⁸⁹ Abigail Favale, "Evangelical Gnosticism," firstthings.com, accessed April 12th 2022, https://www.firstthings.com/article/2018/05/evangelical-gnosticism

VI – Gnosticism as an argument against our anthropology by worshiping the immaterial is irrelevant to Christian anthropology as it seems to ignore fundamental aspects of it such as the Eucharist.

Matter and our Emotions

To disregard the importance of our material bodies is foolish as they provide us with the ability to truly understand other humans and forge relationships by displaying and reading emotions. It is not just language that we rely on to communicate; it is our use of the sensors that allow us to build relationships.⁹⁰ Through body language and eye contact we can observe and display emotion efficiently, using these elements to identify our next action. For example, we can easily interpret when somebody is angry just through seeing that their eyebrows are furrowed and hands clenched. An integral part of this development in our lives comes from a connection between the mental and the physical. When we talk to another person we understand how they feel and what they are thinking through firstly their bodily motions and secondly through our own experiences of life. From this we can note that the Gnostic concept of matter being insignificant is dismissed when we apply that thinking to actual human relations.

Pia Lindman is a performance artist who re-enacts positions and gestures to replicate in some ways the emotions those feel when in said positions; a great example is in her 2004 "New York Times project."⁹¹ One such position Lindman mimics is that of a woman holding her deceased child and Lindman expresses that she felt the feeling of grief as if she was truly in that situation. There is a biological link with emotions and this is through chemicals firing in our brains when we observe or perform certain emotions. Smiling or

⁹⁰ Smart, Beyond Zero and One, 223.

⁹¹ Pia Lindman, "NEW YORK TIMES PROJECT," pialindman.com, last accessed September 6th 2021, https://pialindman.com/NYTimesproject.html
frowning, for example, will affect our mental state positively and negatively respectively. Mirror neurons will also fire when we act the same way as another person we are observing.⁹² This goes to show the importance of the physical in our human social interactions. This is not just being used to further studies in humanity but is also a key factor when designing robots. We will explore in the next section why matter is such a vital importance for improving robot autonomy and so, as a result, disregard any attack that matter is a hindrance.

Physical Bodies Within AI Application

There is a big push for body language in robots; these robots would be designed to recognise and correctly interpret human emotions in participants and then respond appropriately.⁹³ This is primarily prominent in the care industry with the application of care bots, and with these bots comes an increased want for anthropomorphism to be a fundamental design in our robotics. To create familiarity, we design these robots to be appealing to us but not by too much.⁹⁴ This sense of familiarity can be explained with the "uncanny valley": a certain point that humans begin to feel uneasy from humanoid robots as they go beyond the threshold of familiarity. To be successful social robots, they must be designed to avoid this uncanny valley so that they are affective. As humans we are more inclined to approach something positively if it caters to what we find aesthetically pleasing and familiar. For example, most would be more inclined to handle a dog than a spider.

⁹² Sherry Turkle, *Alone Together, Why We Expect More from Technology and Less from Each Other* (New York: Basic Books, 2011), 135.

 ⁹³ Paul Dumouchel, *Living With Robots* (Massachusetts: Harvard University Press, 2017), 103.
 ⁹⁴ Ibid, 110.

An example of a robot that hits all these notes previously mentioned is that of Abel. Abel is a humanoid robot covered in flesh-like material and equipped with sensors and actuators so that it can detect and express highly realistic emotions.⁹⁵ This was done by designing the robotics of Abel with primarily his human like body in mind. Thus, the robot's external appearance came first and its internal mechanics second.⁹⁶ This was done to make sure that realistic human movement was achieved. Abel has already been used in therapy with children who suffer from autism and shows the kind of applications these emotional robots can be utlised in.⁹⁷ Abel highlights the importance of our human bodies and their connection to our emotions. This reiterates that our bodies are essential for who we are. Consequently, this completely twists the Gnostic ideas of matter being unimportant.

An additional point to remember is that these emotional robots can help us learn about our human nature if built in this way. AI and robots will be a mirror for us to reflect in and understand our nature better so that we may improve ourselves.⁹⁸ Again this is leading to the idea that we can use AI as a method to improve human dignity and sensibility rather than seeing it as another form of acid eating away at our anthropology. Accordingly we will next dismantle the Gnostic view of matter now in regards to a biblical narrative.

⁹⁵ Lorenzo, Cominelli, Gustav Hoegen, and Danilo De Rossi, "Abel: Integrating Humanoid Body, Emotions, and Time Perception to Investigate Social Interaction and Human Cognition" *Applied Sciences* 11, no. 3 (2021), 1 – 14.

⁹⁶ Ibid, 7.

⁹⁷ Ibid, 7.

⁹⁸ Ibid, 11.

Biblical Importance of our Bodies

As aforementioned, arguments involving angels -supra cognitive beings - and Jesus not only disregard Pelagianist notions of performance but also the Gnostic ones for the inferiority of matter. We will now expand on these points for debating the Gnostic view by analysing certain Biblical passages that refer to the importance of our matter. In Romans 8:23 and Philippians 3:21, the idea of our body being changed and redeemed is mentioned. What is important to note is that they do not just mention shedding our physical body completely, but that our physical forms will be improved. Philippians 3:21 it quotes that Christ "Who shall change our vile body, that it may be fashioned like unto his glorious body". This directly mentions the body as an aspect of God's image in Christ. Christ is not the image of God as a spirit lacking a physical body; Christ has a human body that is vital in the understanding of God's image.⁹⁹ There is a plethora of evidence to suggest that the body is a part of the Imago Dei as seen through the experiences of Christ. When Christ is crucified he dies and then is later resurrected. Importantly, it is his body is also resurrected; he does not appear as a spirit. This is evidenced in Colossians 2:9, "For in him dwelleth all the fullness of the Godhead bodily." Also, in Luke 24:39, Christ says, "Behold my hands and my feet...for a spirit hath not flesh and bones, as ye see me have." These passages reinforce the idea that our material bodies play a significant aspect in our humanity, especially since Christ appears as such after resurrection.

Additionally, it is mentioned as early as Genesis the importance our bodies have, specifically in relation to God. Genesis 9:6 mentions humanity's status as created in the *Imago Dei* with reference to forbidding murder, likening the act as a direct attack on God. Likewise, we can acknowledge that any kind of attack towards a person involving their

⁹⁹ Kilner, *Dignity and destiny*, 303.

physical attributes is also an offence to God. It is clear from these passages that our material bodies are important in God's image. To recall Athanasius, "God becomes man, that men might become God." We must acknowledge that to be human you must have both a soul and a body as full redemption requires this bodily dimension.¹⁰⁰ Gnostic views on matter are surely put to rest if we understand the *Imago Dei*; our physical forms are prevalent in the understanding and so must be recognised as such. It is worth additionally denouncing the heresy of Docetism, the idea that Jesus only seemed to be human, just as given reductive materialism, we only seem to be human. The heresy holds little meaning as all the above arguments still stand; even at its most damaging, our anthropology still holds the significance of matter.

To conclude both this chapter and the previous one too, both points from Pelagianism and Gnosticism fall both secularly and theologically. Our anthropology is not under threat from AI from either a performance or material standpoint. Performance does not indicate significance, at least on its own, and our material bodies are an intrinsic part of our humanity, thus our *Imago Dei* is grounded in the Incarnation. AI is nothing more than a historical fashion; it is no different from the other challenges that were already contenders to be issues for our anthropology and so has no cause for concern in this avenue. I want to reiterate that by 'historical fashion' I mean that the same popular argument has been made before regarding our anthropology; the heliocentric argument was the 'fashion' in the early 1600's and now AI is the same in the 2000's.

Moreover, we are building AI's with the physical design in mind, so that both them and us can flourish. To see these issues as a threat is to reveal that our anthropology is already broken. For somebody who exercises good anthropology, his or her

¹⁰⁰ Favale, "Evangelical Gnosticism"

anthropology will never be broken. It is those who have given up and believe that their anthropology is lost that never had it to begin with – only the empty would fear being gutted. But this is where we really need to pay attention to the real queries of AI because it is a poison and a cure (*pharmakon*). Without a doubt, AI can be a tremendous material threat, but it could also be a huge material opportunity. This is why we must locate real threats and develop AI to be almost like a catalyst for humanity to flourish. AI can build up our anthropology, by freeing us from the sociological threat we touched on in chapter 1 and I believe we can show that it fits into the Christian anthropology by showing it to be analogous with the *Imago Dei*.

VII - All that AI can do is contribute to an argument that Christian anthropology was never true, exposing the emperor as having **always** been naked, and in so doing it is but an historical variant of arguments of disenchantment that have long been in fashion.

Chapter 4 – A Reflection from the Imago Dei

The case for AI and the Imago Dei

This essay has touched upon several key elements involving AI, these so far being disenchantment, anthropology and re-enchantment. We have previously mentioned Kilner's understanding of the *Imago Dei* and how being in God's image is to stand up for human life and dignity. Appropriately, I will be following his work as the primary source for this chapter, including reflection on the topic within the context of AI.

The *Imago Dei* offered humanity the potential to flourish towards a true unity with God, similar to how a seed, if nurtured correctly, can grow to great heights and majesty.¹⁰¹ In being created in the likeness of God we develop our human nature of rationality, creativity and inspiration, allowing humanity to develop for the best. It also allows us to reflect upon God and form some understanding of Him, so that we may express His mind, albeit in a very limited understanding.¹⁰² It thus follows that we exhibit traits, faintly similar to God. I will touch upon how our creation of AI is an example of these faint traits, the trait of creation. John Gurmin recalls that humans are called to 'fill the earth' and therefore participate in God's creative power to bring forth new life; I think this could even be an illusion to new species we may create.¹⁰³ Ultimately, I want to reflect our understanding of the *Imago Dei* with that of AI and present a conclusion that our *Imago Dei* can help us understand AI and vice versa, additionally improving our sensibility. As argued in the chapters before, AI has no hold over our anthropology, if

¹⁰¹ Noreen L. Herzfeld, *In Our Image, Artificial Intelligence and the Human Spirit* (Minneapolis: Fortress Press, 2002), 14.

¹⁰² Saint Athanasius, *On The Incarnation, De Incarnatione Verbi Dei* (Poland: CreateSpace Publishing, 2017), 12.

¹⁰³ Gurmin, "A Study of the Development," 39.

anything it improves it by highlighting our weaknesses. Utilising AI well will allow us to improve on our altriciality, being one of the most powerful tools we've ever created.

In relation to AI, it can be argued that the concept of the *Imago Dei* has a close resemblance to some areas of AI development and innovations of technology. Noreen Herzfeld theorises that our intrigue into building and perfecting AI may perhaps come from a spiritual aspect, specifically that of the *Imago Dei*.¹⁰⁴ As McCorduck states "AI is the latest manifestation of an enduring human impulse to create artifacts that will imitate our essential human properties of intelligence."¹⁰⁵ Accordingly there has been a continuous aspiration to have machines that can challenge us and I believe this stems from our *Imago Dei*.

As it is recognised that we are made in God's image, we can see a degree of similarity from this topic to the creation of AI's, namely that we sometimes create them in reflection to our own abilities. A brief example of this is how AI applies its deep learning capabilities through a computing system known as a neural network, a structure based on our human brain. Herzfeld describes this relation between humans and AI as our "*Imago Hominis*," this being the intersection between humans and computers.¹⁰⁶ So our projection of *Imago Hominis* gives insight not only on how we build and develop our own machinery, but also offers a mirror on how we view ourselves and what is a vital part of human nature. To have a better understanding of the topics of human nature and therefore, AI nature, it might be best to take a spiritual approach to matters to better understand how the image of God affects us and how this therefore affects our creations.

¹⁰⁴ Herzfeld, *In Our Image*, 6.

¹⁰⁵ McCorduck, *Machines who Think*, 373.

¹⁰⁶ Herzfeld, *In Our Image*, 8.

By delving into a more detailed analysis of the *Imago Dei*, we can start to answer these questions relating to the qualities that we hold as significant in human nature, and why we hope to actualise them in technology.¹⁰⁷

VIII – AI adds nothing to the principled argument against the veracity of this anthropology, namely, the imago Dei. If anything I would argue it supports it.

Understanding the Imago Dei

Firstly, let us account for a general understanding on what is the image of God. We have mentioned previously that being in the image of God is to promote good human life, dignity and sacredness, but we will also explore the goals and the difference between being God's image and being in God's image.

Being in the image of God is not primarily about our likeness to God, through our attributes for example. Kilner explains it as more of a destiny, one in which God hopes that we will reach to be fully in His glory.¹⁰⁸ This is also in line with Aquinas' understanding that the *'finis'* (final cause) is a *'cansa'* (cause).¹⁰⁹ In order to reach this destiny, humanity must reflect on God through Jesus Christ so that we may develop true divine attributes.¹¹⁰ We have a glimpse of these attributes right now, but they will be completely refined in fullness further into humanity's future. What's important to understand about our *Imago Dei* is that we are only in a likeness of God's image; only Christ is the image of God. This is stated explicitly in 2 Corinthians 4:4, "the glory of Christ, who is the image of God," while in James 3:9 it mentions how humanity is just in

¹⁰⁷ Ibid, 5.

¹⁰⁸ Kilner, *Dignity and destiny*, 281.

¹⁰⁹ Thomas Aquinas, *Summa theologica* (Translated by Fathers of the English Dominican Province, New York: Benziger Brothers, 1911-1925), la, q.2, arts 3.
¹¹⁰ Ibid. 289.

a likeness to God's image, "curse we men, who are made after the similitude of God." The revelation of God in Christ shifts focus away from man being created in the image of God and instead allows us to understand that Christ is the image of God.¹¹¹ Through Him becoming flesh we can build a strong similarity to God rather than a small resemblance.¹¹² Hebrews 1:3 identifies Christ as "the express image of His person" labelling him as an imprint of God – this is what humanity is trying to reach as well. Christ represents an embodiment of the image and likeness of God in an incarnate form and hypostatic union. John Calvin adds weight to this claim as he believes that our salvation is effected through Christ, as He restores us to true integrity.¹¹³ Christ is almost like an intersection between God and Humanity; Christ is our best way to reflect on the *Imago Dei*, we can use Christ as an illustration for humanity's destiny.¹¹⁴

We can see from the reflection of AI onto our understanding of the *Imago Dei* a slight resemblance of the two. AI and humanity both strive to reach a goal where we are both ever improving. This goal should hopefully lead to a re-enchanted world where we can use optimised AI to fulfil the needs of all of humanity, reducing suffering such as famine, war and pestilence through its application. Additionally, just as we are not God, AI is not human; we will still hold our uniqueness but we can still build in our likeness to improve ourselves and reach the ultimate goal of the *Imago Dei*. An issue potentially arises with the *Imago Dei* as it does with AI. Just as AI has the potential of being corrupted, so does the *Imago Dei*.

¹¹¹ Gurmin, "A Study of the Development," 89.

¹¹² Kilner, Dignity and destiny, 59.

¹¹³ Gurmin, "A Study of the Development," 156.

¹¹⁴ Kilner, Dignity and destiny, 73.

The *Imago Dei* is an idea that can be used to support great goods, but also great evils in the world. There are previous examples in history of how the *Imago Dei* has been twisted to suit the selfish and grim needs of others, as will be explored below. However, this is not to say the *Imago Dei* has not done great good, and it still offers the potential future we should strive for. But just like AI, the *Imago Dei* has the capability to be a catalyst for devastation and liberation. This is why we must evaluate and study these topics to navigate to a good future where humanity prospers. We will focus on flawed understandings of ideas now in the topic of God's image, with attention to how they have led to harm in the past. Positive uses of the *Imago Dei* will also be explored and will set examples of how the concept should be used and allow us to see a reflection between our application of the *Imago Dei* and AI.

IX – Imago Dei also contradicts the views of the Pelagian and Gnostic, dismantling them further. AI should be regarded with enchantment if anything.

Devastation and Liberation of Imago Dei

We shall begin this exploration of corruption by evaluating how the concept of matter may be misinterpreted with the image of God. The reason for these varied interpretations is because the *Imago Dei* is not truly defined in the Bible, as explained previously; rather, it is more of a destiny that humans must work towards. This leads to an issue that Kilner mentions of individuals who focus only on certain aspects of human life, may it be only matter or only our attributes for example.¹¹⁵ We must also understand the *Imago Dei* does not just concern some human bodies as whole, but every human in their entirety. We also mentioned in chapter 3 that in regards to Genesis 9:6, destroying somebody in God's image is attacking God personally. We should note then that any form of racism and misogyny would be a direct attack on God, so these acts would

¹¹⁵ Ibid, 96.

conflict with the *Imago Dei* and should never be committed. Unfortunately, acts such as these have been committed due to twisting the ideas of the *Imago Dei*. To reiterate what was mentioned at the end of chapter 2, Adolf Hitler identified strong members of society as in the image of God, Additionally "weak" individuals, those who suffered deformities, disabilities and any other attribute the Nazi party did not deem as good and were to be purged It is important to understand that while attributes have been the catalyst for corrupting the *Imago Dei*, they still hold a role in understanding the image of God.

These examples show the dangers and devastation people can achieve by twisting concepts and ideas for their own selfish gain. AI and the *Imago Dei* have the potential to destroy or liberate; it is through in-depth knowledge and positive application of these topics can we apply them to be re-enchanting. We have discussed some ways the *Imago Dei* was corrupted, but we will finish this section by describing how it should always be implemented into our society, as a catalyst for standing up for all of humanity.

As reiterated, being in the image of God is to protect all of humanity as a collective. If we understand it like this, we can begin to see the true altruism behind the idea. Clement of Rome promoted this in the earliest centuries of the church, arguing that everyone is made in the image of God and that caring for everyone is what it means to be bestowed upon by God.¹¹⁶ The *Imago Dei* has inspired people to meet the needs of those who need it most, to treat humanity as a collective and provide necessities for the most impoverish and ill individuals as they are too made in the image of God. Though we mentioned that the *Imago Dei* contributed to the enslavement of many races, it was also used as a positive

¹¹⁶ Ibid, 8.

impact to help prevent slavery in the 19th Century.¹¹⁷ A point we also touched upon at the end of chapter 2.

So from these examples, the *Imago Dei* does promote the equality of all humans together, and through the Bible there are reiterations of this such as in Genesis 9, James 3 and Hebrews 1. The trouble is that the Image of God does not truly have a definition; it is a lens that humanity must head through in order to move towards being like God, by reflecting through Christ. I believe we may reach this goal of the *Imago Dei* through good application of AI and utilise it as a method of re-enchantment. This is what I wish to conclude this essay with, and argue that AI does not cause damage to our anthropology and instead improves it by highlighting our weaknesses through our use of reflexive awareness. We have touched upon the dangers of interpretation and also a general understanding of the *Imago Dei*; with this in mind the next section offers a reflection involving humanity, the *Imago Dei* and AI.

X - We must examine how we use these new instruments we have created in order to benefit humans rather than harm them. Similarly to how we realise our Imago Dei

The Condition of our Attributes

The attributes we exhibit such as reason, regency and relations come from being made in God's image, but they do not represent what it means to be in God's image. As we explained before, it is the entirety of humanity that constitutes being in the image of God, not just some select attributes. Another reason why we must not allow some select attributes to equate to God's image is because this raises an issue with angels too. Just as angels -supra cognitive beings - should seemingly damage our anthropology, there is

¹¹⁷ Ibid, 13.

reason to argue that attributes of regency and reason also fall to their existence. These attributes fall into slippery slopes of interpretation, for example suggesting that some races and genders do not hold equal reason or regency to others. However, this also suggests that if these attributes are what constitute of being the sole factors of God's image, surely angels and fallen angels are in the *Imago Dei* too?¹¹⁸ For example, if reason and regency were to be what makes up the image of God, angels and devils, like humans, must also be in the image of God as throughout the Bible they are shown to hold reason and regency – Satan is the ruler of Hell after all. This is just another example about how we must be careful when understanding the *Imago Dei*, relying on clear exegesis of the topic.

Nevertheless, it is not to say that these attributes are not praiseworthy – they are the result of being made in God's image after all. We must just be careful in how we use them and that it is done in reflection of Christ because, as we previously explored, humanity does have the potential to corrupt and abuse our gifts. God is the absolute perfect being that sets a standard by which the relative perfections of human beings and their possibilities can be properly assessed.¹¹⁹ William power argues that as humans we possess the structural powers and capacities to be able to reflect the formal image of God in us to a degree.¹²⁰

In the following sections, explanation of these attributes will originate from writers who may have classed them as the sole factors of being in the image of God. For the sake of convenience and to not repeat myself, I have clarified what my position of the *Imago Dei*

¹¹⁸ Ibid, 240.

¹¹⁹ William Power, "Imago Dei – Imitatio Dei," *International Journal for Philosophy of Religion 42*, no. 3 (2021), 131 – 141.

¹²⁰ Power, Imago Dei – Imitatio Dei, 139.

is previously in this chapter. Accordingly, their thoughts are primarily being examined so we can see a reflection between AI and attributes that flow from the *Imago Dei*. Following this we may reach a conclusion that AI could be used in humanity if it compliments the idea of the *Imago Dei*, that being to stand up for human life, dignity and sacredness. Our species is naturally very weak and we can see this through our post-partum. But if anything, AI will be an incredibly useful tool to improve our species, especially if exercised through the *Imago Dei*. With this in mind, let us explore our human attributes that flow from the *Imago Dei* within the reflection of AI so that we can perhaps utilise them correctly.

Imago Dei - The Substantive Category

Because we have the power to think abstractly, have free will and reflect on our actions, some infer that this is a result of the *Imago Dei*. This additionally allows us to understand God's existence, at least to a certain extent. This is a very Augustinian view: that it is not our body or even our soul that points towards man being created in God's image, but purely our rational mind.¹²¹ Reinhold Niebuhr builds on Augustine's thoughts of the *Imago Dei* and reaches an idea of "self-transcendence," that the defining condition for human freedom comes from our ability to move beyond the self due to our rationality.¹²² This moves to the notion that the divine image that God creates us in allows us to imagine the infinite within our finite existence. As a species, we reach out towards the things we do not understand, purely so that we may understand them after enough reflection and analysis. Niebuhr describes this condition similar to that of a paradox that really highlights the individuality of humanity for God. Niebuhr states, "The paradox of

¹²¹ Herzfeld, *In Our Image*, 16.

¹²² Ibid, 17.

man as creature and man as child of God is a necessary presupposition of a concept of individuality."¹²³

The human mind is indeed our most powerful tool; it is essentially what has allowed us to survive, evolve and develop as a species, and as a result flourish. Though this may be seen as the fundamental trait that flows from our *Imago Dei*, as explained previously, it also has the unfortunate reality of being the most cruel and malicious aspect of our humanity. On reflection of our attribute of reason, we can interpret some mirroring traits on our development of AI. As Niebuhr says, the image of God is located in our ability to reason, more specifically our ability to transcend beyond the self, which in a way is arguably the whole endeavour of our AI creation.¹²⁴ In the 1970's, the idea for AI to reason and think like us has been the spine of AI development right from the beginning.

To give an example of AI reasoning in application, we may look back at the aforementioned board game playing machines, which in most cases beat our own best players. As we have been graced with a fraction of the capability to reason like God, we have created machines that have a fraction of reasoning like humans. I say AI reasons only a fraction like human beings because the capabilities of AI intelligence is still very weak compared to our own. It is indeed true that AI out performs the average human in a number of ways, such as board games like chess, but we still hold dominion over general intelligence at the moment. The illustration of the "landscape of human competence" by Hans Moravec shows the few areas where AI dominates us and all the areas where the average human outclasses AI.¹²⁵ AI may be better at arithmetic, chess

¹²³ Reinhold Niebuhr, *The Nature and Destiny of Man: A Christian Interpretation* (London: Nisbet and Co.LTD., 1941), 24.

¹²⁴ Herzfeld, *In Our Image*, 35.

¹²⁵ Tegmark, *Life 3.0*, 53.

and rote memorisation, but we still fair favourably at art, writing, social interactions, science and so on.

However, AI still has the capabilities to develop and become more competent amongst humans, but I think this is a good reflection on how humanity can still develop and flourish as well. Also, AI is completely defeated when it comes to breadth of reasoning; human beings can perform hundreds of individual tasks, while AI is locked into narrow limitation.¹²⁶ To conclude the category of reasoning in understanding *Imago Dei/Hominis*, we can see that intelligence is bestowed upon creations, but only to an extent. Nonetheless, this extent still holds the capabilities to do either much good or much evil, in the hands of both humanity and AI.

Imago Dei – The Functional/Regency Category

The next attribute to explore is that of the functional, in particular the function of regency. Alexander Altman saw the motif of the *Imago Dei* to be understood as and emphatic affirmation of man's dignity over the rest of God's creation.¹²⁷ The first account of man being made in God's image is Genesis 1:26. As mentioned before, subsequent to this statement is God's explanation of man being ruler of everything that exists in creation. Following this analysis of the verse, Johannes Hehn founded a nonsubstantive way of categorising the *Imago Dei*, and this was through the suggestion that being in the image of God was to be understood as a royal title and a designation of His creation.¹²⁸

¹²⁶ Dumouchel, *Living With Robots*, 36.

¹²⁷ Altmann, "Homo Imago Dei," 235.

¹²⁸ Johannes Hehn, "Zum Terminus 'Bild Gottes'" in *festschrift Eduard Sachau zum siebzigsten Geburtstag* (Berlin: G.Reimer, 1965), 36-52.

To be in God's image is to function in God's stead; man was put on this earth so that we may govern all that roams the land and act in accordance to the bestowment of stewardship.¹²⁹ The primary role of being the representatives of God on His creation is to aid Him in imposing order on nature and to work towards a final goal that correlates within participation of God's plan.¹³⁰ Humans in exercising this rule are representatives of God. ¹³¹Humanity is able to create as a result of God's gift; a similarity to this idea would be the myth of Prometheus.

In the story, Prometheus is depicted bringing fire to man, enabling humanity to craft and create for the betterment of society.¹³² So, as a general summary to the understanding of function as an attribute from the *Imago Dei*, God designates us as stewards of His creation and offers us the capabilities to do so. As a result of this royal title, man has created numerous ways to hold dominion over the lands, primarily through the use of tools and labour. This is an on going theme in the Bible, from the story of Noah's Ark to Jesus' own profession as a carpenter; technology and work is one of the foundations of humanity. It then makes sense to see the application of these traits in the functions of our AI creations.

To show the *Imago Hominis* of AI through function should be quite self-explanatory. The vast majority of AI is built as a result of completing a particular function. The function of the automated car is to drive us to the allocated destination that we desire. The function of the aforementioned PARO carebot is to reduce anxiety and stress for the

¹²⁹ Herzfeld, *In Our Image*, 21.

¹³⁰ Ibid, 23.

¹³¹ Gurmin, "A Study of the Development," 39.

¹³² Emma Firth, "Prometheus, The Mythical Story of Prometheus," Tales beyond belief, Accessed 7th June, 2020, http://www.talesbeyondbelief.com/myth-stories/prometheus.htm

recipient and the care workers – every piece of AI technology serves a function. The difference between us and AI. is that we understand the actions we are doing, the AI does not. AI does not have autonomy like we do, just pre-set algorithms that best suit its function so it can be as efficient as possible.¹³³ However, that does not mean to say they are not useful; as stated before, AI accomplishes some tasks far faster and more precise than the average human. It could be argued that AI's collaboration with us aids with exercising our title of regency. As AI improves, so do the capabilities of the human race. When IBM created the Watson AI, they showed its power by it pitting against humans on Jeopardy! This resulted in the AI winning, causing a conversation on the power of AI and the fears that it invokes in people. Following this experiment, IBM realised they should focus less on man versus machine, and rather man and machine versus the impossible. Senior Vice President of IBM, John Kelly, argues that AI machines are a reflection of us as humans, and discussed IBM's first function for their Watson AI was applying it to the healthcare sector, reportedly benefiting 150,000 patients.¹³⁴

AI machines could be seen as a detriment to our roles as stewards on this planet, but they also have the possibility to help man really fulfil their designation to the highest possible standard. It is still up to us as the steads of God's creation to steer AI's function to be one of positivity for His world. As a result, our *Imago Dei* leads us to creating AI in our *Imago Hominis*. Consequently, we can exercise God's image by flourishing in the function that God bestowed onto us, with the aid of AI function that we bestowed on machines. At last we will delve into the final category of the relational image of God and the relationship we share as a result of the *Imago Dei*.

¹³³ Herzfeld, *In Our Image*, 23.

¹³⁴ Pontifical Academy for Life, "RenAlssance," 1:04:35 – 1:06:10.

Imago Dei – The Relational Category

The Imago Dei as relational is an interpretation that comes from the philosopher Karl Barth. Barth's interpretation is built from Genesis 1:26, but focuses primarily on the phrase "Let us make man in our image," leading Barth to take not a functional or qualities approach to the Imago Dei, but the image of God as being with God.¹³⁵ For Barth, the image of God does not come from what man does or what man is, but rather comes from us being a "genuine counterpart" to God, "he is the image of God, in the fact he is a man."¹³⁶ The interpretation is further developed if we analyse Genesis 1:26's use of plurality when God is creating man in His image. "Let us make man in our image," gives the impression that God is addressing himself, pointing to the idea of the Trinity, that God can issue a divine call "I" and a divine response "Thou."137 This follows back to the idea of the Imago Dei as relational, this I-Thou response forms the foundations for human creation and for Barth this is the root of human nature and our relationship with the divine.¹³⁸ Barth sees humans as "the repetition of this divine form of life; it is copy and reflection," arguing that we are born out of the I-Thou relationship and that man is "the counterpart of God, the encounter and discovery in God Himself being copied and imitated in God's relation to man."¹³⁹

So to Barth, the *Imago Dei* is not a quality, it exists as a fundamental for our relationship to God. Additionally, Barth argues that this I-Thou relationship is not just possible between man and God, but within the relationships between people. Barth finds that our relationship with God is also found within the first relationship between man and

¹³⁵ Herzfeld, *In Our Image*, 25.

¹³⁶ Karl Barth, *Church Dogmatics: The Doctrine of Creation, Volume 3, Part 1-The Work of Creation* (London: T & T Clark International, 2004), 184.

¹³⁷ Herzfeld, *In Our Image*, 26.

¹³⁸ Ibid, 26.

¹³⁹ Karl Barth, *Church Dogmatics*, 185.

women, which is then the basis for all human on human relationships.¹⁴⁰ This point brings immense intrigue if we try to understand this I-Thou relationship with God not just through human-human relationships, but also with human-AI relationships that have become more prominent through our *Imago Hominis* lens of AI creation.

We have personified objects for centuries; an example would be how people address boats, usually regarding them as female, using pronouns such as she and her. The argument can certainly be made that some artefacts are actually treated with far better ethical care and respect than the vast majority of people. Indeed, buildings and natural areas are given rights all the time and we put a great deal of effort in preserving some arts and animals.¹⁴¹ Jewish philosopher Martin Buber in his work *I and Thou* offers great detail on the I-Thou relation, arguing that I-Thou is primarily the interaction between beings, while I-It is the interaction between objects.¹⁴² However Buber also acknowledges how an I-Thou relationship can stem from non-human beings, giving an argument of how we may on the surface only see a tree as an It, but through grace and will we can be drawn into a relation with even that of a tree and create an I-Thou relation.¹⁴³

We treat artefacts as beings if we develop a large enough connection to them; I am sure that most people have a significant object in their lives that they value personally more than some acquaintances, such as a childhood trinket. The personal relations we build with some artefacts stems from the reflection of human-human relations. It is not

¹⁴⁰ Ibid, 186.

 ¹⁴¹ Michael Burdett, "Can we say "you" to artifacts: Personhood and creation in a technological world," The Faraday Institute, Accessed June 10th, 2020,
 <u>https://www.faraday.cam.ac.uk/resources/multimedia/can-we-say-you-to-artifacts-personhood-and-creation-in-a-technological-world/</u>
 ¹⁴² Ibid, 07:30.

¹⁴³ Martin Buber, "I and Thou" (Edinburgh: T & T Clark, 1937) Accessed June 10th, 2020, <u>https://archive.org/stream/IAndThou_572/BuberMartin-i-and-thou_djvu.txt</u>, 6.

obscene to imagine an I-Thou relationship with AI as they are built on the *Imago Hominis*, which in turn is developed from our *Imago Dei* (our I-Thou relation with God).

As explored briefly before, social robots and carebots benefit in terms of development in the relations between them and their human participant. In some cases, the human can become extremely attached and this is most prominently seen with children. Sherry Turkle gives an example of a frail sick child named Tucker and his connection to the android dog, AIBO.¹⁴⁴ Turkle describes Tucker not wishing to see AIBO "hurt" or "dead," implying that the child sees the robot as alive with feelings. Tucker is inspired by AIBO, primarily because of the robot's ability to be fixed, something the child wishes for himself. Tucker was also told by his brother to not play with AIBO due to the consequences of attachment; this resulted in Tucker reasoning that his brother does not play with him due to a similar thought process. The story of Tucker highlights the light and darkness of human relations through the catalyst of a robotic dog. Through forming a strong bond with AIBO, Tucker has begun to see the robot as a mirror that displays an image of his own reflection.

However, following these three attributes, we can see the relevance and reflection they have on our own creation of AI. I think it is reasonable to agree with Herzfeld and argue that what we imagine in AI might be what God imagined in us in some ways.¹⁴⁵ In conclusion to this chapter, I hoped to show that the *Imago Dei* as a destiny could perhaps be achieved with the aid of AI application. AI is probably our greatest invention to have come from our altriciality, it is not something that will damage our anthropology, but rather improve it by highlighting our weaknesses and then aiding us by improving on

¹⁴⁴ Turkle, 79-81.

¹⁴⁵ Herzfeld, *In Our Image*, 32.

them. As AI develops we will be able to achieve great things economically, medically and socially. Of course, as we have stated, this will only be possible through the use of benevolent function, one that we must achieve through perhaps using the *Imago Dei* as a lens.

XI - We must examine how we use these new instruments we have created in order to benefit humans rather than harm them. AI is a fruit of our anthropology if anything, a creation that comes from our altriciality. We will use AI to make up for our lack of natural defences and capabilities like we have done with so many other tools in the past.

Chapter 5 – Fake and Potential Issues of Technology

Preparing for the Future

Thus far, we have argued that AI as a threat to anthropology amounts to one only of historical fashion. Any concern to our anthropology is unfounded if our Christian Anthropology was to be wrong. It is only through our anthropology that we can exhibit fear towards it. We are naturally useless; we can observe this through our altriciality and post-partum nature, if anything AI will be another step to resolve this through good application of it. So, while the threat to our anthropology holds little weight, there is a clear humanist threats. This chapter will note various other fake issues and then highlight some examples of real potential issues. The first section of this chapter will outline several false understandings of AI that some may class as dangers. These topics should ease us into the discussion on what we want for the future of humanity and lead to the conclusion that there must be an interdisciplinary relationship between the development of new technologies and theology. This supports the understanding of the *Imago Dei* as mentioned by Kilner: that we must stand up for human dignity and life as we are made in God's image.

XII – All arguments below follow the following - I argue we must totally cease arguing any negative anthropological claims and realise that the issues are societal, and not metaphysical or theological, thus such concerns are fittingly delegated to the sociological, psychological, economic, and political registers, the effects of which, to be noticed, require that, ontologically, the human remains and is subjected, for good or bad, to any perturbations.

59

Misconceptions of AI's 'malevolence'

A fear that has been noticeably amplified by media is the idea of robots gaining consciousness, turning evil against humanity. This has been a trope ever since the first mention of robots in Karel Capek's *Rossum's Universal Robots*. The average person if asked about an AI apocalypse would probably give an account similar to the Terminators – indestructible metal androids with red eyes that shoot humans on site. The actuality if AI was to take over would not be fuelled by consciousness or malevolence, but by competence. The topic of consciousness is one that is continuously debated, mainly the idea on how consciousness actually works. David Chalmers is one of the most proficient philosophers on the topic of consciousness and splits problems of consciousness fully if all these problems can be answered, however some queries such as "How do physical properties determine qualia?" and "Why is anything conscious?" are near untestable and are in constant debate.¹⁴⁶

Our understanding of consciousness is a topic of extreme uncertainty, so if we cannot understand our own human consciousness, how would we try and implement such a complicated function into an AI? Furthermore, there is arguably very little benefit for doing so. Daniel Dennett argues that adding consciousness into the already complicated topic of AI is counterproductive.¹⁴⁷ Dennett addresses the complications towards creating such machines, these being the issues of rights, punishment and other legislation that would need to be created in response to these artifacts. He even goes onto mention that AI should be kept as extremely intelligent tools and have no reason to be conscious

¹⁴⁶ Tegmark, *Life 3.0*, 285.

¹⁴⁷ Daniel Dennett, "Will A.I achieve Consciousness? Wrong Question," Wired, Modified 19th February, 2019, https://www.wired.com/story/will-ai-achieve-consciousness-wrong-question/?mbid=social_twitter_onsiteshare

agents as we already have a surplus of such, this being humans.¹⁴⁸ Also, as we previously argued, fear of AI consciousness should not involve a threat to our uniqueness. Regardless, the fear of AI consciousness is misplaced; when people say they fear AI consciousness, and I assume malevolent thought in robots, what they actually fear is AI competence.

Previously in this essay, we explored the hypothesis of superintelligence AI that turned the whole world into paperclips because of its vague programing. Though this might seem ridiculous, it offers a scary possibility of AI competence and what determines an AI's goal, this being a state of the world that either satisfies the goal or does not.¹⁴⁹ Norbert Wiener describes the dangers of AI with relation to the poem, *The Sorcerer's Apprentice*.¹⁵⁰ In the poem, a boy is tasked with fetching water. In an act of laziness, the boy sends a magic broom to complete this action. However, the boy never fully specifies the command and as a result is nearly drowned by the broom fulfilling its correct duty by fetching water.

As Max Tegmark concludes on the issue, "Intelligence enables control: humans control tigers not because we're stronger, but because we're more intelligent."¹⁵¹ However, I do want to make an analogous point that the fear we have toward AI in the apocalyptic regard is misplaced similarly to the analogy of the angels -supra cognitive beings - we gave in chapter 2. Much like how AI couldn't be an anthropological threat if angels exist, surely in terms of danger to humanity, nuclear weapons should be prioritised over AI. Why invoke this fear that AI could cause the world to be destroyed, as per the

¹⁴⁸ Dennett, "Will A.I achieve Consciousness?"

¹⁴⁹ Russell, *Human Compatible*, 49.

¹⁵⁰ Norbert Wiener, *God & Golem, Inc: A Comment on Certain Points where Cybernetics Impinges on Religion* (Massachusetts: The M.I.T Press, 1996), 57.

¹⁵¹ Tegmark, *Life 3.0*, 44.

example given in this chapter, when nuclear bombs that have existed since the 1930's could wipe out our species far quicker? Of course AI could be a new factor to this fear, but AI doesn't bring about this new possibility of an apocalyptic world, this has existed since the 1900's. It is historical fashion again, these fears have existed before and many more will continue. But this is why we must incorporate interdisciplinary action more, to enable research that can prioritise factors and reduce misconceptions. This will also lead to better public knowledge of the topic and contribute to a future where humans and AI work together.

Social fears - misconceptions and carebot queries

Societal fears are common in our lives; issues such as AI affecting our jobs, relationships and lifestyle are going to be in high concern because these three things are common and vital to the routine and nature of nearly every human. Through this section we will explore some of these problems and hopefully ease the tension, while still respecting that these are core problems that must be researched and discussed thoroughly.

Machines taking jobs from humans are analogous to machines taking jobs from horses in the past. Horses used to be our main form of transport. However, as we began to develop new technologies for transportation, farming and other horse centric jobs, the need for horses soon diminished as technological advances made them redundant.¹⁵² In 1915 there was 26 million horses in the US. 35 years later, 24 million were sacrificed for resources such as glue, leather and food.¹⁵³ The fear for some is that we may end up similar to horses in the future. There are some key things to note about this discussion. Firstly, as Nick Bostrom observes, we are not horses – we are capable of capital

¹⁵² Bostrom, *Super Intelligence*, 196.

¹⁵³ Ibid. 197.

ownership and political mobilisation, thus the value of our species should be taken into account a little bit more than horses.¹⁵⁴ Again there is this analogous mirror to our previous argument involving angels -supra cognitive beings. In the context of the job market, AI is a historical fashion to that of immigration. There have already been multiple worries and arguments in the past of immigrants taking jobs away from people. Surely AI is no different to this scenario, and it then becomes just another factor to this pre-existing argument?

It could be argued that the automatisation of jobs will actually benefit us greatly. The average human wage around the world has been steadily growing due to machinery.¹⁵⁵ Hopefully, instead of leading to a life of pure substitution and then famine and poverty, it will instead lead to a case of UBI where humanity can all live comfortably on a granted wage allowing our species to flourish as it is no longer restricted to mundane work.¹⁵⁶ This correlates back to breaking out of the 'Iron Cage' that we discussed in chapter 1. It is also important to realise that jobs being seen as obsolete is historical fashion. While some jobs may be lost in the past, new ones are created; though we no longer have Gas Jockeys and Milkmen, we now have new jobs as a result of new technology involving Virtual Reality (VR) and social media.¹⁵⁷ It is just a matter of fact that as our society progresses, so do our jobs. What is important is that we steer AI development into a direction that benefits our society rather than impedes it. The factor of jobs is but one social query; another one to focus largely on is the impact of human relationships with the implementation of AI. I will specifically look at the application of carebots.

¹⁵⁴ Ibid, 197.

¹⁵⁵ Ibid, 196.

¹⁵⁶ Cameron, *The Robots Are Coming*, 81 – 84.

¹⁵⁷ Ibid, 79.

The use of 'Carebots' in the care sector has a wide range of utilisation that benefits both the caregiver and receiver. A carebot can be described as a machine that assists workers and visitors who are giving care to a patient. One example of many is the PARO robotic seal, which is designed to reduce the stress and anxiety of patients by responding physically and verbally to touch to help maintain a patient psychologically and socially.¹⁵⁸ The effects of these robots are of course to be positive, supplying both the caregiver and receiver with assistance. They allow the patient to maintain a sense of dignity, while the caregivers are relieved of certain duties, reducing stress so they can flourish in other areas of their crucial work. These carebots are not yet widespread in the industry, needing safety checks, improved practicality and cost effectiveness before becoming the norm for healthcare.¹⁵⁹ However, these are not the only factors to consider when thinking of applying these robots to the sector. Consideration should be administered toward the impact these machines will have on our society as a whole, the consequences of how these devices could be the catalyst for a less than desirable ethical outlook.

The use of carebots will hopefully play a positive role as devices that relieve stress from both the patient and caregiver. This should aid the very demanding work a caregiver does regularly, allowing less taxing work that severely impacts a caregiver's mental and physical health. This should allow those who already work in the care sector to flourish while also making the profession more enticing for new members to join. Of course, these positives will also be good for the patients, as better-equipped staff and impressive technology will mean far better caregiving practice. Carebots may also be seen as a good substitute for social partners when a patient's family are unable to visit. Additionally, AI's are naturally

¹⁵⁸ "PARO Therapeutic Robot," ParoRobots, accessed 25th May, 2020, http://www.parorobots.com/

¹⁵⁹ Shannon Vallor, "Carebots and Caregivers: Sustaining the Ethical Ideal of Care in the Twenty-First Century." *Philosophy & Technology* 24, no. 3 (2011), 251-68.

going to be better at remembering times for appointments, medicine and notices that are vital for the patient. The true purpose of carebots is indeed a benefit for society on a whole, as long as their goal alignment does not steer out of alignment with ours; for example, taking logical extremes such as completely restricting a patient's movement forever for their own safety.¹⁶⁰ We already know poor goal alignment is an issue, but even if carebots worked as perfectly as we expected, this may still have awful consequences for own social character.

We can imagine a scenario where we become more complacent with our attitudes towards loved ones under care. This is already an issue with countless people under the impression that, because a loved one is being looked after by a caregiver, there is no need to visit, resulting in many cases of rejected and abandoned family members. The introduction of carebots may reinforce this poor judgment further. This is why a need for cooperation between humans and carebots is vital – instead of relying solely on robots to better our society, we work together with them to aid in developing each other. This will go toward improving our anthropology and heading towards a future where human dignity and sacredness is put first, as is the goal of being in God's image.

Shannon Vallor constantly reiterates in her works that there must be a sense of unification with technology to supplement for each of our weaknesses. There are hurdles for humans that can easily be resolved by machines, relieving caregivers of demanding work.¹⁶¹ Additionally, there are areas of caregiving that a robot would struggle with such as the need for touch, as it is a vital transaction for building trust, respect and

¹⁶⁰ Ibid, 262.

¹⁶¹ Ibid, 261.

understanding between the patient and caregiver.¹⁶² This again shows our relevance of material bodies and why they supplement and amplify our mental attitudes, reiterating that a Gnostic view of our insignificant matter should be disregarded Another important aspect to mention is that it is not just the caregivers who may experience less of a need for human interactions due to AI and robotics, in some cases it could be the patient that becomes apathetic to human relationships.

Sherry Turkle gives a concerning account of how a robot managed to seize the love of a grandmother away from her granddaughter. Turkle describes the story of an elderly lady called Edna and her relationship with a robot designed for those in care named "My Real Baby."¹⁶³ To summarise, Edna was so entranced with her robotic baby that she near completely rejected the attention of her two year old granddaughter, showing the robot more love, attention and autonomy then that of her own relative. This is of course a small window into the societal fears created by AI and one of many issues that we must address involving the effects AI and robotics have on our human nature.

To conclude this section on carebots, Vallor argues for a combination of human caregivers and carebots working together in taking care of patients, giving an example of how this might be achieved. "Carebots could easily monitor vital signs, medication and pain levels while caregivers sleep...Carebots could also help with tasks beyond the physical capacity of many human caregivers."¹⁶⁴ With a co-dependency with carebots rather than a complete dependence, we can counter some of the issues and concerns

¹⁶² Aimee Wynsberghe, "Designing Robots for Care: Care centred Value-Sensitive Design." *Science and Engineering Ethics* 19, No 2. (2011), 407-433.

¹⁶³ Turkle, *Alone Together*, 117.

¹⁶⁴ Shannon Vallor, "Technology and the Virtues: A Philosophical Guide to a Future Worth Wanting." (New York: Oxford University Press, 2016.) Accessed 15th September 2021, http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780190498511.001.0001/acpr of-9780190498511, 227.

previously mentioned. For example, with the aid of a carebot, somebody who was previously anxiety over looking after a patient may now be able to aid in caregiving since the carebot can provide relief on certain aspects of the work.

Not only does it allow more people to be involved in the profession or even duty of caretaking, as Vallor shows in her example, it can provide caregivers with relief that they need in order to perform their job to the best possible standard. Additionally, of course, carebots do allow significant relief for the patient as well. Working alongside these carebots will also allow them to improve; firstly a caregiver can prevent a carebot from preforming any kind of 'absurdly logical' action and then secondly help developers of the machines update the ethics programmed into the carebot. This cooperation between man and machine can lead us to a dignified future and through interdisciplinary relations we can build co-aligned goal alignment between humanity and AI. This future should lead to one where we put our own dignity first and rebuild our sensibility through the application of these impressive inventions and stand up for human life as is the main goal of being in the *Imago Dei*.

Breaching Human Rights

A very real threat from AI comes from the potential exploitations from governments and companies who will utilize AI. Arthur Herman displays concerns over the collection of data AI will have access too. AI data collection can come from multiple avenues such as applications, websites and 5G wireless technology, all providing an astronomical amount of data for the AI.¹⁶⁵ He uses the example of the Chinese government and its aims to create a police-surveillance apparatus powered by AI and its huge collection of data. This has lead to national IDs being needed to travel by train, allowing the government to

¹⁶⁵ Herman, *Who Will Control the Machines*, 48.

prevent human-rights activists and anti-corruption journalists from traveling.¹⁶⁶ It is important to then maintain a just rights system when we develop such technologies that champion protecting human freedom.

Joanna Bryson, who has been part of the 'EPSRC Robot Ethics Team,' argues that corporations and governments should be held accountable and liable for their AI products. Eileen Donahoe and Megan MacDuffee argue for a global rule set for AI's relationship with human rights, using the 'Universal Declaration of Human Rights' (UDHR) as a framework.¹⁶⁷ Donahoe and MacDuffee raise a prominent point that if governments are going to rely upon AI, it is essential they must develop process to evaluate how the application of these AI affect peoples rights.¹⁶⁸ They go on to say that human rights by design should be taught to all technologists as a standard and that our urgent task in our AI dominated future is to figure out how to protect our human rights.¹⁶⁹

Through this chapter we have touched on several very real potential issues involving AI and similar technologies: primarily, the concerns of goal alignment and the affects these future technologies will have on our ethics, societies and relationships. The future of technology is still fortunately in our hands, and we have the power to navigate towards a beneficial posthumanist world if we take the correct paths, or at least try too. In terms of goal alignment it can be hard to perfectly align our goals. A mousetrap still clamps down

¹⁶⁶ Ibid, 47.

¹⁶⁷ Eileen Donahoe, Megan MacDuffee, "Artificial Intelligence and Human Rights" Journal of Democracy 30, No.2 (2019): 115 – 126.
¹⁶⁸ Ibid, 117.
¹⁶⁹ Ibid, 125.

on toes rather than just rodents, but we can do our best to avoid this outcome if we administer caution.¹⁷⁰

Stuart Russell gives a neat conclusion to amending goal alignment that I believe can also be appropriate for the discussion towards AI, and its implications within our society. Russell states, "We have to achieve mutual cooperation, resulting in benefits to Humans, rather than mutual destruction."¹⁷¹Following this is to ask what future do we want to have involving AI and what steps must we take in order to get there? This discussion is vital to all disciplinaries and should be treated as an interdisciplinary topic for the benefit of our societies.

The importance of religious thought

The reason for this discussion now being a case of interdisciplinary thought is because these issues do not just have consequences and concerns in the AI research sector – they now impact all of society. As Brad Smith of Microsoft argues, this technology is too important to be left solely to the people who create it, and as a result, all companies, religions and institutes must work together.¹⁷² Max Tegmark notes that one general goal that science, philosophy and religion all hold is an aspiration for the truth.¹⁷³ Tegmark continues to highlight the comparisons of science and religion, specifically how religions place a strong emphasis on goodness, this also being the key emphasis of MIT.

bM4Hrj2Euw&list=LLgLEBFIWL6rLWREQWGf2Czg&index=4&t=0s

¹⁷⁰ Tegmark, *Life 3.0*, 259.

¹⁷¹ Russell, *Human Compatible*, 32.

¹⁷² Pontifical Academy for Life, "RenAIssance Rome Call for Ethics," March, 2020, *YouTube*, 3rd <u>https://www.youtube.com/watch?v=-</u>

¹⁷³ Tegmark, *Life 3.0*, 270.

With new discussions being created due to potential consequences of AI, we must rekindle classic debates involving ethics and philosophy to grasp some of these urgent conversations that will emerge. It is important to remember that religion is the primary reason for our ethical rules today as many of our laws are derived from the 10 Commandments. Also, in the past, many forms of technology, tools and art were largely known as religious endeavours. Various technological pioneers were led by devout beliefs that ended up becoming the condition for the hallmarks of technological advances.¹⁷⁴ There are numerous examples of such all throughout history. Roger Bacon was one such individual who believed that improvement of the arts gave way to preparation of the kingdom of Heaven. Bacon argued that the Church should use new inventions with a combination of the grace of God so that humanity may investigate the secrets of the world.¹⁷⁵ Bacon saw the advancement of technology as a dedication to reaching the transcendent end of salvation, and a means of restoring humanities lost dignity as a result.¹⁷⁶

Theological contributions towards the technological discipline

There is a clear interest and desire from religious individuals who want to be a part of the scientific narrative, and contribute to the relationship between religion and technology. We will first note various biblical verses that encourage the use of technology, particularly how its application was to aid humanity.

Matthew 7:12 offers the most practical command to all of humanity and is considered the 'Citizen's Golden Rule,' "do unto others as you would have them do unto you." Isaac

¹⁷⁴ David F. Noble, *The Religion of Technology, The Divinity of Man and the Spirit of Invention* (New York: The Penguin Group, 1999), 5.

¹⁷⁵ Roger Bacon, and Robert Belle Burke, *Opus Majus, Volumes 1 and 2* (Philadelphia: University of Pennsylvania Press, 2016), 634.

¹⁷⁶ Noble, *The Religion of Technology*, 26 – 28.

Asimov, a popular science fiction author, came up with three universal rules of robotics, which despite coming from a place of fiction, are a general foundation for creating AI and robots. His first law of robotics states that a robot may not injure a human being or, through inaction, allow a human being to come to harm. Nigel Cameron reasons that Asimov's laws are an echo of the Biblical 'Golden Rule', just employed to fit a narrative of robotics.¹⁷⁷ The 'Golden Rule' should indeed apply to robots and AI, since they are very much a reflection of us as we explored.

Also, mistreatment of these devices could lead to many undesirable consequences. This does not necessarily mean an apocalyptic consequence, but mistreatment of intelligent machinery could lead to mistreatment of human beings, similarly to how animal abuse leads to human abuse in most cases. Of course, for robots to not harm a human being is a vital rule as they certainly have the capacity to do so. This scenario is similar to the play of *Rossum's Universal Robots*, by Karel *Ča*pek.¹⁷⁸ It tells the tale of the end of humanity via the hands of robots; this is due to a combination of over reliance and mistreatment of our robotic creations. As the character 'Alquist' from the play concludes, "It is we who are to blame.... all of us. For our own selfish ends, for profit, for progress, we have destroyed mankind." This certainly begs for an ethology of AI.

As early as the book of Genesis, tools are noted for their great use of shaping and redeeming in the eyes of God. God clearly sees the good in our human creations and this is highlighted in several parts of the Bible. For example, tools and human creation play a huge role in the redemption story of Noah's Ark. The story of Noah's Ark illustrates God destroying parts of humanity via a natural cause, a huge torrent of water that floods

¹⁷⁷ Cameron, *The Robots Are Coming*, 90.

¹⁷⁸ Karel Čapek, Rossum's Universal Robots (London: Penguin Books, 2004).

the entirety of Earth. God requests Noah to also save humanity using technology, resulting in the Ark.¹⁷⁹ Through Genesis 6:14 – 16, God instructs Noah on how to build the Ark with regards to specific materials, size and dimensions. It begs the questions, why did God promote the use of technological redemption and salvation instead of using purely supernatural means? Perhaps this is God showing us that He respects our technological efforts and achievements? Indeed, it is very interesting to note that both Noah and Jesus were extremely righteous men whose character shined through the use of carpentry.¹⁸⁰

These few examples are just to show how the application of technology by humans is seen as a positive. Though there are countless examples of technologies and sectors that AI will improve, I will focus on how the idea of transhumanism could help us flourish regarding secular and non-secular ideas. As discussed in chapter 1, AI will no doubt play even more of a role in our lives in the future and that they'll be integral to our species. With this in mind I will explore the idea of transhumanism with the notion in mind that it'll be one of many technological paths utilising AI for our benefit. I also believe it to be a useful comparison for how we may utilise AI for enchantment and that it fits comfortably with our anthropology.

Transhumanism - Next step of our Anthropology

Transhumanism is the concept of incorporating technology into our bodies as a hybridity to achieve what could be a new sense of evolution called "Techno-evolution." A common conception of a transhuman would be that of a cyborg, reforming and improving our natural bodies with technology that could negate restrictions and

¹⁷⁹ Dyer, *From The Garden*, 101.
¹⁸⁰ Ibid, 103.
weaknesses. I argue that through our application of AI we can improve humanity and AI will certainly play a role in the development of transhumanism. Additionally, as we have discussed in previous chapters, AI and technology will never cause harm to anthropology, it will just aid in the progress of it. In some sense, transhumans already exists as many disabled people are provided with prosthetic limbs that allow them to walk again.

Sherry Turkle gives an account that dates back to 1996 of three men who were considered cyborgs as they were always wired up to the Internet, carrying around computers and radio transmitters at all times. One of the cyborgs exclaimed, "I feel invincible, sociable, better prepared. I am naked without it, with it I'm a better person."¹⁸¹ This was an account in 1996; now in the year 2022, everybody is walking around wired to the Internet and carrying computers and transmitters in the form of smartphones. In a way we could consider ourselves cyborgs now due to our phones and computers being an extension of ourselves. The main goal of transhumanism is to repair, improve and compensate, however as archbishop Antje Jackelèn, this leads to a heaven or hell mind-set on where this idea could end up.¹⁸²

Firstly we shall address the positives of the salvation potential of this hybridity between man and machine, following a religious narrative. Following the core idea of transhumanism being a method of repair and improvement, it could be reasoned as a path to the kingdom of God regarding these concepts. Matthew 11 describes the wonderful miracles of Jesus, specifically his healing properties. Matthew 11:5 accounts that "The blind receive their sight, and the lame walk, the lepers are cleansed, and the

¹⁸¹ Turkle, *Alone Together*, 152.

¹⁸² Jackelén, "The image of God," 290.

deaf hear, the dead are raised up...". Jackelèn argues that this verse is almost a window to God's kingdom and that transhumanism has very similar properties.¹⁸³ With modern technology and medicine it is no longer a miracle for the blind, disabled and diseased to be restored but instead a wonderful result of human ingenuity.

Micah Redding even views Jesus' resurrection as a sort of transhumanism, with matter and energy changing into something new.¹⁸⁴ Following 1 John 3:2, the next step of transhumanism could be a potential step towards God; "Beloved, now are we the sons of God, and it doth not yet appear what we shall be...". Additionally we may reason that all we do is through God's image and this includes our technological nature, therefore transhumanism is a reflection of this, a concept that is built towards improving human dignity and flourishing. Redding also believes that a Christian transhumanism could help with preventing dangerous technology and that they would be a great asset in asking and answering ethical questions.¹⁸⁵ Unfortunately, it is not so simple to regard such a radical concept such as transhumanism and not take note of the theological and ethical issues surrounding the idea.

Though I believe it is inevitable our species will move onto a transhuman state, due to the procedural rate our technology increases along with our near inherent reliance on it too, another inevitable actuality is that the theological and ethical issues will need considerable thought. Concepts of freedom, dignity and sin would need reinterpretation and reconsideration as this type of science unfolds. An understanding of humans

¹⁸³ Ibid, 293.

 ¹⁸⁴ Justin Brierley, Micah Redding, Nigel Cameron, "Should Christians Embrace Transhumanism? Micah Redding vs. Nigel Cameron," Premier Christian Radio (Podcast), Accessed February 21st, 2020,
https://www.premierchristianradio.com/Shows/Saturday/Unbelievable/Episodes/Episodes/Epis

https://www.premierchristianradio.com/Shows/Saturday/Unbelievable/Episodes/Unbelievabl e-Should-Christians-embrace-Transhumanism-Micah-Redding-vs-Nigel-Cameron ¹⁸⁵ Ibid. 44:40 – 45:50.

themselves would need careful analysis between science and religion; one start may be the imperfections of our species. While the scientific approach may be that humans are in need of physical improvement, the theological argument is based on improving the soul via forgiveness and transformation.¹⁸⁶ Perhaps transhumanism could actually aid theological discussion if assessed properly?

A prickly topic of the material also arises in discussion of transhumanism. A Gnostic point of view seemingly creeps beneath the surface of transhumanist reasoning, as transhumanism does seem to align itself with doing away with our material bodies, seeing the material as a hindrance. Erik David agrees, arguing that the digital age of technology is loaded with gnostic motifs and themes, such as transhumanism.¹⁸⁷ Karli Brittz also argues that the notion of transhumanism shows disregard for the human body and material world and that it follows Gnostic thought.¹⁸⁸ However, Redding argues as a Christian transhumanist that transhumanism is actually the opposite of Gnosticism and explains that the essential ideals of being transhuman is to understand that matter is good and provides us with the ability to transform, pulling similarities to how Jesus was resurrected.¹⁸⁹ Though the Gnostic mirror could potentially be broken, there is still a concern over what new additional concepts transhumanism brings to our species, however I don't believe any of them to be a threat to our anthropology, a part of our anthropology is to be shaped by our environment.

Nigel Cameron recently engaged in a debate with Micah Redding on whether Christians should embrace transhumanism and while acknowledging the good that can come from

¹⁸⁶ Jackelén, "The image of God," 296.

¹⁸⁷ Karli Brittz, "Gnosticism, technology and the soul in Cuaron's Gravity" *Journal of Religion and Film 21*, no. 1 (2017), 1 – 20.

¹⁸⁸ Ibid, 6.

¹⁸⁹ Brierley, Redding, Cameron, "Should Christians Embrace Transhumanism?," 21:10 – 23:20.

technology. Cameron highlighted that we must not lose control over our technology and let it control our species.¹⁹⁰ As discussed previously, Redding full heartedly agreed, responding that this is precisely the reason why we need Christian transhumanists, so that the church could understand and face the issues that emerge from such technologies. The conclusion that we should draw is that future technologies such as transhumanism create new ethical and theological issues; for this reason there needs to be religious voices speaking on the matters. Following this, these participants in the discussion should acknowledge the good that can come from these ideas and employ them to build human sensibility and improve our dignity and ourselves. It is important to keep remembering that this relationship between technology and religion is not new, as discussed with Noble's work; it has been prominent for centuries and is acknowledged in the Bible as early as Genesis.

A theandric relationship, coined by Pseudo – Dionysius, with technology must be maintained so that we do not lose our humanity to a cold mechanical world and slip into a true world of disenchantment. Instead we should utilise AI to strive for a sense of enchantment and improved sensibility. We should not worry about threats to our anthropology or other non-issues and instead focus on interdisciplinary discussion to reach advancement of a future that benefits our entire world.

XIII - We must examine how we use these new instruments we have created in order to benefit humans rather than harm them. AI is a fruit of our anthropology if anything, a creation that comes from our altriciality. We will use AI to make up for our lack of natural defences and capabilities like we have done with so many other tools in the past.

¹⁹⁰ Ibid, 35:15.

Conclusion

In conclusion, firstly the concepts of Pelagianism and Gnosticism are nothing more than a historical fashion of previous examples of disenchantment. The threat of AI is simply the same threat of angels -supra cognitive beings - in the medieval era, just in different attire.

The existence of AI has no effect on Christian anthropology; this is due to our *Imago Dei*. Assuming Christian anthropology, these arguments can't work logically; those who think otherwise are making a category mistake. If AI was to be a threat to us in this way, our anthropology was already absent. For AI to be any kind of threat it needs us to have anthropology so that we can register it as a threat to humans, this any such threat is parasitic on the requisite anthropology, so how can a threat be mounted if such anthropology does not exist? We must acknowledge that these arguments from disenchantment are not causal, they only expose.

Given that the above is demonstrable, we must then examine AI as a threat, not anthropologically but sociologically and economically for example. We must examine how we use these new instruments we have created in order to benefit humans rather than harm them. AI is a fruit of our anthropology if anything, a creation that comes from our species-specific altriciality, one that gave rise to enormous neurological development, and that rectified the plethora of weaknesses our species intrinsically display: no armour, mediocre teeth, rather slow, can't fly, no poison, in short, no weaponry, nor protection, thus we are inherently *Homo faber*. Also, the *imago Dei* suggest not only such vulnerability, what after all is religion if not a sense of dependence, as Schleiermacher insisted, referring to: that of '*das schlechthinnige abhangigkeitsgeful*' (absolute feeling of dependence).¹⁹¹ The *Imago Dei* also suggests our awareness of this vulnerability, not just danger, but mortality or finitude, before it happens – *Homo prospectus*.¹⁹²

To agree with McCorduck, holding a symbiotic relationship between humans and machines is the most desirable and realistic outlook for AI.¹⁹³ This is why I argue we must totally cease arguing any negative anthropological claims, which is but misdirection, and realise that the issues are epistemic, and not metaphysical, thus delegated to sociological, psychological, economic, and political registers, the effects of which, to be noticed, require that, ontologically, the human remains and is subjected, for good or bad, to any perturbations.

 ¹⁹¹ Georg Behrens, "Feelings of Absolute Dependence or Aboslute Feeling of Dependence? (What Schleiermacher Really Said and Why it Matters," *Religious Studies 34*, no. 4 (1998), 471 - 481.
¹⁹² Chandra Sripada, Peter Railton, Martin Seligman, Roy Baumeister, *Homo Prospectus* (New York: Oxford University Press, 2016).

¹⁹³ McCorduck, *Machines who Think*, 373.

Bibliography

- Altmann, Alexander, "Homo Imago Dei" in Jewish and Christian Theology," *The Journal of Religion* 48, no.3 (1968), 235 259.
- Aquinas, Thomas, *Summa theologica*. Translated by Fathers of the English Dominican Province. New York: Benziger Brothers, 1911-1925.
- Bacon, Francis, New Atlantis. Thomasmorestudies, Accessed June 21st, 2020. <u>https://www.thomasmorestudies.org/docs/Bacon.pdf</u>
- Bacon, Roger, and Robert Belle Burke, *Opus Majus, Volumes 1 and 2*, Philadelphia: University of Pennsylvania Press, 2016.
- Barth, Karl, *Church Dogmatics: The Doctrine of Creation, Volume 3, Part 1-The Work of Creation,* London: T & T Clark International, 2004.
- Behrens, Georg, "Feelings of Absolute Dependence or Aboslute Feeling of Dependence? (What Schleiermacher Really Said and Why it Matters," *Religious Studies 34*, no. 4 (1998), 471 - 481.
- Berwick, Robert C, and Noam Chomsky. *Why Only Us*. Massachusetts: The MIT Press, 2015.
- Bostrom, Nick, Super Intelligence Paths, Dangers, Strategies, Oxford: Oxford Press, 2014.
- Brague, Remi, *The Wisdom of the World, The Human Experience of the Universe in Western Thought*, Chicago: University of Chicago Press, 2003.
- Brierley, Justin, Micah Redding, Nigel Cameron, "Should Christians Embrace Transhumanism? Micah Redding vs. Nigel Cameron," Premier Christian Radio (Podcast), Accessed February 21st, 2020. <u>https://www.premierchristianradio.com/Shows/Saturday/Unbelievable</u> /Episodes/Unbelievable-Should-Christians-embrace-Transhumanism-<u>Micah-Redding-vs-Nigel-Cameron</u>
- Brittz, Karli, "Gnosticism, technology and the soul in Cuaron's Gravity" Journal of Religion and Film 21, no. 1 (2017), 1 – 20.
- Buber, Martin, "I and Thou," Edinburgh, T & T Clark, 1937. Accessed June 10th, 2020, <u>https://archive.org/stream/IAndThou_572/BuberMartin-i-and-thou_djvu.txt</u>

- Burdett, Michael, "Can we say "you" to artifacts: Personhood and creation in a technological world," The Faraday Institute, Accessed June 10th, 2020.<u>https://www.faraday.cam.ac.uk/resources/multimedia/can-we-</u> say-you-to-artifacts-personhood-and-creation-in-a-technological-world/
- Cahill, Lisa, "Toward a Christian Theory of Human Rights" *The Journal of Religious Ethics 8*, No.2 (1980), 277 301.
- Cameron, Nigel, *The Robots Are Coming: Us, Them & God*, London: CARE, 2017.
- Čapek, Karel, *Rossum's Universal Robots*, London: *Penguin Books*, 2004.
- Cominelli, Lorenzo, Gustav Hoegen, and Danilo De Rossi, "Abel: Integrating Humanoid Body, Emotions, and Time Perception to Investigate Social Interaction and Human Cognition" *Applied Sciences* 11, no. 3, (2021), 1 – 14.
- Cunningham, Conor, *Darwin's Pious Idea: Why the Ultra-Darwinists and Creationists Both Get it Wrong*, Michigan: WM. B. Eerdmans Publishing Co, 2010.
- Darwin, Charles, *The Origin of Species by Means of Natural Selection* New York: D. Appleton and Company, 1859.
- Dennett, Daniel, "Will AI achieve Consciousness? Wrong Question," Wired, Modified 19th February, 2019. https://www.wired.com/story/will-aiachieve-consciousness-wrongquestion/?mbid=social_twitter_onsiteshare
- Dennett, Daniel, *Darwin's Dangerous Idea, Evolution and the meanings of life* London: Penguin Group, 1995.
- Dewey, John, *The Influence of Darwin on Philosophy and Other Essays*, New York: H. Holt and Co., 1910.
- Donahoe, Eileen, Megan MacDuffee, "Artificial Intelligence and Human Rights" Journal of Democracy 30, No.2 (2019): 115 – 126.
- Dumouchel, Paul *Living With Robots,* Massachusetts: Harvard University Press, 2017.
- Dyer, John, *From The Garden To The City, The Redeeming And Corrupting Power of Technology,* Grand Rapids, Kregel Publications, 2011.

- Fauconnier, Gilles, and Mark Turner, *The way we think: conceptual blending and the mind's hidden complexities*, New York: Basic Books, 2010.
- Favale, Abigail, "Evangelical Gnosticism," firstthings.com, accessed April 12th 2022, https://www.firstthings.com/article/2018/05/evangelicalgnosticism
- Feuerbach, Ludwig, *The Essence of Christianity*, New York: Prometheus Books, 1989.
- Firth, Emma, "Prometheus, The Mythical Story of Prometheus," Tales beyond belief, Accessed 7th June, 2020, http://www.talesbeyondbelief.com/myth-stories/prometheus.htm
- Fuchs, Thomas, "The Brain A Mediating Organ." *Journal of Consciousness Studies* 18, No. 7–8. (2011), 196–221.
- Gurmin, John, "A Study of the Development and Significance of the Idea of the 'Image of God' from its Origins in Genesis through its Historical-Philosophical Interpretations to Contemporary Concerns in Science and Phenomenology," PhD diss., Maynooth University, 2010.
- Hankey, Alex, "Kasparov Versus Deep Blue: An Illustration of the Lucas Gödelian Argument," *Cosmos and History: The Journal of Natural and Social Philosophy 17*, No. 3, (2021), 60 – 67.
- Hehn, Johannes, "Zum Terminus 'Bild Gottes'," *festschrift Eduard Sachau zum siebzigsten Geburtstag*, (1965): 36-52.
- Henry, Michael, *Barbarism*, Translated by Scott Davidson London: Continuum International Publishing Group, 2012.
- Herman, Arthur, "Who Will Control the Machines?," Commentary, Accessed April 15th, 2022. https://www.commentary.org/articles/arthurherman/age-of-ai-kissinger-schmidt-huttenlocher/
- Herzfeld, Noreen L, *In Our Image, Artificial Intelligence and the Human Spirit, Minneapolis: Fortress Press, 2002.*
- Hildt, Elisabeth, "Artificial Intelligence: Does Consciousness Matter?" *Frontiers in Psychology 10,* No. 1535, (2019), 1-3.
- Hitler, Adolf, *Mein Kampf*, Boston: Houghton Mifflin, 1999.

- Hume, David, "Of suicide," *Hume Texts Online*, Accessed May 13th, 2022, https://davidhume.org/texts/su/
- Hütter, Reinhard, "The Wisdom of the Cross Is the Wisdom of Charity: Thomas Aquinas's Soteriology—an Anticipatory Refutation of Neo-Pelagianism and Neo-Gnosticism." *Nova et vetera* 19, no. 1 (2021): 135-161.
- Jackelén, Antje, "The image of God as Techno Sapiens," *Zygon 37*, no.2 (2002): 289-302.
- Jeffery, Lloyd, "Wordsworth & Science." *The South Central Bulletin 27*, No. 4 (1967): 16 22.
- Kilner, John, *Dignity and destiny, humanity in the Image of God*, Michigan: Wm. B. Eerdmans Publishing Co., 2015.
- Lorenzo, Cominelli, Gustav Hoegen, and Danilo De Rossi, "Abel: Integrating Humanoid Body, Emotions, and Time Perception to Investigate Social Interaction and Human Cognition" *Applied Sciences* 11, no. 3, (2021), 1 – 14.
- McCorduck, Pamela, Machines who Think A personal Inquiry into the History and Prospects of Artificial Intelligence, Massachusetts: A K Peters, Ltd, 2004.
- Metzinger, Thomas, Being No One: The Self-Model Theory of Subjectivity, Massachusetts: MIT Press, 2003.
- Moor, James, "The Dartmouth College Artificial Intelligence Conference: The Next Fifty Years," *AI Magazine 27,* No.4, (2006), 87 -91.
- Nagal, Thomas, "What Is It Like To Be a Bat." *The Philosophical Review 83*, No.4 (1974): 435-50.
- NewScientist, *Machines That Think*, London: John Murray Learning, 2017.
- Niebuhr, Reinhold, *The Nature and Destiny of Man: A Christian Interpretation*, London, Nisbet and Co.LTD., 1941.
- Noble, David F, *The Religion of Technology, The Divinity of Man and the Spirit of Invention*, New York: The Penguin Group, 1999.
- PARO Therapeutic Robot, ParoRobots, accessed 25th May, 2020, http://www.parorobots.com/

- Pascal, Blaise, "The Thoughts of Blaise Pascal," *Online Library of Liberty*, Accessed 30 August, 2021, <u>https://oll.libertyfund.org/titles/pascal-the-thoughts-of-blaise-pascal</u>
- Pontifical Academy for Life, "RenAIssance Rome Call for Ethics," YouTube, 3rd March, 2020. <u>https://www.youtube.com/watch?v=-</u>
 <u>bM4Hrj2Euw&list=LLgLEBFIWL6rLWREQWGf2Czg&index=4&t=0s</u>
- Power, William, "Imago Dei Imitatio Dei," *International Journal for Philosophy of Religion 42*, no. 3, (2021), 131 141.
- Russell, Stuart, *Human Compatible, AI and the Problem of Control,* London: Allen Lane, 2019.
- Saint Anselm, *Cur Deus Homo*, Texas, RDMC Publishing, 2005.
- Saint Athanasius, *On The Incarnation, De Incarnatione Verbi Dei*, Poland: CreateSpace Publishing, 2017.
- Smart, Andrew, *Beyond Zero and One: Machines, Psychedelics and Consciousness,* London: OR Books, 2015.
- Squires, Stuart, "The Reception of Pelagianism in Contemporary Scholarship," *Annales theologici 35*, no.1 (2021), 135 152.
- Sripada Chandra, Peter Railton, Martin Seligman, Roy Baumeister, *Homo Prospectus*, New York: Oxford University Press, 2016.
- Stengers, Isabelle, *Another Science is Possible, A Manifesto for Slow Science,* Cambridge: Polity Press, 2018.
- Tegmark, Max, *Life 3.0: Being Human in the Age of Artificial Intelligence*, London: Allen Lane, 2017.
- Turing, Alan "Computing Machinery and Intelligence." *Mind 59*, No. 236 (1950): 433-460.
- Turkle, Sherry, *Alone Together, Why We Expect More from Technology and Less from Others,* New York: Basic Books, 2011.
- Vallor, Shannon, "Carebots and Caregivers: Sustaining the Ethical Ideal of Care in the Twenty-First Century." *Philosophy & Technology* 24, no. 3 (2011): 251-68.
- Vallor, Shannon, *Technology and the Virtues: A Philosophical Guide to a Future Worth Wanting*, (New York: Oxford University Press, 2016.)

Accessed 15th September, 2021,

http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780190 498511.001.0001/acprof-9780190498511

- Weber, Max, *Protestant ethic and the spirit of Capitalism*, New York, Charles Scribner & sons, 1958.
- Weber, Max, *The Vocation Lectures*, Translated by Rodney Livingstone Indianapolis: Hackett Pub, 2004.
- Wiener, Norbert, *God & Golem, Inc: A Comment on Certain Points where Cybernetics Impinges on Religion,* Massachusetts: The M.I.T Press, 1996.
- Wynsberghe, Aimee, "Designing Robots for Care: Care centered Value-Sensitive Design." *Science and Engineering Ethics* 19, No 2. (2011): 407-433.