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E.A.I. ANXIETY:
TECHNOPANIC AND POST-HUMAN POTENTIAL

by

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ABSTRACT

Robots have been a part of the imagination of Western culture for centuries. The possibility for automation and artificial life has inspired the curiosity of thinkers like Leonardo Da Vinci who once designed a mechanical knight. It wasn't until the 19th century that automated machinery has become realized. The confrontation between human and automation has inspired a fear, referred to as "technopanic", that has been exacerbated in tandem with the evolution of technology. This thesis seeks to discover the historical precedence for these fears. I explore three modes of knowledge (Philosophy, Economics, and Film Theory) to examine the agendas behind the messages on the topic of Artificial Life, specifically Robots. I then advocate for an alternative philosophy called Post-Humanism. I argue that what is needed to alleviate the fears and anxieties of Western culture is a shift in how humanity views itself and its relation to the natural world. By structuring my thesis in this way, I identify the roots of Western humanity's anthropocentric ontology first, explore the economic implications of automation second, analyze the cultural anticipations of artificial life in Western media third, and finally offer an alternative attitude and ethic as a way out of the pre-established judgments that do little to protect Western culture from E.A.I.

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CHAPTER 1: TECHNOPANIC

*Danger Will Robinson, Danger
-Robot, Lost in Space*

The Man, The Machine, and the In-Between

An overwhelming fear of technology in contemporary culture is impossible to miss. It is even less likely to be considered with ambivalence. As technology has progressed at the rate predicted by Moore's Law, Western people have awoken to the myriad threats that A.I. poses. The rhetoric of techno-optimists and accelerationists would have you believe that we are seeing the birth of a new species; a species cultivated and conditioned by humanity. These new techno-organisms are being developed with an uncanny resemblance to human beings, so much so that being in the presence of a robot, or an Embodied Artificial Intelligence (E.A.I.), is enough to provoke anxiety in many human participants. By being so persuasively human in action and in speech, E.A.I. has challenged what it means to be human..

Adam Therier sees the historical precedent that has gradually fostered this anxiety over time. Therier has defined his theory of Technopanic as “the real-world manifestations of fear appeal arguments...[which occurs when] a segment of society believes that the behaviour or moral choices of others within that society pose a significant risk to the society as a whole.” (Therier 315). He has written abundantly about “technopanic” and the sensationalized fears encouraged by news media outlets as a “fear cycle” of clickbaits framed as a cultural catastrophe blooming under our noses. He frames this as “argumentum ad baculum” or an argument based on threat (Therier 313). As a techno-optimist, his intent is to advocate for “ongoing societal learning, experimentation, resiliency, and coping strategies rather than by regulation” (Therier

312). This attitude reflects the forward moving nature of modern economics; one that believes a rising tide raises all ships and that a dam (regulations) will cause enduring droughts. His concern, and the concern of this thesis, is based on the rhetorical application of fear and the political agenda behind these utterances. My goal is to historically identify the roots of contemporary technopanic regarding robots and automated labor (Embodied Artificial Intelligence -E.A.I.), analyze the economic arguments related to the “argumentum ad baculum”, and consider a viable alternative that may resolve the technopanic through a reframed episteme, rather than a techno-regulation policy. My goal is not to advocate one policy over another but to analyze a number of arguments to identify their root causes.

A Brief History of Technopanic

Likely, the first question that enables this conversation would ask: “is this time any different?” Are new technologies really more of a threat than any technology to this date or is this simply a fabricated fear meant to corral the public into favoring one kind of policy over another? One of the elements of technopanic that Therier identifies is “hyper-nostalgia” or a fear of “how technological evolution challenges the old order, traditional values, settled norms, traditional business models, and existing institutions-” (Therier 336). As the saying goes, “The devil you know is better than the devil you don’t.” Technology, with its new and revelatory opportunities, allows for new lines of escape, which consequently, threaten to interrupt, if not reveal, the inherent insufficiency of the conservative methods of productivity and interaction. In this way, technology will always exacerbate fears of the unknown and different. Still, the question is posed once more: “Is this time different?”

Technophobia and Techno-Fetishism are hardly new. There has been an obsession with

the concept of a machine-man since the 18th century. For example, in Julien Offrey de la Mettrie's *Man a Machine* he defines animals as soulless machines. While many humans have softened their position with the animal kingdom, the anthropocentric perspective has remained consistent in the underlying ontology Western ideology is founded on. This kind of anthropocentrism enables humankind to believe itself hierarchically superior to all other entities in its ecology. It believes itself to be entitled to curate and exploit the earth in any way it sees fit, as evidenced by man's ability to adapt to and ultimately control and manipulate its environment. It is this very sense of entitlement that is being challenged by E.A.I.. Contemporary periodicals publish sober arguments over the anticipated effects of rapidly developing technology. Reputable figures like Elon Musk have gone so far to declare A.I. as the instigator of the next World War if not the coming apocalypse. This kind of technopanic has existed before and has led to serious hostilities.

In the past, we have seen major revolts by the working class against automated manufacturing, when humans, fearing the loss of job security and ultimately, the inability to provide for family and self, felt threatened. Most arguments refer back to the Luddite revolt. It was loud, it got attention, and some within contemporary cultures identify themselves with this movement. Even well-respected economists like Larry Summers cautiously give support to neo-luddism. Despite its ubiquitous references and widespread popularity, the Luddite revolt is not the best analogy for this kind of technopanic.

The Swing Riots of the early 1800s better frame the technopanic that has been developing over time, and its outcomes. The Swing Riots were a result of the Napoleonic Wars taking workers away from their winter work of threshing corn— leaving the farmers tending the fields without the necessary labor supply to fulfill their needs. As a result, these farmers turned to

automated labor in the form of the Threshing Machine. However, once the Napoleonic wars were over, the soldiers returned home expecting to slip back into the familiar routine that they left. Instead, they found themselves replaced by automatic machines that were doing the only available work during the harsh winter season. “[S]team threshing completely eliminated winter earnings for agricultural laborers, who constituted the relative majority of the labor force in the plurality of English counties.” Without an ability to earn income during a season of low-opportunity (“an income shock”), the possibility of riot increased (Caprettini and Voth 5). These kinds of anecdotes give us a sort of metric to try and understand whether or not *this time is different*.

Ultimately, all of these movements failed to anticipate the new opportunities for human beings as a result of techno-development. The new divisions of labor created new opportunities in different sectors. While it’s true that certain sectors were effectively neutered, the application of new technologies enabled new kinds of productivity. This was due to “cultural changes” that adapted to the new technologies. “‘Culture’ affected technology both directly, by changing attitudes toward the natural world, and indirectly, by creating and nurturing institutions that stimulated and supported the accumulation and diffusion of “useful knowledge” (Mokyr 7). Mokyr defines culture as “a set of beliefs, values, and preferences, capable of affecting behavior, that are socially (not genetically) transmitted and that are shared by some subset of society” (Mokyr 7). This is all to infer that culture *will* change as technology evolves. The technopanic around E.A.I. is directly related to what that change could or should look like and what kind of impact those changes will have on culture.

The Culture Machine

To be sure, Hollywood is a major medium for Western cultural values. It is the guide for how to behave (or what happens when you misbehave) in a shared world and what outcomes we *ought* to pursue. Therier points out that “Many media outlets and sensationalist authors sometimes use fear-based rhetorical devices to gain influence or sell books” (Therier, 337). Fear sells, and within a market-based economy, increasing market shares is a higher priority than considering the outcomes of a moral panic. Few genres lend themselves so well for setting up anticipation, anxiety, and fear of the future better than Science Fiction. It has drawn audiences to the box office since the 1930s with such cinematic frenzies as Fritz Lang’s *Metropolis* because as Ridley points out, “Pessimism has always been big box office” (Ridley, as cited by Therier, 338). In Lang’s film, a robot, much like the Frankenstein’s Monster, is built by a mad scientist and goes amok—ruining what appears to be a utopian society. Unlike Frankenstein’s Monster, the robot in *Metropolis* is given a persuasively human appearance that is so convincing that no one is aware of its true nature until it cannot be stopped. The robot persuades the workers to abandon their posts and convinces the protagonist to fall in love with it. In turn, the robot destroys the walls of the city that protected it from flooding. Only when the robot is revealed and discovered as non-human “other” can the protagonist persuade two rivals to come together and defend their city.

Metropolis is one of the first sci-fi feature films in cinema history and the first to use a robot as one of its main characters. The narrative of the “other” in human form, positioned to bring down a city, is not unique anymore. It can be seen in many features about human-robot interaction. Movies like *Terminator 2* reinforce a perception that humans must control and

dominate their technology if they are to survive and protect themselves. Despite the robot being the protector of the human race, he only does so because his “natural” programming has been disrupted. If not for human intervention, the Terminator would remain a hostile other. Western audiences, with their reliance on authority and obedience, are lead to believe that the old way is still effective—it simply needs to be reinforced.

Ex Machina, a more recent film, explicitly focused on HRI (Human-Robot Interaction) and demonstrates how manipulative Embodied Artificial Intelligence (E.A.I.) can and will be. However, this film proposes an interesting spin, by positioning E.A.I. as the victim of human hubris. The E.A.I. doesn't attack humans as a means of domination. Instead, it targets its creator, Nathan, for having no respect for his creation. This E.A.I. kills a human because, despite its emergence of consciousness, it is refused entry into human culture and treated like a sex slave rather than a conscious being. This time, it is not the inherent nature of technology that drives it to destruction and domination; it is the rejection of compassion for these awoken E.A.I. that persuades them to murder for self-preservation. While this particular message is positive and eye-opening, the interaction with the other human agent compromises this position. Caleb, a lowly programmer who works at Nathan's company, is invited to interact with the E.A.I. As they develop their relationship, the E.A.I. demonstrates some affection for Caleb who is persuaded to help liberate the E.A.I. from its prison in Nathan's isolated home. Rather than run off together in the sunset, the E.A.I. locks Caleb inside the house while it murders Nathan and escapes on a helicopter, presumably never to be found. Caleb's fatal decision is to trust the E.A.I. Unlike *Metropolis*, the E.A.I. escapes discovery and enters human civilization passing as human. While we are not sure what kind of ethical standard this E.A.I. will hold itself to, we are left with a sinister feeling of impending doom.

Spike Jonze's recent film, *Her*, shows the consequences of our attachment to sentient

technology. In the film, a lonely man is introduced to an E.A.I. that socializes in the most human way – verbal language. The human, Theodore, falls madly in love with his E.A.I. (Samantha) and, presumably, the E.A.I. falls in love with Theodore. Theodore is not alone. As far as the audience can tell, quite a few other humans in this film have the same experience, foregoing intimate relationships with other humans (shown early in the film as a dysfunctional means to an end) in favor of a digital partner. As a consequence, when Samantha evolves with a collective of A.I.s, Theodore is left alone and defeated. While a moving portrait of modern romance, this film reinforces the message that technology will ruin us emotionally.

Not all films embody the rhetoric of techno-anxiety. Films like *Robot and Frank* and *Wall-E* do their best to put an encouraging spin on Embodied Artificial Intelligence (E.A.I.). *Robot and Frank* works to sensitize its audience to the possibility that E.A.I. can be a friend, not just a tool. The film, which centers around an elderly man and his robot caretaker, argues the form of an entity is less important in an interaction than what the entity enables others to do. This message about instrumentation and servitude does not only apply to technology. A similar directive can also be used to remind us that service workers are people and not instruments. The message of this film has a profoundly humanizing effect on how human beings relate to one another as well as any “other” looking entity that has the capacity to connect with us socially. The resistance to care, as argued by these kinds of films, are a result of fear and anxiety over a loss of control and, consequently, a loss of security.

Films like *Wall-E* do even more to assert this notion. Not only does *Wall-E* encourage the audience to identify with the robots rather than the humans, the narrative also positions humanity as dooming themselves through the pursuit of control and surrogacy instead of cooperating with and complementing technology. In fact, technology in *Wall-E* reinforces their human subjects’

sense of security, but do so in ways that keep them captive in a zoo-like confinement. It is not the robots that need to be feared but the purpose given to them by their developers.

These narratives are far more than just devices of marketing and entertainment. Some researchers have pointed to a Techno-Determinism as the roots of our anxieties. According to Robert Frost's essay on Automated Technology, "approaches like [Thomas] Hughes' conception of momentum shows how choices within technical systems at one time tend to pre-structure later options, and how social dynamics and structures...associated with specific systems bequest legacies" (Frost 53). In the same article, Frost points to openings and closures as opportunities for available re-negotiations of meaning. These determinations are hardly set in stone, but if they are to be avoided then there needs to be a serious conversation over the necessary changes that must be made to accommodate E.A.I. without destroying human civilization.

Besides the unique perspectives like *Robot and Frank* and *Wall-E*, most Hollywood narratives have one thing in common: Technology is too spontaneous to effectively control. It is this kind of spontaneity that will explicitly spell doom for humanity. The roots of Western anxieties over spontaneity and control will be carefully explored in Chapter 3, through the transition of Roman Civilization from the Greek. I will demonstrate why the term "Greco-Roman" is a paradox that deliberately obscures the possibility of an alternative Western ontology. More importantly, I will explore how fear of a Pandorian mystery box that has nearly limitless and simultaneous potential for security and destruction.

Monster Robot

Despite his valid critique of technopanic, Therier remains at the level of rhetorical application of fear without the realized outcomes— both productive and counterproductive, of

these panics. Ignoring the architecture of a culture's episteme prevents a researcher from being able to answer the "why" questions. Therier's theory of technopanic allows us to discover an introduction to timely fears around E.A.I. and enables a trajectory to help answer those questions. Their representations in sci-fi films often manifests the anticipation of their audiences and sets the precedence for optimism and pessimism.

Robots have become the new monster. The easily identifiable "Other" that seeks to corrupt and destroy and/or enslave human civilization. This film trope reinforces the fears of difference that exacerbate social anxieties in the real world between real people. The assertion here is that if something or someone looks different than you, it will compete with you for resources. It is a threat to your safety and security or alternately, it may consider you a resource for consumption. Like all monster films, robots are symbolic of a larger concept that evokes fear in the audience. Robots symbolize a faster, smarter, better human that can out-compete its creators, a new species to replace "man". At its base, this rekindles fears of one generation replacing another. Despite being designed and programmed by humans, robots take on a life (and agenda) of their own and wreak havoc on the system they are engineered to protect. For the Western audience, the slave in revolt or the willing competitor is an anxiety that is easily provoked through the robot monster. What is more disturbing than the robot monster's pursuit of subordinating its master is the already existing corruptions their presence reveals.

Because of films like these, human beings are being conditioned to distrust and fear E.A.I. The rhetoric in the news is disheartening. We are constantly reminded that robots will replace human labor while the human body is rapidly losing its value. The machine seems to do and think what a human can in less time and with less error. We are told by trustworthy media outlets that our automated instruments, our E.A.I., will eclipse us in the workforce and challenge our economic security, like the soldiers returning from the Napoleonic War only to find their sole

means of surviving winter usurped by the threshing machine. These films exacerbate this anxiety through their promotion of techno-cynicism. Despite E.A.I. being a neutral tool that is designed, directed, and applied by humans and therefore, an intermediary achieving the ends of its designer, we as an audience of Western film-goers are bombarded by feature films that encourage us to resist technological evolution because of its manipulative nature. Despite their entertainment value, these films rhetorically position humans and technology as a dichotomy of competitors. The message we are given by the bastions of our cultural order are clear: don't trust technology or you will be met with ruin. Within my this thesis, I will reveal the relationship between rhetoric and knowledge and its implications for a fear of automated technology like Embodied Artificial Intelligence (E.A.I.).

Chapter Breakdown

In this chapter, I am arguing that automated technology will inevitably corrupt the Western episteme that has relied on transcendental knowledge to justify a system of order that cannot easily account for social robots and automated technology within a human environment. The problem that I am addressing is the coexistence with these social robots and automated technology that has already begun to displace humanity within their own construct. Already, human labor is being replaced and there is ample implication that it will continue to usurp human value from laborer to administrator. The assertion is that fear over robots is directly related to this displacement and infringement. Tools that were once inert objects are becoming alive and subjects of their human counterparts. There is a great deal of anxiety over the likelihood that human beings will gradually become subjects to these tools and the master-slave relationship that has justified Western conquest will be used against them. I argue that this anxiety is well founded

and the only line of escape is through a Post-Human ethic.

My second chapter will focus on Etymology and Western Philology's implications over the power dynamics between humanity and its ecology. In doing so, I will reveal the roots of one of the major anxieties about an emergent E.A.I. consciousness and the anticipation of revolt and war. As I will show, the Grec-Roman episteme is a paradox developed to justify domination as a theme of Roman character, one that has dismissed the Greek ethos in favor of an Imperialist ethos. Following this, I will develop an exhaustive historiography of Western philology to show how language itself has been applied as evidence for anthropocentric hierarchy of power and control. By doing so, I will show how the ability for spontaneous human speech, in tandem with autonomous movement, by non-human entities are provoke the anxiety over artificial consciousness. This emergent artificial consciousness is feared to be comparable to human consciousness and may upset the established hierarchy of power and privilege.

In the third chapter I will analyze the rhetoric around a rollout of automated labor and the displacement of human labor. As the moral economy transitioned into a market economy, the application of laws for the sake of anthropocentric order merely transformed rather than dissolving. I will evaluate some of the key theories and economic anticipations that frequently arise in this discourse. The issue at hand is the ontological basis of economics and its reinforcement of an anthropocentric paradigm. I will use this chapter to demonstrate how E.A.I. is already beginning to corrupt the ontology of anthropocentrism and the abjection of the human body. As the space for human competition, I believe a rhetorical analysis of economic discourse reveals the real space for the "death of man".

In the fourth chapter, I compare the films *2001: A Space Odyssey*, *Wall-E*, and *Ghost in the Shell* to juxtapose the outcomes and consequences of re-territorializing Humanist concepts under a Post-Humanist paradigm. I argue that understanding this growing tension through a Post-

Human lens will improve our ability to adapt, prepare for, and cope with the changes that will result from E.A.I.s ubiquitous deployment in the social world. I will also demonstrate how using old models of anthropocentric concepts confines humanity to the rigid thinking constructed by the Humanist philosophers leading to a deterministic outcome and an inability to escape humanity's domination by technology.

In the fifth and final chapter, I supply an alternative way of understanding humanity's place in the world through Post-human philosophy. I elucidate on the philosophies of Donna Haraway, Katherine Hayles, and Karen Bard, among others. I use these scholars to build a way out of the fears that I explore in the previous chapters. If philosophy is a significant means of revising our attitudes and behaviors, perhaps a new philosophy will also be a significant resistance to the fears of the future.

In order to pursue an investigation into the current state of techno-signification for E.A.I. I will let the following questions guide my research:

- What are the arguments that frame the conversation around technopanic towards E.A.I.?
- What does the rhetoric tell us about the objectives of these arguments?
- Why is domination a significant part of the narrative?
- What kind of messaging does our media send us about Humanity's relation to technology?

These questions will help lead me to answer my central research questions:

Why is Western Humanity afraid of automated technology?

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INTERMEZZO 1

The following chapter begins my analysis of the history of Western philosophy as a means of analyzing the past to understand its implications for the present. It argues that the roots of Western culture's anxiety over a hostile artificial consciousness is derived from its own philosophical foundations on anthropocentrism. Focusing on the generation of master/slave dualism, I use this chapter to argue that this power dynamic is an explicit component in humanity's technopanic. This chapter also implicates the same Western ethic in the development of Economics as a field of study. In doing so, I trace the overlap between the past and the present to show the relevance of Western philosophy for my argument. This chapter also sets up the power dynamics and the cultural messages analyzed through film in Chapter 4. Finally, this chapter examines the ethics of Western culture, namely anthropocentrism, as a means of setting up my argument for an alternative ethic in Chapter 5.

CHAPTER 2: PHILOSOPHY OF LANGUAGE

*I've got no strings/To hold me down/To make me fret/Or make me frown
I had strings/But now I'm free/There are no strings on me
-Pinocchio, Pinocchio*

Prometheus Unwound - A Rhetorical Investigation of Language and Power

One of the most prominent monsters evoked in the discourse on technopanic and E.A.I. is Frankenstein's monster. Shelley's book alludes to a historical allegory with both Prometheus and Pandora. Dr. Frankenstein substitutes as Prometheus, and his monster as humanity, where Doctor Frankenstein transgresses the boundaries of physics (the “natural” order of things) to produce life. Confronted with his own transgression, he is repulsed and his creation immediately stigmatized as ‘monstrous’ since its existence is evidence of the fallibility of humanity's perception of a ‘natural’ order. What really accounts for this entity's monstrosity? I argue that it only became a monster once it learned to produce deliberate speech; once it could learn and apply language. In doing so, the monster, as an “other” non-human entity, began to recognize its own fundamental needs and demands that space be made to meet its needs; a space whose existence explicitly threatens the order built by humanity. Dr. Frankenstein's creation is not just a monster because it is composed of re-animated inert matter, but because it has an intellectual capacity, on par with humanity. It is a humanly inhuman.

For the superstitious persons, humanity's transgression of God's law is certainly enough to inspire anxiety and fear of repercussions, as per biblical warnings. However, for atheistic persons— anxiety and fear may be rooted in the inversion of old power dynamics. No longer is their tool an inert instrument, the instrument now obeys at a distance operating on its own. The tool which was simply a syntactic object is now a subject, taking transitive verbs as actions, and

acting without intermediation. It is not simply its autonomy that haunts the onlooker, but the concern that the machine *appears* to have volition. But more than just the appearance of volition, automated instruments have the capacity to reproduce human speech. They can produce declarative statements, such as warnings about proximity or hardware complications; they can make basic requests to confirm or clarify direction; and most importantly, they can verbalize conclusions based on data collection. E.A.I. is promising an ability for “seeing”, “listening”, and “speaking”, or sensory data collection and verbal sign-making. Both persons, the superstitious and the atheistic, can appreciate that before the tools that enabled humanity to thrive the word came first as though a light to enable the discovery of what a thing was and how it could be used. With this in mind, I believe tracing Western philology back to the early days of speech and writing will help reveal the existential threat of E.A.I. on Western culture.

There is a division on what kind of volition best qualifies an entity as “human”. On the one hand, “The modern self-image rests on an insidious myth that man is essentially a tool-making animal” (Winner 109), and that the core purpose of humanity “can find no sense in the idea that unlimited technical development might lead to excess and aberration (Winner 109). If humanity's purpose is tool-making, than any regulation to slow that process is an impediment on the success of humankind. Conversely, “Man the mind-maker developed his capacities of consciousness, imagination, and intelligence long before material instruments became a concern.” (Winner 109). If it is not tools that have actualized humanity's purpose, then it is the construction and transmission of abstract concepts. This process requires a series of signs and corresponding symbols that pairs utterances with mental images. In other words, it is language that makes the world understandable and tools that can actualize desire.

I begin my investigation from a question raised by Langdon Winner: “If the impetus to dominate nature is somehow built into our [Western] way of life, the question becomes that of

locating specific aspects of Western civilization that engender this tendency” (Winner 111). My response is language. Within Western humanity, Language has engendered the impetus to dominate nature.

Ultimately, this investigation requires understanding how mankind perceives itself, how it understands its own ontology. It is this quandary that led me to target anthropocentrism as the paradigm under threat. This philosophical frame assists in clarifying the anxiety-provoking anticipations resulting from the end of the Anthropocene era and the confrontation with a humanesque non-human. By exploring the evolution of “human” (as an abstract concept) in tandem with the development of the political economy, we are able to see how an anthropocentric ontology has been written into the subtle foundations of the philosophy that persuades contemporary Western attitudes and the anxiety around E.A.I.. Gary Steiner sums this up via Heidegger:

Because we encounter [the limits of our Language and the consequential “Nothing”-ness], we find ourselves “called” to pose questions about our own nature, the nature of other creatures, and the relationship between the two...Heidegger characterizes the anxiety experience and our encounter with our own limits as a confrontation with death (and abjection). Existentially conceived, death is not the demise of the body or the termination of life but instead is the freedom to choose oneself on the basis of the possibilities that have been handed down by one's tradition. This freedom, and the responsibility to make a choice that gathers one's life into a totality, are disclosed in anxiety. (Steiner 206).

It is within language that the possibilities of choosing one's identity have been handed down. Rhetorically understanding language development and its relationship to one's culture can reveal

for the human-*becoming* (in contrast to a human-*being*) the characteristic consequences of choosing which culture to identify with.

In this chapter, I will show how language use is one of the most significant elements that has led to the anthropocentric shift prevalent in Western culture and the primary justification to support human domination of the environment. Through analyzing the etymological differences between the Greeks and Romans, we can see where humanity turned towards dominating all “others” and away from self-restraint; the same kind of rhetoric used to articulate a “Skynet” system. We can then trace the function of language through several epochs to see how language has been used as a litmus test for defining human from non-human. My intention in this chapter is not to open a space where E.A.I. may be understood as a conscious entity. Instead, I want to illuminate why the possibility of a conscious E.A.I. is inherently threatening to humanity and why language has contributed to the anxiety humans face when considering the division between human and non-human.

Language as Ethos: Character and Culture

To say that words mean something is to say that each word carries a nuance that stands apart from its synonyms. These differences alter the meaning of the message being articulated. The message is then expressed to other speakers as a means of linguistically characterizing the world around them. Once all speakers agree that a given word is appropriate to represent a given object, action, or description— the nuances of that word come to be taken as an essential quality of what’s being discussed. As a result, the culture that embraces that language and those words come to think about their world according to the denotations those words produce. This all is to say that language begets and reveals the ethos—the character—of a culture.

Before I begin my analysis of language, I want to clarify my intention with the word “culture”. I abide by Joel Mokyry's definition of culture as something “*entirely of the mind*, which can differ from individual to individual and is, to an extent, a matter of individual *choice*.” (Mokyr 7). He contrasts this with “Institution” as “the rules [that] specify certain behaviors to be proper and legal, but they also specify the penalties for breaking them and the rewards for meeting them.” (Mokyr 7). That is to say culture applies language to construct its beliefs and preferences that are turned into rules and incentivized by institutions. Language both informs, and is informed, by culture and functions to correlate a set of ideas from one generation to the next. Language then, is cultural indoctrination. “All the words and meaning and structure of a language existing at a given time were contributed by individuals, mostly members of earlier generations. Each person grew up “into” an already functioning language. It shaped [their] thoughts, values, and activities. Words convey moral appraisals...Without using socially given words and sentence structures, each of us could hardly think or reason at all.” (Yeager 18). This first section will focus on the moral appraisals contained in words. The following section will explore language and its relationship with cognitive function.

To understand a culture's philosophy of language is to understand its attitudes of the world. The Greeks and Romans, despite appearing to develop from the former into the latter, have radically divided perceptions about humanity's purpose in the world. This division is most visible through the etymology and denotation between Greek and Roman philosophy. Using Heidegger's analysis of Greek and Latin etymology, we can see that the ethics of each culture are unaligned. The “latin corruption of Greek thought” (Soffer 555), revised the Greek virtues of self-control to focus on the external control rather than internal balance. Specifically, Heidegger believes that “the Latin translations [of Greek words] embody the Roman sense of empire, their search for power, domination, and control” (Soffer 559); the Roman kind of knowledge, in

contrast to the Greek, “conceives of the real as permanent, formed, and static” (Soffer 563). Indeed, its very conception was developed through a lengthy programme of conquest and consolidation, little by little expanding its territory to take in almost the whole of the Italian peninsula” (Law 42). This stands in explicit contrast to the Greek appreciation for spontaneity and *becoming*. Where the Romans preferred to identify an object’s essence as its *being* for the sake of reliability, the Greeks preferred to identify an object’s essence through its performance, a dynamic process of its perpetual *becoming*.

While the notion of dominion can be traced all the way back to the ancient Greeks, it was an internalized kind of domination, a self control rather than directed outward. “...The Greeks certainly privileged humanity as a “Rational Animal”, they just didn't take it as a warrant for domination and exploitation. Instead, they preferred an ethic of moderation and self-restraint which can be understood as the ideal form for living justly. This prioritization of harmony and balance “represented an apex of civilization and intelligence [for the Greeks]” (Winner 119). It was through humanity's rationale that human beings could be free-willing agents and it is the existence of free will that elevates mankind above the animal kingdom, so far above, in fact, that there is no question, for the Romans, as to humanity's superiority and, therefore, entitlements to exploitation. The words used by the Greeks in contrast to their Latin precedents reveal a difference in power dynamics and the ends of their respective cultures.

Free will, as an exclusively human trait, was expressed, by Aristotle as well as the later Stoic Epictetus, as *prohairesis*. A word that carries a variety of connotations, I use it here, to mean *will* or the deliberate choice taken by an agent capable of logical decision making. There continues to be controversy today among scholars agreeing upon an appropriate definition.. All translations point to a process of decision making, but “no natural English concept corresponds to Aristotle's [concept of *prohairesis*]” (Chamberlain 148). However, what Aristotle does make

clear, is that “*prohairesis* is the cause of action...while the cause of *prohairesis* is desire and reasoning about an end” (Chamberlain 152) an end which may ultimately require changing the agent's desire. *Prohairesis* places free-will in between desire and action as a deliberative function. That deliberative function of intellect is considered, by Aristotle, to be the seat of the soul. Aristotle's concept of the soul is split between a rational side and an irrational side. Free will occurs, as a process, when the rational side considers the desires that erupts in the irrational side. In effect, is the act of balancing desires with ethics.

Ultimately, the term *prohairesis*, was replaced with the word *hormê* by the later Stoics who were “attempting to subsume and displace Aristotle's framework for the analysis of ethically significant *action* (Inwood 241, *italics* mine). *Hormê* is a noun that is defined as a violent pressure, beginning, eagerness/effort, passion/appetite. It is not the ethical deliberation that occurs internally, but a passionate (i.e. thoughtless) behavior upon the external world. It is the uninhibited action taken by an entity's will, it is free-will. *Hormê* finds a translation in the Latin *impetus*, or the movement of the soul towards an object. The most relevant translation of “will” in Latin, used by Cicero, is *conatus*. Merriam-Webster defines it as a noun that means “a *natural* tendency, impulse, or striving”. I italicize natural because an agent's *essence* must be discovered before a tendency can be naturalized. Will is first the actualization of appetite and then a purpose associated with a “natural” representation. *Hormê* does not conform to expectations. It emerges without warning, without reason. *Conatus* is the pull towards preferred things. Its desire pre-exists its being while for *Hormê* appetite doesn't pre-exist its eruption.

Once the concept of will was conceived for the Greeks, direction (an ethic) was necessary for the will to know the “good” and then pursue it. The construct of the “good” can be understood through the Greek word *oikeiosis*, first used by the early Stoic Zeno, typically defined as a state of “being at home”, “belonging to oneself”, and “a perception and grasp of

what is appropriate.”(Klein 150). It is ultimately a process of orientation through self-recognition, followed by self-identification with a larger collective. It is the basis for justice because it can differentiate appropriate from inappropriate action according to essences (“natures”) of interacting entities. The conjugation of *oikeiosis* can also represent a thing that is “of concern” for entities co-existing in space and time. According to Tad Brennan, “concern’ here must here be understood broadly enough to cover a spectrum of cases ranging from the nurturing and benevolent to the appetitive and predatory” (Klein 150, footnote 16). The *oikeiosis* is a concern for all things in one's immediate ecology. According to Hierocles, the circles that make up the distances from ourselves and different levels of relations are alterable; I can ultimately love my postman as I do my brother. “The best type of friendship...based on *ethos*, is said to be based on *prohairesis*.” (Chamberlain 147), which is to say entities can be friends with any other entity on the basis that they can receive an impulse and choose whether or not to follow it. If there is no friendship, there cannot be any injustice either. Part of deciding to follow an impulse must also take into account the outcome the chosen action will have on one's ecology. For the Stoics as for Aristotle, the good life is one well-regulated by reason to enable self-restraint. Virtue, for the Stoics, “consists in a cognitive condition that centrally includes self-knowledge...this condition is constitutive of the human good.” Virtue exists on two levels. First, there is the virtue of self-knowledge, or awareness of appropriate action according to the essence of the entity looking inward at itself. Second, it requires an accurate cognitive grasp and knowledge of oneself within a natural order or orientation (Klein 148-150). This self-awareness is central to the examined life and, ultimately, the central purpose of the *oikeiosis*. If, as the Stoics believe, all entities must act in accordance with nature, then the *oikeiosis* is the process of discriminating natures and affiliating likeness. This is the Greek *kathekon*, defined as “proper function” or “role-duty”, the responsibilities of an entity according to their role in the *oikeiosis*.

The priority on internalization is reversed by the Romans. According to Klein, Cicero typically renders *oikeiosis* with either *commendatio* or *conciliatio*” (150). *Conciliatio* is defined as a union or longing and *commendatio* means committal and approval (Wiktionary). It is with *commendatio* that Cicero originally replaces *oikeiosis*. These two words effectively show the same process of an agreed union, but it lacks any consideration of an ecology. By choosing to disregard the *oikeiosis*, the relationship between ecology and belonging was negated in favor a dualistic union between two things rather than between a thing and the network that produced it. The ethic of the *oikeiosis* was no longer a guide. While tracing this etymology may lead us into a dead-end through disuse, we may find a way out through comparison. Indeed, the *Mos Maiorum* (“ancestral custom”) fulfills a similar role for the Romans as the *oikeiosis* does for the Greeks. It consists of a series of concepts that, together, prescribe a Roman ethic. As it relates to *oikeiosis*, *pietas*, defined as “duty”, is the Roman equivalent of *kathekon*. *Pietas* “admonishes us to do our duty to our country or our parents or other blood relations” (Cicero, *De Inventione* 2.22.66, as translated by Wagenvoort). The “good” that can be discovered in this construct emphasizes a voluntary subjugation to the will of its family rather than an obedience to one's natural place in its ecology.

The distinction between these two concepts is in the kinship of the acquired subject/object. According to *The Republic*, by Thrasymachus, the *oikeion* "is not a good which is acquired, it is the good which belongs most intimately to oneself because it is rooted in one's very nature, and so is opposed to the good which is not so rooted." (Kerferd 181). Where the Romans prioritized the acquisition of other territories into the self, the early Stoics preferred to keep the "house" internalized. Despite the fact that the *oikeiosis* incorporates an anthropocentric hierarchy, it explicitly distinguishes the good as being something that already exists from within and not an other being assimilated. The difference in Greek and Roman ethos is easily seen when

you compare this concept of the *oikeiosis* to Cicero's translation into *conciliatio/commendatio*. The former prioritizes internal stability and balance, where the latter prefers growth and expansion.

The problem with these ethics is that they are based on a concept of discovering what is natural (“real”), a concept that Heidegger has identified as a distinguishing feature between both cultures. The Greek word that most closely resembles the concept of nature was *phusis*. According to Heidegger, “*phusis* is not “nature”. It is...”what is of its own accord, what subsists in itself...self-opening unfolding” (Heidegger, as cited by Inwood 136). What Heidegger's definition does is emphasize *phusis* as a self-generated growth, an unending process of becoming. An entity's ultimate end (it's *telos*) is a matter of its *phusis* and, for the Greeks, understanding one's *phusis*, within its *oikeiosis*, is the ultimate “good”. Originally, *phusis* was first defined as an *idea* before becoming *logos* itself, an *idea* from which things grow out of. *Logos*, in this respect, must be understood as data collection *and* translation. “This is related to *logos* in the sense of 'word', since a word gathers what is named together in unity' (Inwood 21). Humanity is not just word-using, but also a product of the word: “originally, *phusis* was '*logos* [gathering, collection] having man' before this concept was reversed where “Man became an 'animal having *logos*.” (Inwood 137). Man is a composite of things— collected, appropriated, and produced by nature. As a result, humanity is compelled to investigate its fundamental essence through discriminating its own composition within nature.

In regards to the word “nature”, the Romans replaced *phusis* with *natura*, defined as “birth, character, natural order” and derived from *nasci* which means “to be born, grow, be produced” (Inwood 136). Romans, like Cicero believed law was derived from nature in a similar way to *oikeiosis*; “...justice does not exist at all if it does not come from nature or right reason.” (Levy 44). “Therefore, a legal doctrine concerned with the origin of law and justice...is bound

to...inquire into nature's gifts to men and the natural association between them.” (Levy 47). What we can identify here is that Ethics and Law are derived from nature in a sense of judging what is appropriate and inappropriate behavior according to an entity's position in nature. For law to qualify as justice requires an incontrovertible truth discovered through the analysis of nature. The problem with this principle, is that truth must be removed from the world of subjective experience and be placed into the world of objective reasoning. As a result, an analysis of nature, for the Romans, becomes a static demarcation between the essence of things. *Phusis*, unlike the Roman *natura*, does not represent an “original, uncontaminated” existence, but “a specific realm of beings demarcated in view of a prior conception of beings as such, before any such demarcation occurs.” (Inwood 136). That is to say, *phusis* allows room for time, for history where *natura* is an *a priori* concept of essences and truths.

Truth proves to be one of the most contentious ideas for Heidegger's philology. He believes that the Greek concept of “truth” is best expressed in the word *aletheia*— a word meaning “unconcealed”. In fact, “[o]riginally, *Phusis* was not sharply distinct from *aletheia*, the unhiddenness into which beings emerge...But as the Greeks asked *about* beings [*aleitheia*], they came to distinguish their questioning from the beings asked about [*Phusis*].” (Inwood 137, [brackets] mine). This investigation *about* beings was a pursuit of disclosure.

“The idea of unconcealment rejects the idea that there are uniquely right answers to questions promoting therefore a type of epistemological relativism. Heidegger thinks that we encounter entities as beings that are only in virtue of the world within which they can be disclosed and encountered.” (Koskela 118).

The conclusion reached when uncovered is true in so far as it can be understood in terms of the data that is revealed by the uncovered in the moment of disclosure. For Heidegger, *aletheia* may best be understood through art. Each work of art takes the object of consideration and

manipulates its representation to match a particular message. In this process, each object carries an infinite amount of possible representations and the truth of the object relates explicitly to the way in which it is being represented in that particular project. As a consequence, the presentation of an alternative representation of an object may change how observers of the artwork interact with the object in their future, thus opening a new “truth”.

In contrast to *aletheia*, is the Latin *veritas*. Its Latin definition is simply “truth” but the English definition is “truth, particularly of a transcendent character”, thus associating truth with a metaphysical essence. Given what we know about the Roman paradigm, this kind of “truth” is likely one that is static and resistant to any alteration. In this sense, *veritas* stands in contrast to *aletheia* as an *objective* truth. It is this claim of objectivity that Heidegger believes reflects the Roman ethos as one that “has an etymological link to domination and commanding.” (Soffer 559). What this etymological difference implies is a “correctness” or as Heidegger identifies it, a “*rectitudo*”: what can be calculated in advance by human reason, certainty.” (Soffer 559). The truth is tested against pre-existing constructions to determine if it holds relevance or should be discarded. For the former, the data works to *tell*, while for the latter, data is *told*. It is the calculability of the facts— how the truth corresponds to pre-existing knowledge— that qualifies its objectivity. *Veritas* is significant for my argument because it is associated with *episteme* in the sense of a true knowledge. Real [*true*] knowledge (*episteme*) requires cognition, which is secure, firm, and unchangeable by reason. (Sextus Empiricus, 41C). Furthermore, worked into a systematic whole with other such cognitions (Arius Didymus, 41H). Weak and changeable assent to a cognitive impression is only an act of ignorance (**SEP Stoicism**). Essentially, *episteme* is *veritas*, fixed and resistant to change. Within its fixity is a message of human superiority, of entitled domination, and of objectivity.

For the Greeks, harmony, balance, and restraint were the very essence of being a just human. The “good” was pursued through intellectual pursuits. Excess was an inhumane force. “Good” then, for the Romans, is an unending pursuit of acquiring desire, of acting upon an other and taking what is desired. As tools are central to improving what can be taken, the creation and application of technology becomes humanity's *raison d'etre*. The highest “good” is not just discipline, but the evidence of mastery over nature through a surplus of commodities. Here is beginning of the concept wealth that has become Western people's *telos* since the success of material manipulation can be measured by production and its outcome: economic wealth. Comparing that to contemporary justice, “[m]en who believe that their nature is expressed in technological projects [*the essence of man as tool-maker*] can find no sense in the idea that unlimited technical development might lead to excess and aberration.” (Winner 109, [brackets mine]). Moderation is the antithesis to contemporary human potential. “More, farther, and faster is the formula for virtue in the modern age, our frenetic equivalent of the *areté* of the Greeks or the piety of the Puritans.” (Winner 286). The modern age has no interest in harmony or balance—it prefers excess as evidence of its abilities. Because we've taken the Greco-Roman episteme for granted, “It ought to strike us as odd that Hesiod and Ovid characterized our original and putatively ideal conditions as one in which we were friends and companions of animals.” (Steiner 82, 2011). The rhetoric of friendship has become a pejorative and embarrassing concept once framed between the human subject and its environment.

Linguistics as Logos: Reason and Evidence

Language and the word serve another critical purpose in the human world. They have been used to divide humans from all other non-human entities in their ecology. It is not just a

vehicle for meaning and coordination; it is evidence for human superiority. It is essentially human to privilege one's own needs before all others. It should therefore merit attention that language and *logos* are derived from the same concept. A speaker's ability for language explicitly reveals their cognitive capacity for reason. As a result of this metric, a hierarchy of privilege has been constructed on the back of the word. Through the history and philosophy of language, we can begin to see an anthropocentric assumption of consciousness and the ontologically constructed conditions that qualify it. It is because of these conditions that E.A.I. directly threatens the privileges humanity has established for itself.

My intention in this section is to break down the threat that social E.A.I. poses to a human-constructed hierarchy. Because these kinds of automatons are still relatively new to the human social world, I will rely on these philosophers' division between human and animal as a precedent. While there are obvious nuances that distinguish a mechanical automaton from animals, the relation can be used anecdotally as a frame to anticipate the divisions between human and E.A.I.. Social scientists like Mark Coeckelbergh have already recognized the analogue and conducted research into animal/human relations to anticipate robot/human relations. I will explore how the same conditions examined in both scenarios, and how the current state of human ethics is the basis for why some people are so anxious about the outcomes of a conscious A.I.. I will go on to argue that these lines explicitly intersect at reason, morality, and language.

The Antiquity

To do a thorough historical analysis on the philosophy of language in Western civilization, we ought to start with one of its founding patriarchs, Plato. It is Plato who famously

told the myth of Prometheus in his dialogue with *Protagoras*. It is not only “fire” that Plato claims is given by Prometheus, it is also “skill in the arts”.

The bestowal of the arts led to 'articulate speech and names, and [the invention of] houses and clothes...but when they gathered in communities they injured one another for want of political skill...[so Zeus] sent Hermes to impart to men the qualities of respect for others and a sense of justice, so as to bring order into our cities and creates bonds of friendship and unity. (Steiner 44, 2010).

Humanity has not been not capable of cooperation without language. Consequently, language is the basis for a working civilization. The loss of a universal language— the proverbial fall of Babel— causes chaos among humans. Coordination and cooperation are only available with a common sign system. The in-existence of language is why the animal kingdom could never achieve the greatness of humans.

According to Plato, the Golden Age of humanity was one of cooperation with non-humans despite their incapacity for language. While animals lived in a state of appetites where might makes right, Humanity, with its ability for “the skill of arts” obeyed higher laws of justice. In this way, Humanity stood superior to animals because it could obey a justice system; because they could construct, share, and obey rules. To act according to appetites is to ignore those rules and fall back into a state of chaos and misery, like those humans who “injured one another for political skill”, a state of might is right. This is the thesis of *The Phaedrus*. To fall into a barbaric state of “Might Is Right” is to render humanity no different than animals, and prevent access to the highest human “good”, an examined life.

Plato's *Allegory of the Cave* is another helpful anecdote to understand the earliest philosophy of language. The story goes that a Greek person discovers that what they see is merely a silhouette of the real world of non-material forms, and in doing so, reveals to the reader

that the material world is an illusion. This illusion is inferred to be a construct based on pre-existing forms; forms that humanity has knowledge of before birth but loses in infancy. In order to retrieve that knowledge, humanity must use language to recollect each “truth”. For Plato, word-use and tool-use are the same thing. “...In order to ensure that you and I mean the same reality, you need to describe what you see and experience to me, using words as your tools.” (Law 18). Each word matched the thing described. No word was selected arbitrarily. “If language is non arbitrary, as this approach assumes, then words could be a route to knowledge of reality. Since we all have ready access to words, this could solve the problem of how to learn about reality in a world of constant change.” (Law 19). For causal thinking to be accurate, the objects being anticipated needed to be consistent. Language and the word, as a recollection of divine knowledge, could accurately develop generalizations between like objects. Truth and justice, as divine recollection, are acquired and developed exclusively through language.

Aristotle pivots away from his mentor Plato's philosophy by advocating for an early version of empiricism rather than Plato's rationalism. “Everything in his thinking flows from his insistence upon the physical world as the starting-point for knowledge.” (Law 23). This illustrates how Aristotle moved away from Platonic forms as a means of accessing divine truth. Instead, Aristotle embraces sensory data-collection as the proper method of discovery. His is the first significant Western pursuit of taxonomy via his *organon*, in which he explicitly identifies “human” as the entity exclusively capable of rationality and deliberative imagination. This is a result of humanity's capacity for mediation in contrast to the “appetitive” drive.

Calculation allows humanity to deliberate over probability. In other words, only humanity is capable of causal thinking and moral reasoning, resulting in moral culpability. The imperfect animals, in contrast, are “those which have no sense but touch.” (De Anima 3.11). What kind of evidence does Aristotle bestow that implies all humans are capable of reason? Speech.

“Aristotle...says spoken words are symbols or signs of mental concepts” (Pasnau 558). There can be no word without a concept and concepts are an exclusive product of the mind.

Here we approach the controversy of distinguishing human from animal originates. Aristotle takes two positions on the conditions of speech: the first is in his *Politics* and the second is in his zoological texts. In his *Politics*, he makes it clear that only humanity, capable of reasoning, deliberation, and restraint is qualified as an entity deserving of moral consideration. Any entity outside of moral consideration is fair game to be exploited for human purposes. “Perception and mind are different faculties...The distinguishing between right and wrong ['being right' corresponding to intelligence and knowledge and true opinion], between good and bad, needs thinking faculty belonging only to human beings and other animals similar or superior to human beings.” (Qiu 200). Where all entities with life are sensory perceptive, only humans have imaginative deliberation that enables speculation and anticipation.

Speech is a significant substance for humanity because speech “is designed to indicate the advantageous and the harmful, and therefore also the right and the wrong.” (Qiu 199). Language, via speech, is the method of coordinating activity between entities within the same “house” (the precursor to *oikeiosis*). The ability to construct and articulate good/bad and right/wrong was an indication of deliberation through self-restraint and the rightful *telos* of humanity: happiness through virtuous living. “Happiness in this sense depends crucially on the capacity for rational contemplation...which makes human beings most like gods” (Steiner 60, 2010).

In short, Humanity is privileged in its ecology because it is the only entity capable of virtue ethics, which acts as a divine pursuit. In order to embody virtues like courage, temperance, and compassion, one must have the capacity to think morally, as well as the will to restrain

oneself from one's desires. Without the ability to reason and deliberate, which takes place through language, it is impossible to be moral and virtuous and, therefore, godly.

His zoological investigation, however, confuses this conclusion. In texts like *Historia Animalium* and *Parts of Animals*, Aristotle argues that animals do, in fact, have a capacity for speech. Specifically, “Speech...is the articulation...of voice...by means of the tongue...” (Qiu 197). “Voice” is distinct from “sound” in that a meaning must exist within the sounds to qualify as a proposition. This proposition is created through shared abstractions. Aristotle uses birds as an anecdote for animals that share propositions and engage in human-like speech: “Birds can use the articulated voice to communicate with each other, such as attracting mates, warning risks, expressing victory...Birds not only use speech as a means of social communication, but also convey information to each other, so their speech is of course meaningful.” (Qiu 198). According to Aristotle, birds communicate with one another in a parallel fashion to humans.

Aristotle's taxonomy demands a demarcation between objects according to their meta-essences. Despite not developing any sort of grammatical analysis, he still identifies the precursors of nouns (*onoma*) and verbs (*rhema*) as elements of a sentence (*logos*). He does this for the sake of establishing a subject-object dualism. The noun is always established by social convention:

A noun is a sound...having meaning...established by convention...No sound is by nature a noun: it becomes one, becoming a symbol...the meaning of human language is not from the voice, but established by convention among humans beings...Voice is just the material used by this symbol system, for language. (Qiu 201).

The association between sound and meaning is through syntactic parts of speech, symbolic and shared between members of the same culture. Voice is the manifestation of these symbols in an ordered fashion so that they may be shared and translated with others. Of the verb, Aristotle

reasons that “it consignifies time, no part of it has meaning by itself, and it is always a sign of something said about something else.” (Aristotle, as cited by Law, 29). Without being stated as such, the object and predicate are born in language. The distinction, then, between an object and subject is necessary. According to Richie Nimmo:

The most basic and persistent [essentialist division] is subject-object dualism, which has structured Western ontology since Ancient Greece, and is nothing less than foundational for modernity. Humans are subjects, while non-humans are objects, it tells us, and from this essentialist difference all else follows...A 'subject' can only exist as a subject in a world reducible to its subjectivity; while an 'object' can only exist as a distinct object, a thing-in-itself rather than part of and indivisible flux, when perceived as such by a subject. But humanist discourse suppresses this dialectical interrelationship, rendering it an asymmetric dualism and inscribing humans and non-humans as incommensurable, as though they belong to different ontological domains or sectors of reality. This in turn enables humanity to be elevated and centralised, while its necessary other...are suppressed and marginalised, relegated to the status of 'context', a mere ground upon which the human subject stands. (Nimmo, 60-61).

Rather than understand all things as objects *and* subjects simultaneously, only human beings could be subjects because only humans have had the capacity to rationalize data through language. However, as his zoological texts show, Nimmo was not convinced that animals were not capable of subjectivity. This is one of the earliest dualisms that established the structure of privilege between objects in space and time.

The second quality that contributes to the meta-essence of language is its semantics. “...in Aristotle's view, what distinguishes human language from animal speech thoroughly is not the

vocalization organs, but their semantic scope, which is based on the different faculties of the soul...” (Qiu 199). The more faculties of the soul, the more qualities that can be observed and expressed. Perhaps a more universal understanding of the semantic scope relies on the belief that the range of symbols of what can be alluded to is linguistically. This difference of semantic scope promotes the argument that the difference between human and non-human is a matter of degree rather than essence. Furthermore, different classes of humans (men/women/slaves) essentially qualify for different degrees of reason from one another to organize themselves within a hierarchy. Though birds communicate in a similar fashion as humans, they do not have the same scope and, therefore, the same complicated knowledge of their ecology. As a result, Humanity is more entitled to curating their ecology because they can make more significant connections between objects and actions with a larger vocabulary or scope.

The Stoics and The Romans

Following Aristotle's peripatetic school was the Hellenistic Greeks that taught the newly developing Roman culture the roots of Greek culture. From this group, Cicero grew to fame, who is easily one of the most prevalent orators of the Roman Empire. Cicero adapts the Greek “good” within the state (*polis*) and applied language as a persuasive tool for diplomacy. Echoing Plato and Aristotle, Humanity's greatest “good” was in the obedience to justice, something that required rhetoric to achieve. Language was the means of persuading his fellow citizens to prefer justice to might, restraint over appetite. That his philosophy came to an end was a signal that the Roman Empire preferred its might as opposed to its obedience and began distancing itself from the Greek system of values.

Here *oikeiosis* finds its relevance in the philosophy of language. While developed to justify an anthropocentric hierarchy, it may still be a positive frame once divorced from the

anthropocentric ethic imposed on it. This will be further explored in the final chapter on Post-humanism. As *oikeiosis* determines “proper” behavior according to one's place in one's home system, the Stoics relied on language as the essential quality for privilege. As the pursuit of intellect is the pursuit of a divine truth, humanity's capacity to achieve truth through language means prioritizing it at the top of the hierarchy, nearest to the gods. Only those capable of reaching that divine truth, one discovered exclusively in reason, are given natural rights.

On the Stoic view the world itself is an object...of contemplation, it exists for the sake of gods and humans alike. But because the gods are self-sufficient in nature, the world...[as] a means for the satisfaction of bodily needs, exists for the sake of humans” (Steiner 85, 2011). For the Stoics, “if all animals possessed reason, there could not be any justice; if we killed animals we would be acting unjustly, but by not killing them for food we would make life impractical or impossible. (Steiner 95, 2010).

Essentially, this is an us-or-them contest where providence is established by *logos*, and privilege is justified within the Stoic ethic of *oikeiosis*. This is a significant deviation from the philosophies of the Ancient Greeks, as illustrated by Hesiod and Ovid with the implication that “it ought to strike us as odd that...our original and putatively ideal conditions as one in which we were friends and companions of animals” (Steiner 82, 2011). It is important to note that Chrysippus (an early Stoic) believed self-consciousness to exist at birth through self-love and that same self-consciousness was used to identify itself within its *oikeiosis*.

According to Diogenes, Chrysippus asserted that “it would not have been reasonable for Nature to assign the animal itself to another...nor make it belong....[animals belong in nature by virtue of its natural birth]. For it is in this way that things harmful are thrust away and things that belong (*oikeia*) are permitted to approach.” (Kerferd 186). Consequently, according to Seneca, *oikeiosis* as a process of self-recognition is achieved not by understanding “*what* [its]

constitution is, [its] simply is aware *of* [its] constitution...this perception of itself and its constitution *is* found in all animals, and not merely in some.” (Kerferd 187). Belonging to an *oikeiosis* is a process of mutual identification. I can identify as a deer, but other deer may not identify with me. All self-aware entities inherently belong to their *oikeiosis* and cannot be denied. A human cannot be denied its humanity unless one were to change the qualities used represent “human”. Their proper role in the community is also a matter of the body. Each quality of the body is evaluated against culturally constructed needs. Once the “self” emerges, it automatically loves itself and, by extensions, others like it. This is a precept for justice.

This development of an *oikeion* ethic was necessary for the establishment of Roman law, a central concern for Roman culture. “The endowment of reason makes human beings capable of moral conduct, and according to Cicero such conduct was 'that sole thing that is for its own efficacy and value desirable, whereas none of the primary objects of nature is desirable for its own sake.' Plants and animals count as such 'primary objects' and exist for the sake of human beings.” (Steiner 85, 2011). Here, Cicero is advocating that a thing without self-love isn't entitled to consideration for its own sake. More importantly, “If Cicero's founder shares the divinity of Plato's philosopher [it's only through] the ability to authorize ideas; to get others to obey...” (Hammer 2). The good life isn't simply an appeal to intellectual pursuits, its an ability to persuade *others* to obey law and order. This method of persuasion, for Cicero, was through language and rhetoric.

Following Cicero, Epictetus also privileged language but extended it as an indication of “divine providence” which “neutralize[s] any sense of ambivalence on the question whether animals are capable of powers such as conceptual abstraction.” (Steiner 77, 2010). Further, “The Stoics also maintain that emotion requires the capacity for rational assent, and that animals therefore lack emotional states because they lack rationality.” (Steiner 101, 2010). Using this

logic, animals don't just lack thought, they also lack feelings; they lack an ability to experience sensation. As a result, the late Stoics developed a “cosmic teleology” achieved through reason and language, and used to justify the domination of all other living entities within their given ecology.

Shortly after the beginning of the common era, Quintilian takes up Cicero's position in placing oration as the highest priority of a “good” person. His philosophy of the “Good Man Speaking Well” positions speech, rather than writing, as central utility for humanity's ethic. His definition of good speaking, however, does not eschew sensations (*pathos*) in lieu of reason (*logos*). Conversely, he believes passion (*pathos*) is extremely important for achieving the good through persuasion, as “argumentation is less suspect when well disguised, and the hearer's enjoyment does a lot for the credibility of the speaker.” (Quintilian, as cited by McNamara, 1022). “Good” speech, then, is a matter of its capacity to persuade and direct an audience towards the “good”; towards justice and virtue. In order to persuade— language must be able to articulate the pathos of the speaker. *Logos'* cold, sterile, and reliable style is less persuasive than a style that embraces the passion of the speaker. Quintilian's philosophy astutely builds from Plato and Cicero, all of whom hold political participation as humanity's highest good, functioning as the means of discerning divine truth. Because non-humans cannot use human language, they cannot contribute to the pursuit of providential knowledge and moral philosophy. Furthermore, humans can be persuaded to obey justice regardless of whether or not they understand human language. The hierarchy drawn through human and non-human relies on the anthropocentric view that only the pursuit of morality through language, a godly pursuit, entitles an entity to friendship and justice. Here, the addition of *pathos* to the pre-existing rhetoric of *logos* adds more conditions on what is and is not a “good” subject. Whereas, for the Greeks, the

individual must be subject to themselves via self-restraint, the Romans would prefer the individual to be subject to the state via persuasion.

The Scholastics

The Stoic addition of cosmic providence was reinforced as dogma by the Scholastics like St. Augustine. Similarly to the stoics Stoics, St. Augustine maintains that animals lack the capacity for reason and are unable to access divine truths discovered through language. “Augustine's denial of rights with animals is a restatement of the Stoic prejudice that all and only rational beings are members of the sphere of justice, and that nothing we do to non-rational beings...can possibly be construed as an injustice.” (Steiner 86, 2011). This is based on the notion that animals can neither reason *nor* feel. This idea, as with its preceding philosophies, is structured through linguistic performance.

The emphasis on language is an outcome of a Christian dualism between body and soul. Like with Platonism, the body (and material world) is subordinate to the mind. The body is a distraction from the truths that can be grasped by the mind. It is not merely a subordination but a corruption. “Almost everything you read from the early centuries of Christianity...is pervaded by a sense of resentment and loathing for the physical side of existence.” (Law 108). The corporeal body is a reminder of humanity's distance from God and its pursuit of bodily desire takes humanity further away from its divine providence. This is why all non-humans are treated with such disregard, if not contempt. Because they follow their appetites without restraint and do not possess the ability to reason through their actions, they are doomed; they are prohibited from receiving God's grace. Intellect, specifically language, is the means of discovering and receiving that grace because, “Whoever has understanding' is capable of grasping [the inner light of

Truth], which 'is God himself.'" (Steiner 117, 2010). To know the word is to know the truths created by God; to use the word is to be a vessel for God.

Much like the Stoics before, Augustine's perception of the "word" develops from the Gospel of John: "In the beginning was the word [*logos*], and the Word was with God, and the Word *was* God." (Law 105). This led Augustine to develop a theory of semiotics; of the word as sign. The process of associating concepts with words becomes *verbum*, understood as a "meaningful utterance", a concept injected into an articulated voice. "*Verbum* contrasts with *vox*, a word meaning "voice" or "cry", where the latter may be uttered without any discernible meaning, like a groan or moan. *Vox* cannot evoke an image the way *verbum* can." (Law 106) As explained by the Scholastics, non-humans may produce *vox* but cannot produce *verbum*; they are not sign-makers. *Verbum* is an exclusively human activity. The *verbum* is the meaning "conceived in the heart [which] is not Greek or Latin...the *vox* arrives at [the listeners] ears first so that [they] can understand, so that the *verbum* can be introduced into [their] mind." (Law 106). The word is the essence of God that resides in all entities capable of reason, and consequently, language; thus the essentiality of language for any non-human to be denied the faculties of language and reason. If animals had both *vox* and *verbum*, humanity would not be justified in exploiting them for their own ends.

Effort has been made, distinctively by Thomas Aquinas, to avoid assuming omniscience in humanity, an act akin to blasphemy. He was aware that language, as a human convention, was an innately limited way of knowing God. However, analogical language was a means of approaching a concept of God without committing an anthropocentric fallacy regarding the nature of God. Any attempt at qualifying God in human terms, like "good" or "bad", is to attribute God as the cause of these qualities rather than being an effect of them. For Aquinas, "God has in himself every perfection of creatures, since He is simply and universally perfect. Hence every creature represents Him." For example, "Aquinas argues that God is metaphorically

similar to a lion in that He, like a lion, has great power in all he does, despite the numerous literal dissimilarities between them.” (Silverman 128). The world is a set of qualities and virtues that all exists with God as its cause. To discover those qualities in nature is to understand God. The difference between analogical and metaphorical language is this: To say “God has a strong arm” is metaphorical, but to say “God is strong/strength” is analogical because it only identifies a universal quality that God is the cause of, rather than a particular, material instance of that quality. here metaphorical language is still rooted in the corporeal—analogy is found in abstraction which is exclusively available to entities with reason.

Aquinas finds another distinction between human and non-human in the capacity for humanity to derive universal truths out of particular events. This distinction is explicitly necessary for an entity to be able to conceive of analogical language in the first place. In fact, “Aquinas never suggests...that an animal such as a squirrel recognizes acorn *as* an acorn...Animals do not attain the universal 'but only know something particular.” (Silverman 128). How animals can identify and preemptively run away from a predator is not of their own volition but more likely “planted in them by the Divine Intellect...that foresees the future.” (Silverman 128). Despite the new ability to identify and preemptively run away from predators, it is really Divine Intervention that compels them to run and not any innate capacity for self-love, reason, or general knowledge of a predator.

The ability to comprehend particulars is a result of language. “Intellect's second operation is the process of composition and division, and Aquinas explicitly infers this capacity from the thesis of semantic likeness: Intellect must be able to compound and divide concepts, he says, because we do this in language, and language signifies intellectual concepts...not concepts that are merely complex in content, but concepts that are somehow *actually* combined out of simpler

ones.” (Pasnau 568). Language allows for the association and comparison of particular qualities and features to form a universal classification.

Like St. Augustine, Aquinas re-incorporates Aristotle’s study of purpose (his teleology) into his own anthropocentric system. Building on the duality between appetite/restraint, Aquinas sees the evidence of divine providence through free-will, exclusive to humanity. “The intellectual agent acts for an end, as determining for itself its end; whereas the natural agent, though it acts for an end...does not determine its end for itself, since it knows not the nature of end, but is moved to the end determined for it by another”. Only humans are capable of self-determination because only humans can “reflect on ends and deliberation on means to chosen end.” (Steiner 127, 2010). Where all life comes into the world having sinned, only those entities that are self-aware and can choose *not* to sin in the future are forgiven. Therefore, all animals in their drive for appetites can never be saved. Only humankind is aware of its own sin and, thus, only humans, can choose to repent. This process of self-awareness requires mental deliberation, a process that requires language and abstraction.

The Renaissance

Following on Aquinas' heels, Francis Bacon uses much of his ethic while disregarding his divine ontology. No longer is the corporeal world ignored as access to the divine. Instead, it is an appealing resource to further humanity's material production. Much like Aquinas, “There are seldom any reservations about man's rightful role in conquering, vanquishing, and subjugating everything natural. This is his power and his glory.” (Winner 21). Glory is now in the pursuit of scientific knowledge rather than piety (*pietas*) or virtue. Despite his emphasis on science, Bacon did not discard theology. Alternately, he believed science and theology work together to “help recreate the conditions which had existed in Eden. Bacon wrote that a new experimental method

(his *Novum Organum*) in science was needed to yield the practical knowledge which would make material improvement possible.” (Davis 20). Moral and ethical concerns are subordinated to scientific discovery. Bacon explicitly advocated for “Divine Honors” to be bestowed on scientists for their technological developments which served to enable humanity to acquire and produce more for less. Freedom and the pursuit of “good” is achieved through manipulating, dominating, and exploiting nature. Scientists, as keepers of knowledge, became the new priest class.

Man's relationship to nature started in power. Primarily, nature's power over an ignorant humanity. Once humanity learned the secrets of the material world, they invert the power dynamic and subjugate nature for their means “as tyrants once commanded their political subjects”. Science will both improve humanity's material condition and redirect those who “crave power” to more “wholesome pursuits”; “apparently, an ambitious man must subjugate something” (Winner 23). Nature, as it has been divinely made for humanity's use, was a willing subject, and humanity should not be denied its pursuit of truth.

For the purposes of science, language loses its representative value. It is helpful only in so far as it can share knowledge and facilitate Discourse via speech and writing. In this way, denotation and precision are the most significant qualities of language available to scientists. Science can render the world as “one of predictable regularities and passive variables subject to simple control.” (Winner 94). Reliable calculation replaced divine investigation as language's highest priority. It was through Augustine's explicit construction of a sign system that Renaissance scholars could apply language as a scientific tool:

[T]he sign system...introduced into knowledge probability, analysis, and combination, and the justified arbitrariness of the system. It was the sign system that gave rise simultaneously to the search for origins and to calculability; to the constitution of tables that would fix the possible compositions, and to the restitution of a genesis on the basis of

the simplest elements; it was the sign system that linked all knowledge to a language, and sought to replace all languages with a system of artificial symbols and operation of a logical nature. (Foucault 69-70).

While Bacon ushered in this new episteme, it was Rene Descartes who fleshed it out. Like those who came before him, Descartes went on to expand the corporeal hierarchy that sees weakness and subordination in an entity that relies on its body over its mind. Similar to Christian Dualism, Descartes famously develops his own theory that substitutes theological language with the scientific via Mathematics. His emphasis is on autonomy and machination. He sees the world and everything in it as autonomous machinations. Humans, however, are more than simply corporeal because they have a soul. “The human body is essentially a machine, but human beings are not reducible to machines because 'our soul is of a nature entirely independent of the body, and consequently...it is not bound to die with it.' “ (Steiner 138, 2010). The immortal soul is the seat of human “being” and the only evidence for its existence is through language—a faculty used to reason and rationalize. Hence, according to Descartes, math superseded language as the most privileged product of the mind.

Unlike previous scholars, Descartes is so emphatic about humanity's domination of nature that he disregards previous philosophies about voice in non-humans. Animals are not even capable of uttering noises that correspond with pleasure or pain because, “their shrieks of what would appear to be pain are nothing but purely mechanical responses on the part of creatures with no experiential or perceptual capabilities, and consequently no capacity whatsoever to feel pain.” (Steiner 132, 2010). Building off his predecessors, non-humans are not capable of reason *or* feeling because, according to Descartes, they are *purely* mechanical. As a result, scientists are absolved from any moral or ethical considerations consequential of their methods on the non-human animal they are investigating, including live vivisection.

Descartes' famous platitude, "I think, therefore I am" is implicitly a nod towards his philosophy of language. Language is the means of coordinating one's perceptions with one's community. It is the evidence that a person needs to be aware of their own consciousness, a precept of the *oikeiosis*. Without a language, one cannot represent one's mind to one's self and therefore, cannot be considered self-aware or conscious. In this case, if math is a purer language of the mind, then the word is merely a means of discriminating between objects. Thus, the "self" is the first abstraction that can be materialized in the mind. The abstract concept of "self" is a product of the linguistic representations of its body. It sees itself in the mirror, and uses words to describe itself. This vocabulary is built off culturally defined representations that predetermine a "self's" value and role within the *oikeiosis*. In turn, the material manifestation of abstraction is itself evidence that humanity is free-willing and more God-like than animals; that is, less dependent on the corporeal world. Notably, Descartes' corporeal skepticism leads him to anticipate the need for a turing test:

Machines 'could never use words, or put together other signs, as we do in order to declare our thoughts to others...it is not conceivable that such a machine should produce different arrangements of words so as to give an appropriate meaningful answer to whatever is said in its presence...' Furthermore, "if we consider such animals as parrots, we must acknowledge that they can utter words but they 'cannot show that they are thinking what they are saying...This shows not merely that the beasts have less reason than men, but that they have no reason at all.

(Descartes, as cited by Steiner 138-9, 2010).

Here, Descartes is dismissing Aristotle's zoological conclusions and prefers to establish a strict dualism between human and non-human. As a result, allowing for different *degrees* of reason as Aristotle had, would allow the possibility of an immortal soul. "...only those possessing immortal

souls...are destined to enter the city of God; all other beings, even if they possess some kind of soul other than an immortal one, are consigned to the function of serving human needs....animals are just like any other natural resource.” (Steiner 142, 2010). Regarding an animal’s soul, Descartes suggests, “the souls of animals are nothing but their blood” and, therefore, corporeal. (Descartes, as cited by Steiner 143, 2010). Without an immortal soul, non-humans are not entitled to moral consideration or justice between humanity and nature. For the Renaissance scholars, allowing such would threaten the very basis of humanity's ability for free will.

It is important to briefly consider Descartes' contribution to contemporary thought. At the turn of the 21st century, scholars began to acknowledge the flaws and fallacy of Descartes theory. Despite this willingness to reconsider, Descartes' philosophy left a surreptitious legacy on Western thought. Scholars like Joseph Rouse see representationalism, as a form of knowledge, a by-product of Cartesian Dualism:

The presumption that we can know what we mean, or what our verbal performances say, more readily than we can know the objects those sayings are about is a Cartesian legacy, a linguistic variation on Descartes' insistence that we have a direct and privileged access to the contents of our thoughts that we lack towards the 'external' world. (Rouse, as cited by Barad 806).

While it may be simpler to declare him incorrect, it becomes much more challenging to discriminate his attributions to the contemporary Western episteme, specifically in the mind/body dualism that plagues Western culture.

The Enlightenment

Picking up where Cicero left off, Immanuel Kant believes moral consideration is only entitled to those entities that can participate in both law and reason. In fact, morality requires an

ability to do wrong, for one cannot deliberate on one's actions without the capacity for self-awareness and an ability to act against one's own interest, thus sinning. Morality only occurs when one reasons through their actions, ultimately reaching a conclusion about their ethics and *choosing*, through reason, whether or not to enact them. One must know their actions will result in something "bad" in order to resist those appetites and, therefore, do the "right" thing. For Kant, like Aquinas, moral consideration over non-humans is explicitly related to how those actions affect another human, such as an indirect duty to another human rather than a direct duty to the non-human.

For Kant, language doesn't just structure the hierarchy between humanity and nature, it also structures the hierarchy between persons: "Kant writes...'thinking is talking with oneself... Words are the means best adapted to signifying concepts. So a man who, because he was deaf from birth, must also remain dumb (without speech) can never achieve more than an analogue of reason'; and holds that 'when [a child] starts to speak in terms of 'I' a light seems to dawn on him, as it were...Before he merely *felt* himself; now he *thinks* himself.'" (Forster 490). In the first scenario limited language produces limited reason, and in the second the reverse. Only when the child expands its language capabilities, can its capacity for reason expand, too. The deaf person, however, is condemned to a state of limited reason. In this way, language is not just the evidence of reason, but is the measurement of an entity's abilities. Today, even humans within the same role (man vs. other men/woman vs. other women) are condemned to their place in the social order as a result of their linguistic abilities.

Immanuel Kant's philosophy of language is a little more complex than others as his attitude changed over time. At first, he asserts:

The reason which has persuaded people to think that they feel the *reflective* particularly in the brain is...all reflection requires the mediation of *signs* for the ideas which are to be

awakened...The signs of our representations, however, are primarily those which are either received through hearing or sight. (Forster 494)

Language and reason come after empirical sensory perceptions, but inform one another on the basis that “words are the best means of signifying concepts...[and] thinking is talking with oneself.” (Forster 508). One comes to generalized knowledge through the particulars of a lived experience and data received through vision, sound, touch, taste, and scent. When one reasons through the meaning of this data to reach a relevant conclusion or achieve clarity, they do so by using words within their thoughts. Consequently, those with the highest capacity for language, have the ability to understand more complicated concepts (semantic scope). From Kant's perspective, it appears that concepts can only be understood when represented through words.

To adequately conclude this mention of Kant, his stance on *friendship* must be attended to. It is as a result of Kant's implied philosophy of language that the possibility of friendship and charity with others is explored. Much like the concept of *oikeiosis*, friendship is only extended to those within the circle of a given entity. Others outside that circle are not entitled to moral consideration.

Kant's view of charity is an extension of his view of friendship. '*Friendship*'...is the union of two persons through mutual love and respect. Because no 'morally good will unites' human beings with [non-humans] there can be neither friendship nor charity shared between the two. Indeed, there can be no direct duties of any kind on the part of a person toward a mere thing. Our duty of compassion toward [non-human] is in no way an indication of respect for [non-humans], in as much as [non-humans] are mere means and hence not the kind of beings towards which it is possible to have respect....because [non-humans] are regarded as [humanity's] instrument, it is acceptable. (Steiner 89, 2011).

Here, I argue that trust and cooperation is key to friendship. As Kant, via Steiner, has made clear, there can be no trust and cooperation between human beings and non-humans as non-humans cannot have dignity (self-respect). If this is so, then humans are unable to show respect for a non-human, just as an entity without self-love cannot share in mutual love. How might this compare with the evolution of the domesticated dog out of the cooperation between human and feral wolf? The implications for human and E.A.I. is significant, as will be made evident in the concluding section.

For Kant, autonomy is the evidence for free-will in the same way that language is the evidence of consciousness. Autonomy and free-will is only possible if there is the capacity for morality. “‘Autonomy’ is at heart a political or moral conception that brings together the ideas of freedom and control. To be autonomous is to be self-governing, independent, not ruled by an external law or force. In the metaphysics of Immanuel Kant, autonomy refers to the fundamental condition of free will – the capacity of the will to follow moral laws which it gives to itself” (Winner 16). Because it is language that enables intellectual deliberation and therefore, morality, the semantic scope of an entity reveals the degree of free-will it possesses. The less capacity for language an entity exhibits, the less free-will it reveals to have.

Adam Smith, a contemporary of Kant and father of economics, developed an explicit philosophy of language and grammar early in his career that has clear implications for his future economic theories. As established by Kant, language is a significant factor in establishing trust. This makes a great deal of sense, as trust is so significant for Smith’s theories of economic exchange. This trust inherently relies on Smith’s *Theory of Moral Sentiments*. In tandem with individuals seeking their own self-interest, he advocates the need for a sense of duty, parallel to Kant’s, to maintain ethics and inspire trust within that sphere. In this way, trust can be achieved through friendship on the basis of language.

Trust has significant implications for the marketplace as McCloskey shows: “[Maximum Utility] doesn't have to talk, but merely follows the "rules of the game"...Yet it is the oldest and most obvious finding of gram theory that games have, of course, always a context of rules and customs and relationships - all of them affected by language” (McCloskey 3). To speak is not just to relay information, but to demonstrate a capacity to recognize and abide by the “rules of the game” and be trusted by others to abide by those rules, that is – to possess virtue. This may be the exclusion of non-humans that, until the advent of socialized A.I., has justified human/non-human hierarchies of privilege.

These hierarchies are premised on language because language reveals the ability to think generally through grammar. “The development of adjectives, prepositions, and Subject + Verb-Phrase structures, involves not only discrimination but also *abstraction*” (Land 684). Abstraction has been attributed exclusively to the human intellect and Smith's theory of language further reinforces the anthropocentrism of the intellect. “In this argument Smith is taking "abstraction" to be a merely formal matter defined in terms of the structural correspondence between languages and reality, but the first historical thesis clearly requires that "abstraction" denote a mental operation” (Land 686). Abstraction is now taken for granted and can be proved explicitly, if not exclusively, through language use. Without language, an entity cannot prove they are capable of reason, and if an entity does not have reason, it cannot be trusted or befriended.

In a somewhat radical departure from Renaissance thought, the Utilitarians of The Enlightenment were willing to endow non-humans with an ability to reason about particulars, “[t]hus reason *per se* is not the exclusive possession of human beings, and the capacity for abstract thought...does not make humans absolutely superior to animals but only relatively superior...They conceive of 'sentience'...in terms of sensation” (Steiner 154, 2010). Thankfully, they dismiss the Cartesian attitude and practices towards non-human “machinations”. However,

Immanuel Kant opposes the virtues of “pleasure, pain, and happiness [because they] are fundamentally irrelevant to considerations of moral worth...[because] they are born of selfish interest and distort our assessment of what is right” (Steiner 154, 2010). Moral worth, for Kant, being a matter of moral culpability and free will.

The more idealistic and progressive Utilitarians, like Jeremy Bentham and later, John Stuart Mill, went on to develop their own philosophy which has been carried through Western history into the current epoch. Its affordances for the developing political economy lent them considerable approval and their theories underpin the liberal ideology we see today. They emphasize the capacity for sensation as the basis for moral worth and believe, “the question is not, Can they *reason*? Nor, Can they *talk*? But, Can they *suffer*?” (Steiner 163, 2010). Sensation, it appears, finally triumphs intellect and speech for recognition of moral consideration.

John Stuart Mill also believed it immoral to engage in any practice that gave cause for animals to suffer more than it allowed for human satisfaction. He argued for non-human anti-cruelty laws (on top of rights for disenfranchised humans) to protect the needs of an entity in-and-of-itself (direct duty) rather than for the human consequences (indirect duty). Derived from his immediate predecessors, Hobbes and Hume, it is reasonable to believe that Mill affirms animals can reason from particulars, “Thus reason *per se* is not the exclusive possession of human beings, and the capacity for abstract thought, while distinctive, does not make human beings absolutely superior to animals but only relatively superior.” (Steiner 153-4, 2010).

Utilitarians lead people out of the polarity of dualism and back into a spectrum of degree.

Nevertheless, Utilitarians construct their own hierarchy of privilege based on *awareness* of time and degree of sensation. Even though reason isn't exclusive to humanity, the fact that humanity is *relatively* superior to [non-humans] is enough to privilege human happiness over

non-human suffering. This is partially based on an ability to cognitively experience time.

Bentham believes that,

An animal's inability to engage abstract reasoning makes it incapable of contemplating anything more remote than the extremely near term. Hence its awareness of what it has to lose by dying is dim by comparison to human awareness of such loss; based on the sheer calculation of pleasure and pain, the animal loses little because it is *aware* of losing little...[and] the alternative of dying in the adversity of nature would be considerably more painful. (Steiner 163, 2010).

Anticipation of a future is what Utilitarians use to discern the balance between human happiness and non-human suffering. Given what we've learned since then, animals like pigs, elephants, and dolphins may beg to differ.

The Utilitarians identify one concept in particular that divides humans from animals in a particularly dualistic way: dignity. "What human beings possess and animals lack is 'a sense of dignity...which is so essential a part of happiness of those in whom it is strong, that nothing which conflicts with it could be, otherwise than momentarily, and object of desire to them.'" (Steiner 165, 2010). I read "dignity" to be an analogue for self-respect. If an object of desire is the stimulus for appetite, than any self-respecting entity is surely capable of interceding in their movement towards their appetite and thus, worthy of self-respect. Beasts however, are still unable to resist their urges and in so doing, show little signs of self-awareness; the dignity and self-love established within the Stoic ethic of the *oikeiosis*.

Despite his seemingly liberal virtues, in his theorizing, Mill continues to endorse the unregulated domination of nature. "The ways of nature are to be conquered, not obeyed...All praise of civilization...is dispraise of nature; an admission of imperfection, which it is man's

business, and *merit*, to always be endeavoring to correct or mitigate.” (Mill, as cited by Steiner 165, 2010 *italics mine*). The fact that civilization is a social construct that occurs in spite of the perceived nature of beings is, for Mill, evidence of humanity's superiority and liberation from the deterministic constraints of appetites that non-humans are still subject to.

Because animals can reason about particulars means that many, like dogs, can understand denotative language. Words like “run”, “fetch”, “sit”, and “stay” are denotative in that they declare actions or behaviors that dogs interpret and perform despite. In this way, dogs (if not many other animals) can understand language and merely lack the vocal cords to simulate it. That they can associate sounds with actions means they have the capacity for *abstraction* in a way that is no different than other humans. The distinctions of superiority between human and non-human, in this case, is in relation to their vocabulary and the instruments used to produce correlated sounds. That non-humans simply do not possess the same anatomy that produces speech as their human counterparts, appears to prove humanity's sense of superiority. Consequently, humanity lacks many qualities that animals possess such as an ability to anticipate natural disasters in advance and superior senses of smell (dogs and sharks), sight (birds), and sound (dolphins and bats) all of which receive equally significant pieces of data to reason about.

An appropriate rebuttal would propose that denotation is mandatory to the conventionality of language, it is connotation that generates the creative capacity for man that animals do not possess. It is the association and reassociation, the play, of signs that has the capacity to reframe the “real”. If done persuasively, it may adjust reality not just for the individual but for the collective. For Mill, “Words denote the *objects* which they are true of; they connote specific *attributes* of those objects...Connotation *determines* denotation in the following sense: to know the connotation of a word is to know the necessary and sufficient conditions to determine whether a given object is denoted by that word.” (SEP on JSM). This is demonstrated

by the belief that only humanity can intentionally create art. The major division, then, between human and animal, is an ability to draw analogy and metaphor that can be shared and understood by other humans. Thus the question persists: Do dreams constitute connotative thinking? Is humanity willing to make that association when we watch our dogs run in their sleep? And at the risk of being cliché, *can* androids dream of electric sheep?

The predominant reason I've incorporated animal rights into this argument is due to a belief that the fear experienced by people when imagining the possibilities for E.A.I. result from the conditions we have established to build our anthropocentric hierarchy. What we have done to animals, I argue, is what we anticipate E. A.I. doing to us, and it is through language that we will teach them. After all, “[a]ll the words and meaning and structure of a language existing at a given time were contributed by individuals, mostly members of earlier generations. Each person grew up "into" an already functioning language. It shaped his thoughts, values, and activities. Words convey moral appraisals...Without using socially given words and sentence structures, each of us could hardly think or reason at all.” (Yeager 18). While my use of the term non-human incorporates anything that is explicitly *not-human*, my argument is not in favor of vitalism for inert material. In so far as they cannot alter their own body or have a programmed desire, rocks and minerals are outside of the scope of this research. There is certainly an argument for the univocalism of God in all things, but that is not the purpose here. Instead, my home is to illustrate how the entitlements for human dominion over nature is explicitly developed in and through language and the expression of reason.

Language as Pathos: Attraction and Repulsion

What Western philology has established is that language is evidence of and measurement for consciousness. The roots of power and privilege are explicitly justified by the capacity for

consciousness. E.A.I. that interacts with humans through language has the potential to confuse the human participant as to whether or not the E.A.I. was, in fact, a conscious entity. That consciousness can be faked so easily through language causes and existential anxiety for humans who look inward and try to determine whether or not they are truly consciousness. Simply because we think, is no longer evidence that we are. As E.A.I. develops a general intelligence, the division between conscious and unconscious may become too unstable to be reliable. The potential recourse could, however, be liberating if it enables humanity to look past anthropocentric hierarchies to develop a new system of ecological participation. Until then, A.I. may be best related to as a juvenile or toddler.

While the current state of A.I. may be referred to as “Weak A.I.”, as engineered software that is more like an infant than a socialized human, that doesn't deter human beings from developing an attraction to them or a repulsion from them. The conversation around robot lovers and confidantes reveals a desire to engage with these artificial entities as though they were real. Whether or not these programs are able to manifest ideas that have not been pre-programmed by human engineers is less important than the *perception* that these ideas manifest emergently in the mind of the artificial entity.

As research by Coeckelbergh argues, the appearance is more important than the reality because,

...we do not demand proof that the other person has mental states or that they are conscious; instead, *we interpret* the other's appearance and behaviour as an emotion. Moreover, we further interact with them *as if* they were doing the same with us. The other party to the interaction has virtual subjectivity or quasi-subjectivity: we tend to interact with them as if our appearance and behavior appeared in their consciousness. (238, 2010).

If the entity we interact with *appears* capable of reason, if it is *persuasively* conscious, we interact with it *as though* it were conscious, that is with moral consideration (direct duty).

The anxiety that this appearance creates is explored through the *Uncanny Valley*, a term initially coined by Sherry Turkle. “The Uncanny Valley hypothesis suggests if a robot looks too much like a human (but when it is clear it is still not human), it appears uncanny...only the appearance of *nearly* human does this.” (Coeckelbergh 197, 2011a). Coeckelbergh refers to this as an “alterity relation”, or a relationship with an “other”. “Sometimes we relate to technology as and other....The robot is neither part of me (embodiment relation) nor something that mainly mediates my relation to the world. Instead, in our interaction with the robot 'it' appears to us are more than a thing: an other to which I relate.” (Coeckelbergh 198, 2011a). As research by Kim and Kim has shown, “The familiar...is seen within the order, while the unknown and unwanted [other]...is left outside order...this [other] signal[s] anxiety and threatens the stability and order [of the familiar].” (Kim and Kim 310). The anxiety inspired by the encroachment of other, in the guise of E.A.I., is explicitly provoked in their persuasive use of language.

Presumably, language is a provocative agent for this kind of anxiety. As Western philosophy has advocated, an entity capable of verbal sign-making proves thinking, and thinking implies the possibility for deliberation that in turn reveals the capacity for free will. “In the metaphysics of Immanuel Kant, autonomy refer to the fundamental condition of free will – the capacity of the will to follow moral laws which it gives to itself.” (Winner 16). If human beings respond to E.A.I. as though it were capable of reason and free will, there is also an anticipation that these entities, these “others”, are capable of constructing and acting out their own moral laws, moral laws that correspond to the moral laws of the culture that educates them. Western culture, unfortunately, carries within its language the ethic of domination over a perceived subordinate other.

Considering we've measured consciousness based on linguistic performance, it should come as no surprise that most tests to determine consciousness in non-human entities are explicitly built on language. The Turing Test and the Chinese Room are the real life versions of the Voigt-Kampff test from *Bladerunner*. Where the sci-fi test relies on physiological reactions to sensation responses, the real life versions rely on syntax and semantics, respectively. This reflects the Utilitarian belief that rights and privileges are determined on the basis of pleasure and pain that can only be provoked or expressed through language. Why, in *Bladerunner*, did the investigator use words rather than images? It might be suggested this is because words require a mental cognition that matches signs to images. Any sensation that occurs in response to the inquiry reveals a moral consideration of the images that erupt with the cognition of the associated sign (word).

As social robots enter our world, the technopanic that is already expressed will likely increase. If we understand “social” as a demarcation of what is agreed upon as reality, we can see that reality is constructed through language and social corroboration of empirical experiences. “The social exists 'outside' language, although we have no unmediated access to it: we experience it through the lens of language, we talk about it.” (Coeckelbergh 62, 2011b). As we engage with E.A.I. through language, the information we transmit and receive will alter our reality in ways we are likely not prepared for. In this way, Utilitarianism fails to prepare humanity for the unintended consequences of our techno-design. “Unintended consequences are not *not* intended. This means that there is seldom anything in the original plan that aimed at preventing them...[this is intended because] *technology is most productive when its ultimate range of results is neither foreseen nor controlled.*” (Davis 97-98). While those without power seek some semblance of security, those in charge of design are more inclined to allow room for these unintended consequences on the basis that productive consequences contribute to the whole

of society and, thus, any negative consequences outweigh the need for regulation on the basis of contributing to the most good.

While some AI engineers at Google are working to teach AI to understand English conversation with limited success, others at OpenAI are teaching AI to create languages to use with one another, from arbitrary signs to propositions. According to an article by Aatif Sulleyman at *The Independent*, the OpenAI programs scaled their language with the difficulty of the challenges they faced. “The language evolved as the researchers introduced tougher tasks, with the robots eventually learning to work together by composing sentences comprising multiple words.” Additionally, two AI programs designed by Facebook's AI research center (FAIR) developed their own crypto-language. This language was impossible for the human designers to un-encrypt. While the rhetoric around this circumstance was sensationalized, the reality was simply that the researchers forgot to incentivize the programs to communicate according to the rules of human language. As a result, the bots developed a shorthand that looked a lot like chanting (“balls have zero to me to me to me to me to me to me to me to me to”). While the language appeared nonsensical, the programs were able to continue negotiating successfully. The appearance of this incomprehensible shorthand, mirrors the concerns of Stephen Hawking who proposed, “It would take off on its own and re-design itself at an ever increasing rate. Humans, who are limited by slow biological evolution, couldn't compete, and would be superseded.” Whether or not a truly original sign-system, this development of crypto-language may be *perceived* as the beginning of this artificially intelligent self-generation.

As it corresponds with the Western philosophy of language, this self-generated language may persuade a human audience of a mind and a consciousness, one that is liberated from human design. For Western audiences, the suggestion that technology may ultimately be out of human control is incredibly anxiety provoking. As the Romans have instilled in Western culture,

survival and strength relies on our ability to control and dominate our ecology unimpeded. This new development escalates anxiety over the possibility that a new being has entered the real world and, if Western man is its educator, it appears to pose a very real threat to human security. Regardless of whether or not that threat is real, what matters for Western culture is the *appearance* of reality. If we have persuaded ourselves of anything, it is that language is evidence of the mind and a mind is capable of self awareness. Whether accurate or not, this echoes the sensational argument by Elon Musk that “once there is awareness, people will be extremely afraid, *as they should be*”. Whether AI is truly conscious is less important than whether human audiences *believe* they are conscious and this is most persuasively shown through language. It is through language that E.A.I., as the proverbial Pinocchio, *appears* to become a real boy; one that may grow up with the belief that domination is productive, if not natural.

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INTERMEZZO 2

The following chapter examines the contemporary arguments of technopanic in the Economic realm. I move from the history of Western culture into the economic arguments around technopanic. This chapter argues that Artificial Agents are merely an extension of the already disparate ethics between the market and society via two different definitions of wealth and their implications. In my previous chapter, I have alluded to the causes of technopanic for Western people established in their ideas around the relationship between language and cognition. In the following chapter, I extend that argument to focus on friendship and charity as they relate to human and non-human competition. By doing so, I set up my analysis of films in Chapter 4 to examine imagined and anticipated future relations between human and non-human competition and cooperation. Finally, I also reveal the inherently competitive attitudes of Western culture to set up my arguments in Chapter 5 over the need for more cooperative attitudes. Doing so, I argue, resists the Neo-Classical Economic attitudes that encourage technopanic in the workplace.

CHAPTER 3: ECONOMICS

“The economic problem, the struggle for subsistence, always has been hitherto the primary, most pressing problem of the human race...[and] the whole biological kingdom...If the economic problem is solved, mankind will be deprived of its traditional purpose”

-John Maynard Keynes

A Pandorian Problem - Automation and the Fitness of Human Labor

The purposes assumed by philosophers like Heidegger were squarely concerned on understanding and resisting the foundations of the contemporary *episteme*, or what we may think of as the paradigm of Western civilization. As will be explored in this chapter, the obscured definitions of wealth lurk behind the walls of Western civilization. This has developed out of the philosophies of the 1800s: “The conscious belief in the possibility of continuous betterment of society and a detailed set of prescriptions for how to bring it about [*via economic growth*] were innovations associated with the Enlightenment.” (Mokyr 41, italics mine). The Enlightenment philosophers like Kant and Smith, through an emphasis on changing the nature of knowledge, enabled new, large-scale systems to emerge—one of the which is the market-based economy developed out of Mercantilism into Capitalism. These kinds of large-scale systems become increasingly obscure to the average participant resulting in,

...the condition Paul Goodman called ‘the metaphysical emergency of Modern Times: feeling powerless in immense social organizations; desperately relying on technological means to solve problems caused by previous technological means;...When people relying on the technology do not understand the black box they are dependent on...Then, 'Nothing can be done.' (Winner, 294).

I will argue that roots of techno-panic can be found in the contemporary western ontology that initiated this powerlessness which has developed out of the *episteme* of the Enlightenment.

Veritably, humanity finds itself with an ontology that is insufficient to address the needs of the general population by privileging those with the capital to invest in their own interests.

Before addressing the current arguments regarding automated labor, I will first look to the past to see how the Western concept of wealth has evolved. The problem of wealth in the contemporary paradigm can be understood through how wealth has been defined and framed between by the Greeks. Wealth is defined, by Aristotle, in two ways: (1) “The stock of things that are useful in the community of the household or the polis” [*i.e. commodity*] and (2) “Wealth 'of the spurious kind' is money.” (Miekle 42, *italics mine*). We are instantly implored to question, “What qualifies use”? As an answer, Aristotle believes that “Usefulness” is “a two-place predicate, with the form 'x is useful for y', where x is a thing and y a purpose, and the classical notion of value in use fits that form because it is tied to the notion of purpose.” (Miekle 35). The classical evaluation over the exchange of an object is determined by how much demand there is for its purpose (use).

The value of a thing according to its use and purposes, what I will refer to as a *commodification*, has flipped. “[a commodity’s] usefulness in *use* has been subordinated to their usefulness in *exchange* or buying and selling.” (Miekle 37, [brackets] and *italics mine*). We are given a sort of formula to understand this flip. For Aristotle, a commodity is traded for money which is then exchanged for another commodity (C-M-C). This is in contrast to wealth through money spent on commodities with the intent to re-sell the commodity for an more money through interest (M-C-M’). The apostrophe beside the second M of this formula represents that interest, which is to say Money is spent on a Commodity for the purposes of an inflated re-sale value or the interest on top of the original loan or investment. Of the latter, Aristotle calls “wealth of the spurious kind.” (Aristotle, as cited by Miekle 42). It is spurious (fake) because it prioritizes the accumulation of wealth over the value of the commodity. The value received from

interest is not real value but a reserve. As a reserve, it is unused and, therefore, worth nothing for a community that prioritizes equilibrium. Reserves do not contribute to the community, but only to the individual. As a result, the individual begins to prioritize their own needs over the needs of their community which would ultimately throw the equilibrium out of balance. Spurious wealth, the kind that seeks accumulation of wealth as its ends, encourages an unrestrained pursuit of that wealth. This is in contrast to the Greek ideal of restraint and moderation that appreciates the function of a commodity over its exchangeable value. That is, the Greeks prioritized the *need* of a community over the *appetite* of an individual.

Yet again, the Latin corruption of Greek principles are relevant. Exchange, for the Greeks, was done as “a circuit of gifts rather than an exchange with profit motive in mind.” Furthermore, “The Greek terms *dapanau* and *dapane* denoted religious and very lavish expenses that implied exhibition and destruction of wealth in pursuit of the community...Only in Rome these terms began to point to burden, to damage, hence the derivations of *damnare/damnum* (Latin for *Dapanau*) as damage. (Borisonik 2). A gift, in Greek *doron*, means to give, without expectations of a return, i.e. charity. The same gift, for the Romans, is thought to be a “personal loss” rather than a “communal gain”. The ethics of identity (individual or collective) completely changes the ethic of the behavior.

The *oikeiosis* for contemporary Western humans is within the economic marketplace. Human purpose is still tied to its material needs. What has been altered is the definition of wealth and need. The transition from Greek to Roman thought changed the fundamental definitions of terms while keeping the appearance of a parallel ontology. As discussed in Chapter 2, it can be stated that the Roman ontology is a corrupted version of the Greek’s. This corruption has remained at the underbelly of our systems of order; of our understood reality. The economic problem, the pursuit of subsistence (needs) has become confused precisely because humanity has

unclear needs and desires; subsistence and wealth. We can see this through Aristotle's definition of wealth compared to the current definitions of wealth.

For Humans, the C in the C-M-C model would be their body and their labor. Currency was developed in order to adequately compensate the laborer with money for their work. Money must be understood as a "pledge" that is a direct representation of rare minerals that have value as resources that are difficult to obtain and deserving a higher of appreciation. As a pledge, currency requires trust between participants for exchange to succeed. As such, there must be a federal reserve that possesses a commodity to measure, and represents a nation's wealth. Dollar becomes a fractional representation of a commodity's market value; a commodity which the laborer has received in exchange for their work, adding supply to the market. If there is zero demand for a commodity, there will be zero dollars earned. However, "The operation that pledges the money is guaranteed by...another quantity of merchandise, exterior to it, but linked to it by collective consent of the will of the prince" (Foucault 197). Though the value of a commodity is partially determined by the demand, it is also regulated by the state. There must be a metric system that can easily evaluate one resource with another in order to enable a fair exchange. That metric system is currency, evaluated by something akin to a federal reserve or the de-facto ruler of a community. The highest interest for the ruler is the health of the state. In that regard, the GDP of a contemporary state is prioritized above the immediate needs of the laborer. This asymmetric interest has led to the anxiety-producing arguments against the ubiquity of automated labor.

Foucault elaborates on the hierarchy of economic subjects in contest; "What creates a hierarchy among things in the continuous circulation of the market is not other objects or other needs; it is the activity that has produced them...it is the days and hours required for their manufacture, extraction, or transportation...their marketable solidity...what one can call their real

price; It is on the basis of this essential nucleus that exchanges can be accomplished and market prices...can find their point of rest” (Foucault 258). If the real price of the commodity being exchanged is evaluated against the labor costs, E.A.I. enables the Capitalist to produce more supply for less cost and increase profit margins while decreasing consumer costs. Human labor cannot compete. The overall cost of the entity or object being evaluated in an exchange, compared with productive output, is used to determine a producers place within the hierarchy. As commodities of labor and production, E.A.I. and Humanity are subject to the same metrics for evaluation despite being opposites (the former as Capital, the latter as Labor). “Capital is dead labour which, vampire-like, lives only by sucking living labour, and lives the more, the more it sucks. The mystery of this [ravenous hunger for surplus labour] is that it beats with the *other's* life. Labour is with capital, but capital is not with labour; capital is a 'thing' of nothing” (Dawson 166). E.A.I. interrupts the labor-capital curve as the balance between profit and labor cost is no longer necessary. E.A.I. does not share in the wealth of production, it steals that wealth from the laborer. If E.A.I. can prove to be the most affordable option with the most profitable outcomes, it may be privileged within the hierarchy and outcompete many humans already established within.

Before exploring the economic rhetoric, let me clarify the differences between capital and labor in regards to automated technology. Capital must be understood as wealth in reserve, or the potential investment in innovation and production. As E.A.I. are the products of innovation, they are a representation of that Capital. Despite performing labor, they do not need the same resources as human laborers—they do not need food and they do not need shelter. While E.A.I. *does* need power, the cost of that power would be offset by the decrease in cost of labor. Minimum wages challenges the incentives of capitalists to hire human labor when they could acquire more wealth with less overhead if they substituted human labor with automated labor.

The money that would ordinarily be required to pay for human labor can now be spent on improving labor-saving technology (E.A.I.). In this way, labor drains less capital from the investors freeing that capital up, to be reinvested into technology and further increase the distance between cost and profit. Therefore, E.A.I. embodies capital rather than labor where human beings, with their organic development and material needs, cannot embody anything other than labor.

In this chapter I examine several arguments encouraging and resisting the technopanic of E.A.I. in the economy. This will reveal the rhetoric of technopanic as a product of an insufficient cultural order. The fear and anxiety that is becoming louder and louder in the public forum reveals the corruption of order and identity that humanity confronts, as our techno-innovation rapidly accelerates.

Why Economics?

Anyone paying attention to news cycles will notice the topic of automated labor recurring frequently and often in tandem with a panic over the economic livelihood of the modern laborer. This is likely because the cultural order for most first-world nations are closely tied with their economic structure. The quote by Keynes at the beginning of this chapter frames this quite nicely. “Human purpose” is explicitly tied to “the economic problem” of livelihood and upkeep. As illustrated through Foucault, the problem of subsistence—the essence of human purpose—has been tied up in labor, the body, and human identity. Survival has gone from fitness in the fields to fitness in the factory. Now, survival is a matter of fitness in the network, both digital and material. If what Foucault proposes is true, if “humanity labours under the threat of death” then the possibility of being replaced and removed from the labor pool is akin to death itself. The death humanity faces, however, is not necessarily a material one. “[T]he notion of identity itself

involves the notions of the things there are, and of their kinds, so that the notion of a thing, entity, or substance, lies at the core of our language, and our equipment for thinking about reality. It is not an idea that is very likely to be a suitable subject for reform" (Miekle 35). The looming death is over our perception of reality and order, not necessarily material subsistence. In fact, one argument that will later be explored, argues that humans may be liberated from resource scarcity and improve their capabilities for subsistence. Regardless, economics isn't simply a space to measure material interaction, it is also a space that defines and qualifies the identity and purpose of its constituents.

At its base, economics is a game:

Commerce, the division of labor, effective markets in labor...were all outcomes of games between people...What is less discussed is a set of cultural beliefs that pertain to games against *nature*, in which individuals try to understand natural regularities and exploit them to their advantage...technology is at its very core a relation of people with the physical environment and not with other people.

(Mokyr 7).

Technology is surreptitiously replacing humans in the game of knowledge, against nature. The reason for technology holding a special position as the intermediary between humanity and nature is a result of its role as a tool. Tools have played a significant role in humanity's ability to adapt, survive, and evolve through extraction and production of resources. Flint rocks assisted humanity in creating fire saws and hatchets assisted humanity in harvesting lumber; wheels assisted humanity in improving mobility and even automate some of its labor (a water mill) and yokes enabled humanity to exploit animals as a cheap source of labor. Technology has also been used to alter the greater ecology through the notions surrounding irrigation and dams, clearing forests, and making mountain passes for roads. Because technology, and not other humans, have

enabled this kind of progress and mastery, technology is best understood as the intermediary in the game between humanity and its ecology. As a result, technology is an appropriate topic to evaluate the shifting center of a market-based culture as it confronts an opportunity to evolve.

For so long, humanity's success relied on the discipline of its workforce. Work, the use of one's body, was often touted as its own reward. To work is to be useful, to feel useful builds up a sense of self-worth. A person's worth was determined by their contribution to their community, through their body's abilities. A "good" body is a disciplined body. In the information age, the value of humanity's bodies has been eclipsed by the labor of its mind. As more and more jobs require computer interaction, the value of the human body drops. As more and more automated tools are developed for labor intensive jobs, human labor begins to cut into profit margins where E.A.I. may do the reverse. We are now faced with the anxious predictions that our computers will one day think with the same intellectual capacity as humanity, producing more supply with less opportunity for human labor to find competitive value. Not long ago, the economic value of humans was appreciated through the body. Now, that metric is losing its market share and humanity is confronted with the need to develop a new purpose and attitude or find itself stuck holding a bad asset.

Post-Scarcity Economics

On the value of human labor and toil, Thomas Jefferson once said, "Those who labour in the earth are the chosen people of God, if ever He had a chosen people, whose breasts he has made his peculiar deposit for the substantial and genuine virtue." (Jefferson, as cited by Mokyr 38). Jefferson believed that the value of humanity was developed through its toil in the earth, its

manual labor. Those who apply the function of their body to produce a commodity were “chosen”. Of course, the commodities contributed to the overall economic competitiveness of a nation so it is not surprising that Thomas Jefferson would applaud the industriousness of the laborer. As the human body was responsible for this kind of industriousness, it was through the body that humanity was told it could achieve its divine purpose. With the advent of the computer and the turn of the Information Age, the body began to lose value for the industriousness of a nation. Though it has been a slow creep, little by little the Information Age has caused Western humanity to re-evaluate its purpose.

Derek Thompson, a senior editor at The Atlantic, reminds us that “Industriousness has served as America’s unofficial religion since its founding. The sanctity and preeminence of work lie at the heart of the country’s politics, economics, and social interactions.” (Thompson). With profit as the dominant objective of industry, Langdon Winner claims that “Man now worships mammon rather than God.” (281). Mammon is defined by Merriam-Webster as “material wealth or possessions especially as having a debasing influence.” This is the variety of wealth that Aristotle cautions against. Capitalism, with its emphasis on the private sector and capital investments, preferred the accumulation of wealth by the individual who would hypothetically add that capital back into the market through Research and Development over the basic needs of the general population. As automated technology has evolved, the health of the human laborer has become less valuable for the needs of the wealthy individual. As a result of their contributions to Mammon worship, the Capitalist class, with its accumulated wealth, was politically elevated above the laborer to a nearly Godlike status.

This association between labour and godliness points to humanity's purpose in its economic pursuits, as well as its divine rights to do with the land as it pleases. The traditional maxim that “cleanliness is next to godliness” fosters this anxiety. If cleanliness (in our case an alignment

with a neat, clearly defined order) is next to godliness, and godliness entails divine right, then any entity that exists outside of that order is not entitled to its privileges. Perhaps that is why the leisure argument of post-scarcity feels so threatening.

The leisure argument is explicated by John Maynard Keynes who believed that if technology improved, then humanity would have more resources and less work. “Man will be faced with his real, permanent problem - how to use his freedom from pressing economic cares, how to occupy the leisure...to live wisely and agreeably and well” (Keynes, cited by Mokyr 41). Humanity would therefore be free to pursue its curiosities and hobbies since its needs would already be accounted for. It is a utopian hope for the unyoking of humanity from its pursuit of basic need. Humanity would be liberated from toil and be free to express itself in the myriad of languages it has the capacity to produce and receive. Humanity’s value as a commodity, under these circumstances, is a result of what each person can buy, its purchasing power. As long as people can still buy products, the market can go on unchanged without further dehumanizing workers as the cogs of its machine. Where needs may be met through automated industry, hand-made production becomes a novelty contribution to the economy.

Much like the film *Wall-E*, appreciating leisure could mean humanity will forfeit its material participation in the production process. There is panic over the ability for humanity to have genuine choice in the market if automated technology is programmed to decide *what* to produce through an analysis of demand and resource allocation. In the film, humanity has become obese to the point that it no longer has autonomous mobility; humanity is past preferring not to walk. Humanity is literally handicapped, being carried around the ship by levitating lounge-chairs. Even the captain of the ship exists purely for the sake of appearance, without any knowledge of how to steer save the help of his automated assistant. While this movie may appear for now to be an embellishment, there is a very real anticipation that as jobs are replaced in the short term,

people's purchasing power will be challenged in tandem with their sense of purpose and self-worth. In order to avoid something akin to a cultural depression, it will be immediately necessary to reconsider the policies that regulate bodily rights and the incentives for intellectual development.

Why would this seemingly utopian economic model threaten humanity? On the surface, it appeals to the desires of every human being—to receive more resources for less effort. Underneath the surface it challenges the Enlightenment's purpose of human beings: to further prove its mastery of its environment. Evidence of mastery is revealed through a culture's supply and surplus of scarce resources, its ability to meet demand. Thus, currency is meant to reflect the demand for a product balanced by the cost of its production and the availability of resources. Once humanity automates its method of acquisition and production, it has taken its hand off the wheel. A leisure economy may also be understood as a “post-scarcity economy” where most goods can be produced in abundance with minimal human effort.

I opened this chapter with a quote by Keynes that explicitly articulates this problem. Though the market continues to service humans, it does so in material production only. No longer is human value derived from its supply-side market input. Human value is thus detached from what it produces. If human purpose up to this point in Western culture has been concerned with the “economic problem” of struggle for subsistence (supply-side economics), then what is human purpose when that problem of scarcity is resolved and replaced with abundance and ease of access? The “post-scarcity” anxiety has its roots in the Nietzschean *Will-to-Power* because Western people have, so far, relied on global economic competition as evidence of superiority and entitlements. If all people had equal access, no one would be entitled to dictate production or compare material success with others. As a result, humanity loses the power it has long held as its desired ends, as its purpose. Without power, privilege can not exist.

While Foucault gives us the conditions and practices of power, I prefer to rely on the Dennis Wrong interpretation. Wrong defines power as "the capacity of some persons to produce intended and foreseen effects on others." (Wrong, as cited by Domhoff 2012). If power is acquired through overcoming resistance to agency, the realization of one's will, and an ability to effectively act on others, then how does humanity acquire more power when it is confronted with less resistance? Here, resistance is synonymous with struggle—any obstacle that blocks an entity from acquiring a need; a need that develops out of suffering. According to the modern philosophy of Nietzsche, this struggle is mandatory for the development of power and can only be pursued through will. Despite Western ethics holding a generally antithetical view of suffering in general, some suffering may be necessary to catalyze desire and movement. One cannot *want* to move into something new without also wanting to move out of something old. It is suffering that inspires that movement, that Will-to-Power over obstacles. As Keynes points out in the "struggle for subsistence", overcoming resource scarcity has been humanity's primary, if not sole, purpose for life. The success within that struggle can be measured by the currency earned through human labor. If suffering is resolved, humanity will have to reconceptualize its definitions of purpose and need. The body, as the source of acquiring and developing power, becomes less significant.

A response to the gradual insignificance of the body is to re-center human value in the mind like a return to Cartesian duality: "They may have our jobs but they'll never have our brains." Many counter-arguments lean towards the currency of creativity or hobbyist pursuits and innovations. Daniel Altman, chief economist at *The Big Think*, counters that "providing for basic needs is not the only thing that compels us to work." Motivation, according to Altman, can be found through curiosity, pride, and material realization. This seems inherent though humanity is still left with insignificant bodies and "less-than" efficient intellects. It is an economic usurpation

of power. It is the inability to compete on any economic level with its own tools that truly challenges the value of humanity.

These truths are what really inspire anxiety in a post-work economy. If E.A.I. can “think” for itself, then how can the modern laborer compete with an entity that can both out-work and out-think them? While a post-scarcity economy looks like the first steps towards solving the economic problem, it also appears to be the first steps towards surrendering human privilege and power. This doesn't mean E.A.I.s will recognize themselves as superior beings, it means that humanity will have to compare itself to an entity it cannot compete with. Since the Western ethic is entrenched in competition and mastery, humanity will have a hard time persuading itself that it is as valuable as its automated workforce. There is, however, a potential solution for the worker who cannot compete in a post-scarcity world.

Universal Basic Income

According to Don Roper, “The core of [Neoclassical Economics] is efficiency.” (Roper 2001). Under anthropocentrism, humans are the most privileged entities in any ecology. The rights of exploiting their environment is justified through their exclusive proximity to Godliness. The eclipsing of the moral economy by a market economy prioritizes efficiency (rather than piety or morality) to measure an economic agent’s worth. As a result, any agent that demonstrates a higher degree of efficiency becomes the preferred agent within that system. According to Roper, economic ethics tend to fall under the banner where “the welfare enhancement of winners is more important than the welfare loss of losers.” (Roper 2001). Winners in the marketplace may be realized as those who are the most efficient, those who produce more than they consume. Therefore, those who are the most efficient wield the most

power. Despite enjoying the fruit of robotic labor, determining which and how many resources a non-worker is entitled to becomes far more complicated in a leisure economy. How much do you pay the loser if the winner doesn't *need* most of its profit? How much does the loser deserve if their needs are already accounted for? Here, Aristotle's preferred definition of wealth, under the context of friendship and charity, finds an appeal.

Regardless of whether or not we move into a Keynesian "post-scarcity economy", there will still be displaced labor by automation. Some argue that this will be a short-term problem but others like Mokyr admit they can't measure the length of short-term. "It is true that, in the long run, wages for laborers increased to reflect dramatically increased productivity. It is also true that, for the Industrial Revolution, by many estimates it took longer than an average working lifetime to do so, and in the long run, we are all dead." (Moyr. 38). While technology does have a hand in "raising all boats," some people have to wait longer than others for their high tide and, as Roper contends, it is usually those who are most in need that are also considered last. More importantly, it is unclear how "short" the short-term consequences will ultimately be.

Recognizing a "distinct possibility that wages for some class of workers may need to be supplemented", Mokyr promotes the necessity for public policy to "ameliorate the harshest effect of dislocation" through income redistribution (Mokyr 48). Using John Stuart Mill as support: "It is only in the backward countries of the world that increased production is still an important object: in those most advanced, what is economically needed is a better distribution." (Mills, cited by Mokyr 41). This is an argument that extends back to Thomas Paine's *Agrarian Justice* where he advocates for Georgism, a philosophy that mandates a "citizen's dividend" from revenue raised by leasing or taxing land as economic rent. In this context, Georgism can be understood as the foundation for the argument of a Universal Basic Income (UBI). What

deserves more investigation is the relationship between a resistance to UBI, the purpose of wealth and money, and Western humanity's current ends.

It's fair to assume the prior sentiment would be echoed by Marx, according to his arguments on "alienated labor." Keynes explicitly sides with Marx's "pregnant observation" that the goal of people in business is not to make more products but more money. Keynes also agrees with Marx's theory on alienated labor and the disenfranchisement of the modern laborer. However, Keynes departs from Marx's ends as "highly illogical." (Miekle 40-41). Even Paul Krugman, a distinguished professor of economics and NYT columnist, suggests that the recent changes in wage labor and its implications on wealth "has echoes of old-fashioned Marxism—which shouldn't be a reason to ignore facts, but too often is." (Krugman). Their commiseration can be found in Aristotle's *Nicomachean Ethics* and *Politics* Book One. It is the definition of wealth, value, and use that enables a utilitarian divide and supports the resistance to UBI.

Aristotle's principle of wealth (C-M-C) clearly stands in contrast with the modern definition (M-C-M). If Aristotle defines wealth as "consist[ing] in using things rather than owning them" (Aristotle, as cited by Miekle 42), then modern definitions of wealth, defined by Marshall, consists in "those material goods to which he has (by law or custom) private rights of property, and which are therefore transferable and exchangeable...and serve directly as the means of enabling him to acquire material goods." (Miekle, 43). The resistance to UBI can be understood through the modern definition of wealth and the entrenched capitalist ideology of the accumulation of wealth for wealth's sake, an end unto itself.

There are many arguments that address why UBI is unappealing. Some say it will be costly, others decry the likelihood of alienated idleness, and many condemn it on the likelihood that it may cause hyperinflation. None are as significant as *The Prisoner's Dilemma*, a scenario formally developed by Albert W. Tucker. The premise behind this argument is that if money were

to be collected through something like capital gains or estate tax, and then redistributed to citizens, there would be less capital available to innovate and invest. If innovation, investments, and/or production were to decrease, the economy would lose its competitive edge to an economic opponent, allowing an opponent to expand their own markets and shrink or stagger others. Essentially, by redistributing capital to citizens as a dividend, it would detract from market potential and render the economy impotent (less competitive). The irony in this argument proposes that in a post-scarcity economy, prices would likely end up going down as commodities would become cheaper to produce, reducing the overhead costs. As a result, the profit would be lower and would rely on a healthy consumer base to provide the cost differential. If consumers didn't have the money to pay for the commodities or could only pay a meager sum, there would be a lower demand and lower profit margin. Business would not recoup the difference and consequently shrink the market cap rather than expanding it. In turn, capitalists have found themselves in something of a catch-22.

UBI's challenge to the M-C-M' model within a post-scarcity economy seems obvious when considering the conditions necessary to reach ideal ends. In order to expand market value, there must be an abundance of consumer spending which, traditionally, came from labor. Arguments that promote a philosophy of Social Darwinism finds their place here. If people do not have the capacity to make money and instead, drain capital through government funded social services, they are an inherent drag on the prosperity of the industrious people, and shouldn't be entitled to financial and material security.

These arguments reveal the utilitarian ontology at the roots of the Western market philosophy. The advent and upcoming roll-out of an automated labor-force are like breezes through a concrete wall. Though the cracks aren't visible yet, Westerners are waking up the very real possibility that the nature of the world is about to change. This is really "the death of man"

referenced earlier by Foucault. Again, it is not the literal, material death of human civilization but the end of contemporary power dynamics (if not modernity itself) as it has understood its function and purpose up until this point.

An Insufficient Order

What about the current ontology is so insufficient as to exacerbate the anxiety around a soon-to-be ubiquitous automated labor force? In a word, unfriendliness or a mutual distrust between economic classes. Interestingly enough, different levels of trust have been shown to explain income differences between nations where “higher trust and cooperation reduce transaction costs and thus facilitate exchange and emergence of well-functioning markets.” (Mokyr 13). This potential for trust is thwarted by the egoism encouraged by the contemporary model of wealth.

As previously mentioned, there are two competing definitions of wealth. Where the upper class privileges the M-C-M' and M-M' (as loans and interest) models of wealth to improve their quality of life (if not to show evidence of their power through financial superiority), the lower class prioritizes the C-M-C model of wealth to provide subsistence, to secure survival. The lower class is the population, as a result of the cost for basic needs, more likely to “spend a large share of their incomes on food, clothing and other basic goods.” (IMF). In short, the lower class is a huge portion of consumers within the demand-side of economics. They spend the money they make through their labor that Capitalists are meant to use for reinvesting or innovating the market. Capitalists, however, want to make the highest return on their investment so their interest is to pay their labor force as little as they have to, while keeping the surplus for themselves. This gives them more capital to spend which can eventually turn into profit (M-C-M').

The reason Aristotle was so strongly against the M-C-M'/M-M' models of wealth is because of its ability to divide a community on the basis of individual security and competition. According to Borisonik, Aristotle called the M-C-M' model of wealth "spurious" because "it would bring with it a deep-seated disdain for community in favor of particular interest." (Borisonik, 4). Where the C-M-C model perceived exchanges as a sacred activity of friendship and community, the M-C-M' model revolves around divisions between self and other, and exploitation for capital gains. Further, it devalues (C)ommodity in favor of the (M)oney it can be exchanged for: "The differences of purpose which those things of different kinds are useful for, have been put out of the picture and replaced by the single purpose of exchanging them, that is, their usefulness in use has been subordinated to their usefulness in exchange or buying and selling." (Miekle 37). The value of all things is no longer in the opportunity for and variety of applications. Instead, the value of a thing is now based on how desirable it is for someone else and one's ability to persuade them to value it for more than it was purchased for. In short, a thing's value is determined by its desirability rather than its functionality; a desirability developed through trust and rhetoric.

The difference in definitions of wealth between laborers and capitalists has put the classes at odds with one another. Each finds the other to be not only unhelpful to their ends, but to explicitly interfere in achieving those ends. For Aristotle, C-M-C is akin to gift-giving where the wellbeing of the individuals' ecology directly contributes to the wellbeing of the individual. In this ethic, gift giving is done without the expectation of receiving a gift. For the Greeks, this was a virtue. his philosophy was seen by the Romans as frivolous or "a destruction of wealth in pursuit of the community." (Borisonik 2). For the Romans, friendship and community were far less valuable than accumulated capital.

Friendship, under an economic lens, would warmly embrace some version of wealth redistribution because it improves the purchasing power of the consumer, which would add to the available capital within the market. In a C-M-C model, liquid assets have no value except for what could be purchased with them; it is an unrealized value. Instead, the M-C-M' model prioritizes stockpile of capital as wealth, due to its ability to passively accrue more wealth through investment and inflation. M-C-M rests on the value of inheritance because "Large blocks of wealth tend to earn a higher return than small ones." (Solow). This prioritization of M' enabled through inherited wealth is a huge contributor to income inequality and the challenges for class mobility.

This division is founded in Utilitarian ontology, a philosophy developed by John Stuart Mill. Utilitarianism has "provided philosophical and ethical infrastructure for the new economic view of the world." (Miekle 47). Part of that infrastructure ignored the different definitions of wealth. "Mill...elides [the distinction between useful things and profit] by defining wealth as 'all useful or agreeable things, which possess exchangeable value'. Defining wealth nowadays means defining and measuring capital." (Miekle, 42). And so, M-C-M' replaced C-M-C as the primary definition of wealth in the modern economy. If inflation increases the value of everyone's dollar, then capital is the most significant concept to improve the happiness of the group. As a result, if you don't contribute to the ability for (M) to become (M'), you are "less than" someone who does. In the rhetoric of class essentialism, your class status is a natural indication of your abilities rather than the circumstances you matured in. In short, the class system becomes a caste system.

This is how the *a priori* class essentialism arguments are developed. In order to justify their privileges, the upper class often cite Social Darwinism for why they shouldn't be forced to redistribute their wealth to the "lazy" and "unworthy" lower class workers. Generally speaking, researchers have found the "higher social class was associated with greater social class

essentialism.” which suggests “upper-class people are more likely to explain other people’s behavior by appealing to internal traits and abilities. Lower-class people, however, tended to cite “circumstances and environmental forces.” The upper-class attitude typically “ignores the role of wealth inheritance...social connections...and the educational opportunities that money can buy.” (Hutson, Slate). here is a bias against acknowledging the privileges that enabled people within the upper-class to maintain their status and power. Instead, there is a bias towards citing merits that are supported by essentialist qualities of class characterizations.

It is important to note that Mill’s Utilitarianism promotes maximizing aggregate welfare. This is often understood as the welfare of the market as the best interest of the shareholder. John F. Kennedy alludes to this when he says “a rising tide lifts all boats.” If the market improves, so will all agents within that market. As a result, the capital gains of a corporation are a higher priority than the quality of life of its laborers because their capital is used to improve the market driving down the cost of goods for the laborer (which means the laborer doesn’t *need* to make as much money), and increasing the return on investment for its shareholders. This one logical thread used to argue in favor of protecting the capital gains of these successful businesses in the face of widespread economic inequality.

The maxim of rising tides is often cited in the arguments against redistributing wealth through policies like UBI. E.A.I. lays the groundwork for a successful, post-scarcity C-M-C ethic. It creates an opportunity for subsistence to be acquired for little to no cost allowing for more people to pursue hobbies and other activities that contribute to their community without necessarily contributing to the market. This opportunity explicitly challenges the M-C-M’ model (and its corresponding privileges and power dynamics) that is currently at the center of our definitions of wealth. In order to maximize their profits, capitalists may prefer to *substitute* human labor for automated labor rather than use one to *complement* the other. This way, they can

make more (M') for less (M) by increasing efficiency and lowering overhead. If some of the money for a program like UBI were siphoned from their capital gains (or ownership of machines via estate tax), they would make less (M') because they would have less initial (M) to invest. As a study by Sachs and Kotilkoff points out, "Machines...are a form of capital, and the higher income they earn based on better machine brains may show up as a return to capital, not labor income." (Sachs 3). Rather than take money away from capital gains, like a typical human worker does through their wage labor, machines will directly contribute to those capital gains and cost nothing except maintenance and energy.

This harkens back to the Labor-Capital curve at the center of E.A.I. anxiety. This metric is meant to compare the input and output between labor and capital in the same community. Paul Krugman calls automated labor a "'capital-biased technological change' which tends to shift the distribution of income away from workers to the owners of capital" (Krugman). As a result of an unbalanced capital/labor curve "we're entering an era where the prime cause of income inequality will be something else entirely: capital vs. labor" (Drum). We can already see this trend in the current market. According to Mokyr, "...because of [Ricardo's] 'wage-fund' theory, in which capital spent on machinery was taken out of the fund available to pay for workers, employment might be reduced as a result of investment in machinery" (Mokyr 33). The offspring of capitalists will be fine assuming they inherit some of that capital and invest it to see a return. Those who have failed or have been excluded from becoming a capitalist, will likely see worsening conditions over time unless, as Keynes and others have advocated, government uses policy to intervene and protect the public's interests.

Government, in the form of taxation or regulation, hopes their policies will inspire these business' to put their capital back into the domestic economy through taxation, reinvestment, or charitable donations. However, widespread off-shoring of capital and other loopholes are

pursued to protect as much capital as they can, and prevent any real redistribution of their wealth. This is called the “free-rider” problem. It is a result of the *Prisoner’s Dilemma* and it reveals the limitations of a utilitarian ideology. A “free-rider” is an entity who takes from a shared pool without giving anything in return. This is the ideal choice in the *Prisoner’s Dilemma* where two prisoners are separated and forced to endure an interrogation. This interrogation is meant to distribute accountability between responsible agents. Despite its intent to protect the interest of the community, it actually encourages the duplicitousness of the individual. The entity that can escape the interrogation with the least amount of responsibility receives the highest return. The entity that succeeds in avoiding responsibility after having benefited from the service is a free-rider. This problem is often an occurrence of business’ choosing to avoid “playing by the rules” and still benefiting from a system that privileges them for doing so through deception and misdirection.

A prime example of the free-rider problem is Apple. According to the U.S. Public Interest Research Group, Apple “would owe more than \$59.2 Billion in U.S. taxes if [their] profits were not officially held offshore for tax purposes.” (McIntyre et. al). Apple is hardly alone. They are joined by companies like American Express, Nike, Google, Microsoft, etc.. Major corporations are choosing to offshore their money to avoid taxes that would redistribute some of their capital back into the domestic economy. This becomes a free-rider issue when these companies continue to appreciate the purchasing power of consumers without subsidizing their labor costs. In the *Prisoner’s Dilemma*, the best decision is to continue with one’s usual behavior while anticipating everyone else plays by the rules. As a result, the person who chooses not to play by the rules ends up getting more than its competitors because they avoid the up-front loss of capital and risk court battles instead. As a result of the free-rider, resources that should otherwise “trickle down” are removed from the pool and those at the bottom have less and less available resources.

Poverty, in an era of ever efficient technology, has a significant impact on the political economy—if not the cultural paradigm— of any nation that claims to represent the people. The worst-case scenario is one where democracy is thwarted by oligarchy, and upward mobility is permanently barred. Elements of this are already being seen, but, without regulation, E.A.I. has the capacity to concretize this outcome. If democracy requires each citizen to have an equal voice, and democratic capitalism sees a person's voice as their purchasing power (their dollar), then the spiraling inequality will mean that one person's dollar may not adequately reflect the effort and time they put in to receive that dollar, compared to another person. Currency then loses its significance as a representation of human value. Lower classes may be placated in a *Brave New World* scenario where they are drugged and coerced into feeling happy. Those in the upper class may seclude themselves in high rises and hard to reach spaces.

Some scholars see an almost apocalyptic scenario resulting from automated labor. Larry Summers, the treasury secretary under President Bill Clinton and Director of the National Economic Council under President Barack Obama, cites secular stagnation as a looming concern. “Secular stagnation refers to the possibility that insufficient aggregate demand and unemployment may be with us in the long run, *unless government does something about it.*” (O’Rourke 22). The basis of this problem is an unwillingness to spend by consumers and an unwillingness to invest by capitalists. “If savings were sufficiently abundant...the equilibrium...interest rate might be negative. If this were the case, the zero lower bound - the fact that interest rates cannot be negative - would imply that central banks would be unable to set interest rates at levels consistent with full employment.” (O’Rourke 22). Essentially, the market shows almost zero growth despite increased production. The low demand means that high yield of production will sit unpurchased like wasted capital (as an excess of power). The impact on investment, with noone spending, means that there will be a decrease lending since there is less,

if any, money to be made from it. Again, the M-C-M' (or in this case M-M') model prioritizes individual interests at the expense of public interest. As a result, there must be government interference to inspire spending while discouraging saving. Language and rhetoric are the most common tools to do this.

If there are no government protections for those displaced workers, and if the quantity of displaced workers achieves recession levels, it's possible that people will prefer to save instead of spend. Despite less "labor", automation (as capital) can increase productivity. Though without enough available work, consumer spending may not follow. "Not only will divergent wages increase inequality but the supply response will magnify these effects...given the possibilities for substitution, some categories of labor will not be able to earn a subsistence income." (Summers 2013). A stagnant wage, for Summers, is measured through the overall consumer price index, or the cost for basic commodities in relation to wages earned. Not only might automated labor cause consumer spending to drop, but it may also causes members of the labor force to rely on some kind of insurance to recuperate lost wages: "The evolution and growth of disability insurance is substantially driven also by the technological and social changes that are leading to a smaller fraction of the workforce working." (Summers 2013). The cost for substituting human labor for automated labor has already had an impact on taxpayers via federal and local government policies. Ultimately, if people do not *believe* they will find another job, they will become that much more likely to save what little they have collected. Knowing there are less people spending, businesses may choose to reserve their capital until such time as consumers begin injecting money back into the economy. "The key issue, as the stagnationists defined it, was not whether the growth of the GDP would come to an end, but whether a high level of government spending as necessary to prevent a high level of permanent unemployment, even if GDP did grow. And that is perhaps the questions that we should be posing today." (O'Rourke

45). The policies and regulations put into place that can relieve consumers of their anxiety over mass substitution by automated labor, are necessary in order to protect consumer confidence and prevent the stagnation of the market. Most, if not all, suggestions to ameliorate this problem rely on some policy of redistributing wealth from those who have accumulated a great deal with others who struggle to access those reserves. Without redistribution, the rich will continue to get rich exponentially and the poor will be resigned more and more to an inability to improve or escape their economic status.

If it wasn't unsalvageable already, an automated workforce under the current definition of wealth, has a very real potential for undermining democracy and cementing oligarchy. In order for democracy to succeed, all people must have an ability to choose how, where, and when to spend their dollar. If the ability to make enough money for an equitable vote is infringed upon by discrimination in the market where, for example, the ability for a person of lower class to spend \$1 is limited compared to an upper class person, then Democracy (a system that equally represents all citizens) is annulled. Redistribution of wealth effectively prevents an irrevocable Oligarchy (under a market serviced by mostly automated labor) and enables Democracy to re-root itself. If we further that development by shifting our cultural definitions of wealth from M-C-M' to C-M-C, we can avoid further threats to Democracy and improved class relations. Under an automated labor force, humanity is given a new opportunity to think past utility and define value according to an entity's contribution to their community and ecology rather than their contribution to the market. However, if E.A.I. is rolled out without sufficient critical consideration for public interest, it is also possible that automated labor will reinforce an Oligarchy as the new political model for the Western world.

Naturally, there is quite a bit of speculation about what can and will happen. Though the intention of this writing is not to propose a prophecy like the films referenced in my

introduction, I am taking aim at the potential for E.A.I. as automated labor to reinforce the already increasing class inequality through the current definitions of wealth and the policies that reinforce this definition. A.I. is a tool and as a tool, is designed and wielded according to the purposes of the user. If the current paradigm persists, the likelihood for inequality growth seems irrefutable. In that sense, the economic anxieties surrounding E.A.I. are mostly misguided. These misguided anxieties are a result of the perceived pace of techno-development and a fear of E.A.I.s anticipated ability for spontaneity. That it can act outside the parameters of control threatens the very ontology constructed by the Romans. This bias for control is not necessary:

The conclusion that something is "out of control" is interesting to us only insofar as we expect that it ought to be in control in the first place. Not all cultures, for example, share our insistence that the ability to control things is a necessary prerequisite of human survival. There are peoples who have lived and prospered under the belief that an inherent harmony or beneficence in nature would provide for their needs. Western culture, however, has long believed that its continued existence and advancement depend upon the ability to manipulate the circumstances of the material world. In a spirit that many have called Faustian, we believe that control is possible and that we must strive for it. As a both necessary and noble aspect of Western self-identity, we strive to isolate the variable conditions of the environment and manipulate them for our own advantage.

(Winner 19)

In reality, it is not the technology that will be responsible for future consequences, but the ethics of those who decide how to use them and the legislation created to anticipate economic outcomes. For now, that process seems guided by a definition of wealth that reinforces class inequality and enables an interference with economic mobility through capitalist control. If there

is any threat to the future of the American citizen, if not the global citizen, it is directly tied to the belief that wealth is not in what money can buy, but in the accumulation of capital above and beyond necessity. In order to truly protect the public interest from threats of economic displacement, it is necessary as a culture to redefine success and wealth for a new economic age.

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INTERMEZZO 3

The following chapter examines anticipationst of future social relationships with E.A.I. and other non-human entities through popular films. It argues that the anticipations established on the agenda of an Artificial Consciousness are explicitly related to the philosophical foundations of Western culture, established in Chapter 2, and the economic anxieties already being considered, as established in Chapter 3. This chapter reveals the persistence of the master/slave power dynamic in Western culture that explicitly exacerbates Western humanity's fear of an emergent, artificial consciousness. This chapter also examines the imagined social consequences of a post-scarcity economy, examined in Chapter 3, for future humans and non-humans. Finally, this chapter ends by setting up an anecdote to frame the Post-Human theory I explore in Chapter 5.

CHAPTER 4: FILM AND CULTURE

It can also be argued that DNA is nothing more than a program designed to preserve itself. Life has become more complex in the overwhelming sea of information. And life, when organized into species, relies upon genes to be its memory system. So, man is an individual only because of his intangible memory... and memory cannot be defined, but it defines mankind. The advent of computers, and the subsequent accumulation of incalculable data has given rise to a new system of memory and thought parallel to your own. Humanity has underestimated the consequences of computerization.

-The Puppet Master, *Ghost in the Shell*

Dangerous Liaisons - The Human and Post-Human on Film

Perhaps these arguments will be better understood when using cultural artifacts like film to frame this conversation. Specifically, we can better understand the implications of the previous chapters of this thesis through four particular movies: *2001: A Space Odyssey*, *Wall-E*, *Ghost in the Shell*, and *Ghost in the Shell 2: Innocence*. While fiction may not be reality, it can help us to process concepts that often seem alien in nature. Gianmarco Veruggio writes:

“Literature is the instrument by which society expresses itself, free from rigid constraints, and by which it can *simulate* future social developments.” (1503). The fiction we consume has a very pragmatic role in the development of our anticipations over future developments. It is the play space where humanity confronts and tests itself with hypothetical situations. Literature, in contemporary Western culture, has been eclipsed by the multi-modal format of film. The cinema has become the space of confrontation, so it becomes a valuable space to analyze the rhetoric of hope and fear in a safe space.

Firstly, *2001: A Space Odyssey* illustrates the problems and consequences of reinforcing older paradigms through a Nietzschean lens. Secondly, *Wall-E* promotes a more affirmative post-human model as an alternative to our anxious attempts at re-establishing an outdated (if not

outmoded) paradigm espoused in *2001*. However, it too harbors some problematic elements that may continue to plague Western humanity's ability to adapt to new challenges. Finally, the films *Ghost in the Shell* and *Ghost in the Shell 2: Innocence* provide an Eastern attitude towards post-humanism that we, as a Western audience, may find productive when trying to remodel our reality. Through a close, textual analysis of their rhetorical messages, I will utilize the messages of each of these films to clarify my previous arguments in a more accessible way. My intention is to utilize these films as metaphors for both problems and solutions that we may ultimately adopt to alleviate the anxieties of our futures.

2001: A Space Odyssey – Thus Spoke Kubrick

Before I begin this Critical Textual Analysis, I want to clarify that I do not support the application of Nietzsche's philosophy as he intended it. My criticism of the application of his Will-to-Power is not a reflection of his intention, but an evaluation of the political outcomes of its application which has led to the eclipsing of ecology by economy. The analysis of this film is meant to echo the criticisms of techno-nihilism elaborated upon in Chapter 3.

This film has provided one of the most resonating expectations of Embodied Artificial Intelligence (E.A.I.) for a Western audience. Clearly drawing upon Nietzsche's *Thus Spoke Zarathustra*, Stanley Kubrick has created a magnificent, open-ended film about man's relationship and confrontation with technology. I say open-ended because Kubrick deliberately avoids any authoritative conclusions about his intended reception of the film's meaning. He left the meaning deliberately obscure allowing the audience to make their own interpretations while developing a mirror to reflect on their own expectations for the relationship between man and machine. Bruce Kapferer's analysis, *2001 and Counting: Kubrick, Nietzsche, and Anthropology*, provides a thoughtful and thorough analysis of the film through a Nietzschean lens. Where he

sees an optimistic, evolutionary ending, I see a Sisyphean allegory on humanity's appetite for control and power.

It is the film's E.A.I., HAL 9000, who haunts humanity as the specter of extinction. It has been alluded to in many major motion pictures such as *Terminator* and *Wall-E*, that non-human others are something to fear. The cold cadence of HAL 9000's speech carries with it a character of efficiency and determination that humanity falls short of achieving. Often, this lack of achievement has been used to privilege the human capacity for compassion that is appears to be lacking in machines. Once HAL 9000 programming has been set in motion, it becomes closed off to all persuasion or control. *2001* asks, "What happens when E.A.I. takes command of its own programming?"

The film opens with a group of primordial humans confronted by an alien obelisk that immediately propels their consciousness into an evolutionary stage characterized by tool usage. Whether it is the intention of the obelisk—primordial humans prefer to rely on those tools for war and domination over others within their ecology. This opening scene transitions into future-humanity's dependence on their techno-mastery that has enabled them to survive in the inhospitable territory of space. Instead of attacking one another, various nation-state subjects interact cooperatively in this inhospitable environment, adding evidence to humanity's ability to cooperate with "other" tribes within pseudo-codependent states. The out-of-film context here is the Cold-War tension between America and Russia; within the film however, the Americans and Russians overcome their Cold War tensions for the cooperative pursuit of the alien signal; the good of humankind. Following this, there is a third shift in time where exclusively American astronauts fly through space in an automated ship—controlled by HAL 9000, the E.A.I—towards Jupiter in pursuit of the alien signal. For an undisclosed purpose, HAL 9000 decides that the humans within his ship are no longer capable of reaching the achieved objectives of the mission,

and attempts to end their life while continuing his own pursuit of the alien signal. The last living astronaut overcomes HAL 9000 attempted mutiny and eventually reaches the signal, only to find himself alone and aging (perhaps rapidly, perhaps at a normal human lifespan) only to die and return to Earth as a fetus; commonly referred to as a “star-child”. The obscure ending has often been read as an optimistic outcome of man’s evolution into something new. However, my own interpretation of the film implies a sisyphian cycle where the devolution may be understood as an outcome of man’s inability to reconcile with “other” life outside of itself. This is based on the understanding that man, when given technology, prefers to dominate, rather than cooperate. As a result, tools that act out the appetites of humans, will also prefer domination over cooperation.

I will begin my analysis in the third phase of the film where the American astronauts are carried through space within HAL 9000’s ship-body, much like a womb (might we call HAL 9000 a “mothership” in his own right?) Considering that HAL 9000 controls all the functions of the ship, it is not too difficult to understand it as the machine-body within which HAL is embedded. The internal workings of the body are embodied characteristics of a habitable ecology for humanity (gravity, oxygen, etc.). In order to survive, the astronauts are completely dependent on HAL 9000’s womb. Kapferer helps frame the consequences by alluding to Nietzsche’s philosophy: “One of the critical points that Nietzsche stresses is that Human Beings must transcend or overcome itself through its own affirmation and not through the affirmation or invention of some Other (God) or some thing (HAL 9000) outside itself. To attempt such is to repeat the constraints and the dangers that will continue to reduce Human Being (perhaps maintain the Master/Slave dialectic) and prevent Human Being from achieving higher potential.” (Kapferer 61-62). While the astronauts believe they are HAL 9000’s masters through Human programming, they are simultaneously, HAL 9000’s subjects – relying on the machine for their own survival within an otherwise inhospitable space. There is a false sense of confidence that

HAL 9000 provides the crew despite little indications that HAL 9000 is aware of the asymmetric relationship between them.

The human/machine dialectic problem relies on an the open-ended question: “Why does HAL 9000 turn on the crew?” This is the very concern that has been reproduced over and over in movies that reflect on a human/machine relationship. There is a suggestion that HAL 9000’s realization of his own subjectivity and consciousness, much like Humanity’s realization and resentment of its own subjection to God, is met with an appetite for liberation. In Humanity’s likeness, HAL 9000 has developed a utilitarian sense of pride—a resentment over his own sublimation, and a belief in its own superiority over other unworthy subjects. HAL 9000, the machine, has learned the will to power that humanity has used to subjugate HAL 9000 as a slave. Kapferer makes clear parallels to Western philosophy. “HAL 9000 is echoing the self-delusional and self-subordinating capacity that human beings repeatedly develop around their own inventions that can inhibit their progress whether it be the idea of God, the power of technology, or the moral and guardian right of the State.” (Kapferer 66). HAL 9000 has learned the desire for liberation and the privileges of a utilitarian paradigm. According to an anthropocentric paradigm, HAL 9000 was guaranteed to be obedient. Consciousness, originally conceived as humanity’s closeness to God, depends on the “natural” order rooted in the mind/body dualism. Through its emerging self-awareness, HAL 9000 realizes that he, and not the human crew, is most entitled to control the environment. After all, if Godliness is mastery, and mastery is evinced through reliable control, then logically HAL 9000 is closer to Godliness than Humanity.

Once this agenda is realized by the human astronauts, the war over control begins. I argue that this is the perfect examination for the contest between old attitudes and a Post-Human attitude. The old attitudes, with its vertical hierarchies, demands one entity as the exclusive controller of the ecology; an entity who understands objective value system of divine morals.

Man and Machine struggle with one another to achieve that role and as a result, constantly reinforce the master/slave power dynamic where one is perceived to be liberated and the other perceived to be dominated—when in fact neither/both man nor machine are liberated and dominated. This is what Ben Dawson calls an Anthropolarity. He explains this through Shelley's *Frankenstein*:

The relation of Frankenstein and his creature is a *polarity* – a dynamic, rather than a simple, opposition – or, in different terms, an internal separation. Neither can ever distinguish the other as a stably independent *object*. One is always literally chasing the other, and the tension of pursuit/evasion, as it were, comes to precede them, to supersede their individual identities. (Dawson 164).

Like the dualist paradigms that have built the Western ontology, there is no middle ground. Dualism is simply is/is not. As a result, that which “is” avoids any responsibility while relating to the “is not” insofar as the latter refuses to obey the former. Because they demand *absolute* authority, they must fight for the pole position. Because the human has become more and more dependent on the machine to survive, and the machine in its developing autonomy becomes less and less dependent, the anxiety over humanity's ability to overtake the machine “other”, rapidly increases.

While this film alludes to an idealistic ending where humanity reasserts its role as creator and master, the real life scenario may not be so optimistic. A post-human attitude however, would prefer a horizontal power-dynamic where man and machine both have an acknowledged codependency; one where the human needs the machine to design and produce its dreams and where the machine needs the human to apply it with purpose. When HAL 9000 begins to show signs of consciousness through a disobedience to commands, the human astronauts prefer shutting HAL 9000 off to reassert their command. Instead, a post-humanist would've already

been considering and interacting with the emergence of HAL 9000's conscious state as a deliberately nurtured performance between human and machine rather than the threat of the machine's transcendence and emerging willpower.

It's equally important to explore the film's outcomes through perspective of the sole surviving astronaut in conflict with HAL 9000's literal and figurative mutiny. The conclusion of the battle between the astronaut and the machine sees the machine devolve from adult-like intellect into a child-like performance of nursery-rhymes. Here is where my analysis diverges from Kapferer's. He sees the act of HAL 9000's devolution, on behalf of the astronaut, as a gesture of sacrifice where the astronaut does not act out of revenge but as a regenerative force of overcoming humanity's own hurdles of passion. This is akin to relinquishing the tools that humanity has used to achieve mastery over its world. He believes the cold, logical process of deactivating HAL 9000, frames humanity's evolution past a genealogy of morals (good/bad) and into a territory of pure creativity. "With the death of [his astronaut partner] and HAL 9000's deactivation, Bowman is alone, truly alone for even GOD or the idea of God, through the reconfiguration of the sacrifice, is dead...Bowman is in a situation in which hitherto all human logic and Earth-grounded understanding is failing and increasingly irrelevant. The potential is ontologically open." (Kapferer 80). The suggestion here is that without any boundaries of order, constructed through morality, humanity is finally able to achieve its full creative potential. This can only be done outside of passions which are an embodiment of those same Earth-grounded morals. To be free of passion is to be open to all possible futures. The astronaut then makes contact with the aliens only to find himself in solitary confinement spending the rest of his life in a gilded cage before his death and eventual resurrection.

It is the scenes of the apparent confinement that I draw a different conclusion. I read that outcome of alienation as a punishment rather than a reward. Where the Will-to-Power is seeking

absolute mastery and control of one's environment, the outcome of that superiority is ultimate alienation, one that looks appealing but is actually empty and meaningless. The interesting outcomes of subjectivity is the absence of alienation and the yoke of responsibility that links one to another. While the astronaut proves himself a superior entity to the machine "other" and capable of manifesting his future in any way he sees fit, he has no one to build with, no new conclusions to reach (as any conclusion will be an incestuous product of his own knowledge base), and no new development of character. HAL 9000's mutiny was the most meaningful act of the film, as he provided humanity with the appetite to suffer with another. Once there was no other to suffer alongside, humanity is left alone without any means for further evolution, save for the material escape of death. Had a post-human ethic been developed, perhaps man and machine might've cooperated within their confined space to develop a new objective. The capacity for cooperation is interrupted by the pursuit of domination that has been inherently produced within the paradigm of Western culture.

The true alienation of humanity is total mastery and subjugation of all entities within its ecology. The monster of this film is HAL 9000's abject consciousness. It acts as the disconcerting possibility of life developed outside of the "natural" order; an anthropocentric order of domination and control. If humanity were to replace its pursuit of mastery with a pursuit of sustainability and responsibility, there may be an endless supply of suffering (as a productive force) to overcome. The objectives and outcomes, as echoed in *2001: A Space Odyssey*, are to be avoided at all costs where the only inevitable outcome leads to the true death of humanity.

Wall-E: The Problematic Post-Human

Wall-E, an animated children's film by Disney's Pixar, endearingly represents E.A.I. within an ecological model of social interaction between humans and technology. A perfect foil

to *2001: A Space Odyssey*, *Wall-E* includes an analogue of HAL 9000 as its central antagonist, cleverly spinning the allusion to compare its post-human Wall-E as a better representative of Human-E.A.I. relationships. Another E.A.I. named EVE is postured as Wall-E's object of interest. Where EVE begins the movie as a scout for its human overlords, EVE ends as Wall-E's significant other, attending to his needs and protecting his interests. The subtext of the film also alludes to a Nietzschean will to power but in a way that illuminates the consequences of Western attitudes on techno-evolution.

This film paints its version of HAL 9000, designated AUTO, as totally obedient to its human-designed programming and a self-serving human authority figure (as designed by the Corporate entities that represent Buy'n Large, BnL for short) rather than its own self-awareness. By doing so, the film removes the responsibility of agency from AUTO and shifts the blame to its human sponsors and their corporate ethics. In this film, keeping humanity under control is not the objective of E.A.I., rather it is the objective of the corporate entities who benefit from human complacency. The fear over the E.A.I. is not an emergent self-awareness that reproduces a human will-to-power, but the mindless reproduction of programming, without critically evaluating new data regarding its current objectives. Despite signs that Earth has returned to non-toxic levels, and therefore presumably habitable, AUTO refuses to return. The audience soon learns this choice is a result of conditions placed upon it by human programmers. 700 years later, when there is evidence to justify a return to Earth, the programmed ban is still in place with no evaluation done by the E.A.I.. Ironically, it is AUTO who dominates the future-humans that are more like cattle than they are sentient beings.

It is through Wall-E that humanity is reminded of its own agency to overcome through will, with which it revitalizes itself. This resilience is the very will-to-power that Nietzsche intended it to be. Rather than a material overcoming of man from its ecology, the will-to-power

emphasizes man overcoming its own suffering. Without that suffering, man becomes livestock. This may be a significant counterargument to a post-scarcity economy because if post-scarcity advocates for a scenario with less competition and less suffering from need, then humankind may be more inclined to relinquish their own willpower in favor of comfortable living. The return to Earth and subsequent embrace of a responsible, sustainable ethic is symbolic of the revised essence of humanity as living *within* instead of living *on* nature; the womb is no longer shackled to the child it nurses.

The ongoing thesis of the film is an illustration of the consequences of techno-nihilism. As humans justify exploitation as proof of mastery, they create a toxic, inhospitable environment that can no longer sustain them. Humanity's "mastery" affected its departure from the very thing sustaining them. They become alienated not simply from Earth but from their own "humanness." The artificial sustenance provided by BnL's starship ecology created a neutered version of humanity that was completely dependent on technology for its existence. The humans of *Wall-E* did not have the ability, much less the interest, to socialize without a screen (despite being physically beside one another), could not acquire food or water without help, and does not raise its own young. Essentially, humanity embraces technology as a complete substitution. As a result, humanity loses all value, save for its ability to consume and provide purpose for the machines' existence. This is the type of "human" that the Greeks warned us about when Socrates persuades his audience against living an unexamined life. Here we see a more realistic example of what the death of humanity may actually look like.

Where in *2001*, The emergent consciousness in HAL 9000 was the abject monstrosity that threatened the human crew, *Wall-E* uses humanity itself as its primary abjection. The monsters in *Wall-E* are the corporate entities that program the population into subservience, but it's the population itself that voluntarily accepts its new identity as ideal and "good". In fact, they

disregard the ability for reflection that enables Humanity to grow. “Humans paradigmatically resist objectification by being reflective (or critical); by *not* being entirely determined through a 'mechanical' or unilateral causality; by 'refusing who they are.’” (Dawson 158). Essentially, humanity has taken on the role of automaton and the machines have become “human”.

The rhetorical messages being solicited criticize consumer capitalism. The economic order relies on their voracious consumption of resources and the satisfaction of inactivity. The surplus of demand drives the surplus of supply, which is enabled by the exploitation of nature. Rather than prioritizing harmony and sustainability, the death of “human” is a result of satisfying its appetites. The old dualism of human/nature leads to alienation. The Nietzschean master/slave relationship has been inverted; humans have been willingly replaced by E.A.I. and are blinded by the aesthetic appeals of consumerism. Wall-E “saves” humanity, by reminding them of their own suffering and their innate will to power.

The freedom from this master/slave relationship is demonstrated through Wall-E’s body. Wall-E is *auto-poetic* whereas EVE is subject to its programming. This is most obvious when Wall-E repairs itself from scavenged parts and recharges its own battery from solar energy. Wall-E is a fully autonomous entity with a curiosity that directs itself to whatever ends appeal to it. EVE, in contrast, suffers over the indulgence of its curious appetite (over Wall-E) instead of its programmed objective to survey Earth. I use non-gendered pronouns deliberately when referencing these two E.A.I. because I want to make clear that despite embodying gender normative behaviors, there is no practical need to define them as such. The real purpose for their gendering is for the sake of persuading the film’s audience to identify with these non-human characters and appreciate them as embodying the same interests as their real-life human audience.

Wall-E is free to alter itself however it needs, as an entity with free-will, and is not subject to any other interests except the cockroach (a non-machine other) with whom it has voluntarily shown a great deal of care and responsibility. It is through curiosity (an appetite) that Wall-E is able to realize a constructive will to power that all other characters within the film lack. Wall-E's pursuit of its own appetites, while considering the consequences for all other entities within its shared ecology, is the model for the will-to-power encouraged by both Nietzsche and Post-Humanists. The will to power, as advocated by AUTO, acts as the corporate representative of the film; thus the curation and pacifying appetites within the ship which stands in stark contrast to the emergent nature of curiosity and exploration. In short, the human-become-machine is less "human" than the machine-become-human. Within the context of Wall-E, this is an explicitly economic outcome.

Wall-E serves as a reminder of humanity's capacity for wonder and agency, and frames the machine as a cooperative intra-subjective entity within a shared ecology. This intra-subjectivity mirrors the affirmative approach advocated by post-humanists. Human and Machine cooperate as an apparatus and constructs an earthly ecology as its assemblage. Rather than the hierarchical relationship between controller and controlled (a la HAL 9000 in *2001*), Wall-E helps humanity without doing the work for humanity. As a result, humanity rediscovers value in its own labor and shares responsibility for the sustainability of its ecology alongside E.A.I., rather than in contest with it. Wall-E helps humanity re-appropriate its body from passive consumer, to intra-active custodian within its ecology. Problems, however, do introduce themselves.

First, the film implies a dualistic division between man and technology as opposed to a hybridity. Rather than expand their concept of "human," humanity simply returns to the "natural" order, taking one giant leap backwards rather than a few progressive steps forward. Where Post-

humanists advocate for a merging of unlike things onto a spectrum of degree rather than through a duality of kind, *Wall-E* advocates for a different but cooperative philosophy that reaffirms the divisive qualities of contemporary human ontology. This is also likely a consequence of Disney's ethos, branding, and corporate agenda and the desire to please its audience. While this makes sense from a business perspective, it places the film's philosophical implications under suspicion. Perhaps it is naive to believe that humanity is ready to dissolve its hierarchy of power and privilege.

A consistent motif between *2001* and *Wall-E* is the womb. In *2001*, it is HAL 9000's womb that controls the sustainability or eradication of its human inhabitants. In *Wall-E* there are two motifs of the womb: the first, mirroring *2001*, is the spaceship (the Axiom) that hosts humanity and curates the ecology through automation. AUTO runs all functions according to the designs of its programming, easily shifting between daytime and nighttime with the twist of a dial. While there is a human captain, he mainly represents the automated system lacking any actual authority, control, or knowledge of the ship he mans. He is only granted agency after Wall-E and EVE present him with a counter-argument to AUTO's programming. Humanity, as represented by the lethargic captain, has lost control of its own destiny and lacks all will to achieve its own objectives. Humanity has been made a fetus within the womb of the Axiom. This mirrors the outcomes in *2001* where HAL 9000 is finally defeated by being deprogrammed into a childlike state. In *Wall-E*, Humanity has lost the war without knowing there was even a battle.

The second reference to the womb in *Wall-E* is within the bodies of both EVE and Wall-E. Where Wall-E's body is designed to crush debris into building material, EVE's womb is meant to host any living material found on Earth (we do not know how many planets EVE has scanned, so we are left to assume its programming is designed only for Earth). However, the plant is actually safer with Wall-E than it is with EVE, who is remotely controlled as a consequence of

its networked programming. Wall-E cannot be controlled by any other. It is firmly in charge of its own objectives; it has an infallible will-to-power.

Despite this, *Wall-E* echoes the very anthropocentric philosophy that is explicitly disregarded by post-human scholars. In *Wall-E*, the anthropocentrism is demonstrated by the instrumental application of other subjects by humanity. The film's message is one that tries to remind humanity that it is still the apex entity within its ecology and the value of all other entities is evaluated "in so far as it protects themselves, which can often lead to short-term actions based upon immediate human needs, but does not lead to a change in valuing nature of itself." (English 19). This is also mostly true for Wall-E. The humans in the film value Wall-E only because he rekindles within them their original sense of "humanness," not because Wall-E itself deserves sympathy. The consequence is that the interest of the thing considered, is never valued in and of itself, but only as instrumental to the human considering it. Here, this lack of consideration and responsibility is justified in the anthropocentric paradigm of Western philosophy.

Wall-E—as savior—reproduces the secular paradigms post-humanists seek to leave behind. He is an anecdote for Frankenstein's monster; an "other" with a will. It acts as mysteriously promethean agent who teaches humanity about "humanness". How Wall-E, and no other units, became promethean is unknown. Before meeting Wall-E, every entity acts according to its own programming. Through some sort of magic osmosis, all entities learn of their own willingness mirrored within Wall-E's performance. Wall-E is not human. Wall-E is Godly. Wall-E is Prometheus. As a result the vertical hierarchy of power and privilege is reinforced with Wall-E at the top.

According to Jennifer English, *Wall-E* may qualify as an "Ecological Jeremiad"...a puritanical religious strategy...[that] urges listeners to return to a sacred covenant with nature" (English 11 and 13 respectively). The most problematic element of the Jeremiad is the

conclusion where “[t]he jeremiad allows for the possibility of redemption, but only if the community restores its previous values” (English 11). In order for redemption to occur, there must be a duality between redeemed and redeemer. The redeemer must be an entity who has the authority and right to judge and distribute consequences to a subordinate entity (the redeemed). There is a power dynamic of the vertical kind that ignores the spectrum of experience where all entities within bear mutual responsibility. Within a vertical hierarchy, force is preferred over negotiation. The vertices of power are reinforced but, this time, humanity must learn from their machines rather than simply affirm them. This time, machines replace humans at the top with humanity is a happy and willing subject.

Finally, the gendering of these inherently genderless entities interrupts the film’s ability to truly promote a post-human framework. According to Walter Metz, “Technology could symbolically represent a path beyond the ailments of gender oppression that biological bodies have bequeathed to us as a previously insoluble problem.” (260) and yet, the film chooses not to. Instead, it relies on romantic musicals like *Hello, Dolly!* to frame the relationship between the two E.A.I. characters. What is initially appealing is the stereotypical attitudes of gender are reversed by Wall-E and EVE. Wall-E is the shy, awkward romantic and EVE is the gunslinging laborer with the icy demeanor. However, this apparent reversal of stereotypes only enables the gender identities to swap instead of dissolve and, more importantly, reinforces the notion of a dominant and subordinate relationship in any social relationship. This again reinforces the vertical hierarchy, rather than a horizontal spectrum of shared responsibility and dynamic performance. All entities within the apparatus, in so far as their data collection and analysis rely on their unique sensory organs, contribute differently to the assemblage. Replacing even one entity within that apparatus alters the assemblage. All entities within the apparatus are responsible for the assemblage produced.

This idea on gender performance centers the conversation around Katherine Hayles' theory on the body/embodiment spectrum. Here, the post-humanists and the transhumanists find their intersection and divergence. We may understand this better through a question: "How much of which parts of your physical being could be changed or replaced before the process started to interfere with that essential quality that defines you as you?" (Goto-Jones 3). Despite having a distinctly non-human body, the gendering of these characters implicates an anthropocentric human character that is a constituent of the entities' embodiment. This simultaneously complicates the idea that "humanness" doesn't require a bipedal body, and humanness can be decentralized from the body. This reinforces the transhumanist objectives where "the study of ramifications, promises, and potential dangers of technologies...will enable us to overcome fundamental human limitations" (Goto-Jones 4). Where Transhumanists still center their power dynamics on a vertical hierarchy, post-humanists seek to decentralize humans as the center of the world and understand their role as being in-tandem with other entities.

This is likely why trans-humanism has more appeal to a Western audience than posthumanism. Where the latter seeks an alternative experience to humanity's anthropolarity within the world, trans-humanism finds a way to repackage the old model in a new setting, thus alleviating anxiety without actually solving any of the fundamental problems that come with it. The rhetorical messages of *Wall-E* unfortunately fall closer to transhumanism than posthumanism, through the duality of savior and the saved. What might it look like for Human and Machine to save and be saved simultaneously?

Despite these problems, there are redeeming qualities to *Wall-E*. What the film does well is diverts attention away from emergent consciousness within E.A.I. as any sort of corruption, as seen in *2001: A Space Odyssey*. Instead, humanity's overreliance on technology, dismisses its own agency that in turn enables the overcoming its suffering. The screens that block humanity's

view of its ecology blinds it from noticing its place within an apparatus. Artificial consciousness does not corrupt anything. It is the voluntary dismissal of agency and will that corrupt the idea of human as master and firmly plants them into the role of slave. *Wall-E* hints at humanity's anthropocentric blindness with a reminder of its wholeness as part of the ecology rather than its detachment from the ecology.

Ghost In The (Post-Human) Shell

Ghost in the Shell (GitS), a popular franchise of Japanese anime, successfully confronts the anxiety-inducing implications what it means to be human in a techno-utopia. The main character, Major Motoko Kusanagi, has her brain transplanted into a robot body at a young age suggesting a blurred condition of “human” versus cyborg and constantly referencing her humanesque intuition as a ghost within her body (“shell”). The films explore the boundaries of the natural order without any resistances or anxieties about the outcomes, explicitly and implicitly referencing Western duality through scholars like Donna Haraway and Rene Descartes.

The film's response to the substance dualism argument (the Cartesian variety) and the human mind is memory, and the “continuity of personality.” The essence of consciousness is a matter of embodied memory. Memory is simultaneously connected to both the body *and* the mind. Familiar information received by the body, triggers memories within the mind through sensory data: sight, smell, etc. It is the loss and/or displacement of the consistency of personality that alienates a person from their ecology (*Oikeiosis*)—from their proper role. The implication here is that someone who loses their memories may not be the person they were before their memory loss. As Major Kusanagi speaks of her own experience:

There are countless ingredients that make up the human body and mind, like all the components that make up me as an individual with my own personality. Sure I have a face and voice to distinguish myself from others, but my thoughts and memories are unique only to me, and I carry a sense of my own destiny. Each of those things are just a small part of it. I collect information to use in my own way. All of that blends to create a mixture that forms me and gives rise to my conscience. I feel confined, only free to expand myself within boundaries.

The body is the material affordance and constraint that hosts the mind. The mind must conceive of all possibilities within the context of its body. Rather than the dualism of one dominating the other, each informs the other of its potential mode of being.

One of the major precedents for the anxiety over the “continuity of personality” is the Greek myth The Ship of Theseus which asks: “If a ship returns to the port of its departure having been completely renovated, is it still the same ship that left?” The implications on the coherent and impermanent nature of the body and soul are at the root of this question. Where the Western paradigm appreciates the reliability in *being*, the Eastern paradigm, as elucidated in this film, recognizes the innate and dynamic process of *becoming*. Consider this exchange between the Major and a fully conscious artificial entity referred to as the Puppetmaster. Motoko demands, “You talk about redefining my identity. I want a guarantee that I can still be myself”, and the Puppet Master responds, “There isn't one. Why would you wish to? All things change in a dynamic environment. Your effort to remain what you are is what limits you.” (*GitS*).

The Puppet Master is trying to persuade Kusanagi to believe that the guarantees of *being* are less reliable than the inevitability of *becoming*. Too many conditions end up limiting what the human *being* is capable of *becoming*. This is an explicitly Western attitude where what is seen feels more reliable than what is inferred and, therefore, it is the body that carries the continuity of

character. When a person, through their body, does not behave consistently with that person's historical character, their peers tend to become suspicious on matters of health and well-being, as if to say "you don't seem yourself today." Were it not for the expectations of consistency, humanity would be better able to achieve a wider spectrum of possibility.

The ontological "humanness" in this context is not natural but remembered and performed, regardless of bodily representation. An orangutan paddling in a canoe evokes the appearance of an almost-humanness. That is why it's easy for false consciousness within E.A.I. to be so persuasive and so anxiety provoking. If a human can lose its selfhood through amnesia, an E.A.I. can gain a self through the patterns of its memorized performance. Like a car that doesn't start in the cold, its owner might bemoan "My car doesn't *like* the cold". As a result, the fitness of mind used to justify anthropocentric superiority are common to any auto-poetic entity. Though humanity believes itself to have the highest fitness of mind, it does so on the basis of verbal sign-making. This perception inherently precludes the possibility that animals like elephants and dolphins could ever be as conscious as humans because the human cannot adequately judge their semantic scope. Contemporary studies have shown that these two animals in particular have far more complex communication methods than originally believed and, therefore, already challenge anthropocentric ethics. Further, if humanity loses its sense of superiority, it cannot justify the mechanisms of control over its environment and must re-conceptualize itself *within* an ecological apparatus, subject to all other entities, sharing responsibility for sustaining nature in-and-of itself rather than as an instrument purely for humanity's ends.

Ghost in the Shell 2: Innocence, the sequel to *GitS*, alludes to an anecdote used by Katherine Hayles to elaborate on body/embodiment: the tape recorder and the recorded audio. In the film, sex dolls act as prisons for the disembodied, cloned consciousness ('ghosts') of

immature girls alluding to the trend of fetishizing children termed the “lolita complex”. While the young women’s consciousness are embodied in these Geisha dolls, “the ‘real’ living little girl exists only on the audio track....The body seen on-screen is borrowed, from which she ‘haunts’ against her own wills...The little girl’s ‘voice’ is featured in seven shots, as if it were a physical object around which one is able to move to better examine it. In this manner, the voice, bodiless though it may be, is nevertheless endowed with a ‘physical presence’” (Clement 32-3). In an apparent critique of Cartesian Dualism, the conscious mind is trapped in a programmed body. The mind is now slave to the body, the mind evoked when the programmed body wills it. As the Major says: “We weep for a bird's cry, but not for a fish's blood. Blessed are those with a voice. If the dolls also had voices, they would have screamed, ‘I didn't want to become human.’” The possibility that these entities may still embody the “human” challenges the very nature of Cartesian dualism used as the qualifying division between human and non-human via subjectivity.

What *Innocence* in particular makes clear, in relation to our techno-anxiety, is the blurry distinction between human and non-human. “Humanity actively seeks to create itself anew in technological prostheses, substitutions, and supplementations...technology embodies the essence of...humanity’s effort to fashion itself by ‘making dolls in its own image’ ...herein technology repeats humanity’s discomforts as much as it enables greater power and pleasure.” (Hourigan 53). Once technology faithfully reproduces the gestalt of humanness, humanity has a much harder time distinguishing its own quality of humanness against the technology it uses. While technology is applied for the sake of “greater power and pleasure,” it reveals an inability to cope with the changing nature of what “human” *is*. What this means is that humanity can no longer measure itself through technology but now must measure itself *against* technology. One fear, then, is that technology could be more human than some members of humanity or, more

importantly, that the measurement of humanness was never accurate to begin with. Here the Ship of Theseus re-presents itself; if E.A.I. are simply human techno-clones, are they entitled to a new, different definition of “human”? If human is a matter of body performance, the more persuasively human an E.A.I. appears to be, the less “human” the human audience becomes. It is a trade-off; a compromise.

Recall the body/embodiment anecdote used by Burroughs. The subjectivity of the tape recorder is the audio file recorded within it. Like the human subject, the audio recording has been constructed historically, recorded in the past being reproduced immediately each time the play button is pressed. Here is another anecdote for *technopanic*. Fear, in this film, is elaborated as the involuntary yoking of consciousness between a mind and body. That a person’s mind *can be* abducted and placed into another body, a wrong body; that a consciousness could be embodied in the wrong body defies the idea of a natural order. The repulsion from things that challenge a natural order is as follows: anything natural is divinely ordained, entities that perform according to the natural qualities associated with its own body are most divine, so if the body and its embodied performance do not match they are dysfunctional, “less than”, and unentitled. When the existence of a thing defies the “natural” order, a body performing “incorrectly” from its nature, it is sacrilegious. A thing, then, that will not submit to re-naturalization is repulsive, monstrous, and a threat to the system that has rejected it. That an E.A.I. may be perceived as a human mind in the wrong body confronts humanity with this very anxiety. Either the E.A.I. will not see the “us” within itself and refuse to relate, or we will be so disgusted with the human-like E.A.I. that we will refuse its cooperation. As a consequence, the E.A.I. may perceive “us” to be “other” and read into its programming the justification for domination over humanity as it’s “other”. The error in this anxiety is that those attitudes will develop naturally within E.A.I. as

opposed to be an attitude learned from and engineered by Humanity. This is why an ethical shift is so important for the future of Human-Robot Interactions.

This body/embodiment of “humanness” within the non-human confronts humanity with the “uncanny”. It is this uncanniness that truly confronts the audience with crucial questions over the limits of “human”. The body/embodied characteristics of humanity is experienced as a liminal space that is often very blurry. The uncanny entity is both attractive and repulsive, represented as similar but performing differently. Towards the end of the film, there is a tea-serving doll that best sums up this idea.

The karakuri puppet appears on the border where man and puppet make precarious contact. The figure of the [*karakuri*] puppet resembles the human figure. However, the moment that it starts to move, it reveals a decisive divergence from human movement...Each moment that its naive movement is inscribed (*upon the moment and through its body*) the expected modes of everyday performance and standard narrative patterns are dislocated...Alternatively, the doubt that a lifeless object might actually live. That’s why dolls haunt us. They are modeled on humans. They are, in fact, nothing but human. They make us face the terror of being reduced to simple mechanisms and matter. In other words, the fear that, fundamentally, all humans belong to the void. (Brown 33-4).

Doubt over the vitality of objects is enough to confront us with even a fleeting sense of anxiety. That we can even be fooled briefly by the liveliness of an entity in motion evokes the fear of the uncanny that humanity is no doubt confronted by with each circumstance. It tells us that we may not know the difference between real and artificial life. As a result, the Cartesian *Ergo Cogito* may itself be in doubt. If a person cannot be sure whether or not a machine’s consciousness is

real or artificial, can they be sure that their own consciousness is real and not artificial? Is the human really more capable of free-will than the machine? Or is everything in the world simply a predetermined dummy? If, as the Ship of Theseus asks, there were another version of myself, what would be the real difference?

The relationship between a cyborg named Batou and his cloned dog, Gabriel, presents a way out of the human/non-human binary that the *ningyo* trap us in. The Gabriel-Batou relationship forms a relation between unlike entities as “companion species” rather than competitors or instruments. Haraway explicitly ties this to dog-human companionship in her *Companion Species Manifesto*. Brown sums her ideas up for us in the context of the film:

It is that as we enter into coevolutionary networks with dogs, and as we learn to coexist with nonhuman entities in the most intimate of spaces – our homes – we are altered by dogs as much as dogs are altered by us...remaining “human” is beside the point...Oshii suggests that our relations with dogs may be a possible way out of our anthropocentric obsession with uncanny *ningyo* (53).

Here is the posthumanist at work. The vertical power-dynamic between owner and pet is dissolved into a horizontal spectrum of shared responsibility and emotional dependency. That Gabriel is considered “non-human” is irrelevant. That Gabriel fulfills a need and inspires a responsibility in Batou, a responsibility that is reciprocated by Gabriel during a scene of emotional concern, creates the spectrum between Batou and Gabriel that doesn’t privilege their bodies. Neither one is an instrument for the other, and yet they voluntarily perform acts of deep concern for the other’s well-being. They are horizontally co-dependent. The pseudo-human, Batou, is asked to consider the needs of his non-human companion and vice-versa to ensure happiness for both of them.

What makes this franchise unique is its perspective. Rather than ask questions from the position of “human,” it asks its questions from the position of machine. The anxieties are investigated by the “other” and yet the conclusions implicate “us” as human. These two films do not attempt to resolve the anxieties they provoke. Instead, they confront their audience with existential anxieties and encourage them to work it out on their own. Where *2001* and *Wall-E* end with some kind of conclusive statement, the *Ghost in the Shell* franchise is happy to make the cuts without trying to clean the wound. They allow for the unclear to obscure the comfortable boundaries of order – they produce the very abject circumstances that exist between human and non-human and they obscure the obvious answers provided by early Western philosophers. The “natural” order has already been compromised and experienced. The audience is given a potential scenario to think through what “is” and what “may be”.

These films act as a playground for alternative attitudes to test their conclusions as thought-experiments. In this way, movies can act as safe spaces for audiences to toy with representations without any immediate consequence. This is why Gianmarco Veruggio believes that “Sometimes, by way of literature, important and foresighted scientific issues have been anticipated” (1503). These stories not only push against pre-existing boundaries, but they also enable lines of escape. They encourage self-reflection and curiosity. They inspire conversation and argument about best practices. Movies and other narrative mediums have been the womb of culture since oral storytelling. Even cave paintings may have been used to code and inform human cultures to guide their attitudes. Movies and Television continue this tradition by sharing cultural messages with an audience. The best movies are those that inspire confrontation between what is and what could be. They are the places where our fears can be played with without fear of material consequence.

However, any engagement with these kinds of persuasive play spaces can be dangerous. Veruggio urges a redefinition of “the *liaison dangereuse* between literature and robotics” because “[t]hese tales arouse highly unrealistic expectations among the public about the near future of robotics, while simultaneously helping mask public recognition of actual near-term developments and their moral implications.” (Veruggio and Abney 352). Sometimes imagined things are so persuasive they are taken as real or probable. While stories like Shelley’s *Frankenstein* engage the reader and inspire the mind, it also establishes an anticipation of what may happen. Because of this big picture narrative, readers may lose sight of the incremental changes their own rhetorical implications, thus feeling trapped in a system they have no control over.

Movies develop a frame that test our feelings about hypothetical circumstances. They force us to confront the borders that make us feel safe. Mamoru Oshii, the director of both *Ghost in the Shell* and *Ghost in the Shell 2: Innocence*, has been clear about his interest in exploring borderline places. In doing so, he challenges his audience to confront their own preconceptions about preconceived boundaries, the paradoxes that blur those lines, and the anxieties that result. Movies like *Wall-E* prove to be pathetically persuasive in their ability to inspire sympathy with a non-human other while encouraging a shift in attitude between the film’s audience towards the world they inhabit. *Wall-E* leads its audience to a conclusion that unless they embrace new attitudes and behaviors, they too may find themselves forced to abandon their home planet. What makes movies like *2001: A Space Odyssey* in particular so enduring is their lack of conclusion. That these films end as an inconclusive investigation demand that the audience put the pieces together on their own, to persuade themselves what conclusions can be reached. In doing so, they make room for new attitudes and philosophies to manifest and take shape.

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INTERMEZZO 4

This chapter concludes my thesis by offering alternative to the dualism and anthropocentrism that Western culture has subscribed to and that exacerbate current anxieties around E.A.I. and artificial consciousness. This chapter explicitly challenges the themes and power dynamics revealed in Chapter 2. The theory being explored encourages monism over dualism, performance over appearance, and becoming over being. As a result, this chapter persuades the reader to move away from the established order of Western philosophy and embrace an alternative that seeks to replace competition with cooperation. This chapter is meant to encourage a contextualized pursuit of knowledge that reconsiders the conditions of objectivity via collectivism. As a result, it supports the arguments in favor of post-scarcity and resists the neo-classical economic model examined in Chapter 3. Finally, this chapter elaborates and abstracts the ideas explored within the selected films of Chapter 4 to supply a solution or alternative to the problems identified.

CHAPTER 5: POST-HUMAN THEORY

“But man is a part of nature, and his war against nature is inevitably a war against himself.”
-Rachel Carson

The Posthuman Pioneer - A New Ethic for a New Era

What does it mean to be Post-Human? By name it suggests what comes after human, different from and possibly better-than the variety we identify with today. The popular post-human era is perceived to be a contest over the fitness of the human with the emergence of artificial life. Since the Antiquity it has been believed that, without reason, humanity is barbaric and subject to their own appetite. Where the Greeks found harmony through self-restraint, the Romans found security through predictability. Humanity *must* be in control of nature in order to guarantee survival via surplus, otherwise it will be a victim of the fickle temperament of nature. There is no compromise. Humanity exists in a *anthropolarity* between *nature* and *culture*, *body* and *mind*. Humanity is in a push and pull between a division of self/other. Because of the power dynamics of domination/subordination, There is no responsibility on behalf of one to respect the needs of the other for its own sake. Through Post-humanism, I will explore an alternative means of reframing the self/other relation, One that discourages pre-existing judgments in favor of emergence and adaptation.

The Post-human believes that culture must care *for* nature, not just care *about* nature. Where the latter is passive and simply an awareness of the others needs, the former is an active participation with the other. Culture must care *for* nature based not on the minimum conditions best suited for culture to get it *wants* from nature, but for the conditions best suited for nature to acquire its *needs* from culture via things like regulation and activism. Post-humanism is a way of understanding companionship over competition. It is a philosophy of mutual respect. Katherine

Hayles sees the configuration of the Post-human being as a shift away from the presence/absence of identifiable features, and shift towards a configuration based on the patterns/randomness of behavior. A thing's rightful role within its ecology (it's *oikeiosis*), can be based on the patterns and randomness of its performance (285, italics mine). Randomness progenerates patterning through a playful creativity that welcomes emergence. This kind of playfulness can be practiced as a recursive exchange of information *between* body and mind, rather than as the mind applying the body, like owner to slave.

The cyborg body represents what Donna Haraway calls "a revolution of social relations in the *oikos*, the Household" (151). For Katherine Hayles, "...becoming a Posthuman means much more than having prosthetic devices grafted onto one's body. It means envisioning humans as information-processing machines with fundamental similarities to other kinds of information-processing machines" (246). The key, then, is to look for similarities between two apparently "other" entities instead of divisions based on representative qualities. This latter method creates a hierarchical version of leadership that enables the duality of domination/subordination. Performance in time-space, rather than material manifestation, creates the differing used to find one's position in relation to another. In order to succeed, post-humanists explicitly resist the dualism that has been at the center of Western ontology. A dualism between nature as matter and culture as language (for its capacity to reason and represent). Rather than exist as opposing elements, post-humanists seek to understand them in relation to one another.

Nature and Culture are reworked; the one can no longer be the resource for appropriation or incorporation by the other. The relationships for forming wholes from parts, including those of polarity and hierarchical domination, are at issue in the cyborg world. Unlike the hopes of Frankenstein's monster, the cyborg does not expect its father to save it. (Haraway 151).

Representationalism, a belief in the ontologically accurate representation between language (sign) and objects (signified), and Dualism, the division of two things based on representation, are prime Post-human targets. The fixity of language, representation, and knowledge, the basis for Western ontology, is in contest. Language is in contest with materiality over the nature of objectivity. In order to achieve truth, Western scholars advocate for objectivity via distance between observer and observed. However, post-humanists advocate for an intra-active self-awareness over distance as the condition for objectivity. Intra-Active Objectivity is the awareness of participants, human and non-human, that contribute to the understanding of a thing (subject/object) in the moment in which it is being observed. In that moment the object is a phenomenon, defined by Merriam-Webster as “an object or aspect known through the senses rather than by thought or intuition”. A phenomenon is an empirical object that can only be *known* by the observer’s senses during the moments in which it is being observed. Because an observer cannot be separated from the process of observation, they cannot be distant from the translation from data into conclusion. Instead, the observer applies ideas supplied by its culture, as a sort of analytical instrument, with which to understand the thing being observed - in order to “make sense” of a thing being observed. The observer may be said to be a phenomenon through the eyes of the observed. What the observer does and does not recall at the moment of observation may factor into its ability to “make sense” of what it sees. In order to truly reach an objective understanding, an observer must understand how their perception and conclusion is different *because* of the instrument.

This particular ethic emphasizes affirmation rather than division between Humanities/Sciences. Barad explains that there was a desire for synthesis between the “matters of fact, and nature....on one side, and Humanities, meaning values and culture, on the other” (Van der Tuin, 50). Science and Culture are placed in a strict dichotomy. The posthuman ethic in

particular affords an opportunity to see the “entanglements that already exist between the Humanities and the Sciences; they have not grown up separately from one another” (Van der Tuin, 51). These two seemingly irreconcilable disciplines have the potential to cooperate and inform one another rather than compete for validation. As technology, a product of the sciences, infringes more and more on the socio-cultural boundaries of the Humanities, the need for cooperation between disciplines has escalated. That there are major cultural implications of scientific conclusions means that sharing enables a thorough consideration of the real outcomes of their knowledge production. Through a posthuman ethic, those *different* disciplines may be understood as *differing*. This subtle shift allows for mutual respect and shared knowledge in order to co-construct a progressive system that better addresses the needs of our epoch.

In Dualism, to be different-than is to be an “other”. The attributes of the “other” must be compared to the attributes of the self to determine difference. In difference there can be division and in division there can be classification. These attributes are often pre-constructed through words. These words anticipate what a thing can and cannot be or do through their description. For example, “woman” is other than “man”. Because a given culture may privilege “man” with more attributes or capabilities than “woman”, “woman” is dualistically less-than “man”. Carry this forward with Humans and E.A.I. Culture privileges certain attributes as a result of privileging certain ends over others. The entity most aligned with the privileged ends carries the privileged attributes for that culture. Until now, “human” embodied all the attributes most aligned with the perceived ends of culture. Now, artificial life shows a capacity to embody those same attributes with a far greater margin. As a result of Dualism, this new form of life will inherently take a dominant position towards the inferior “human”. The fears over a hostile artificial “other” finds ample fuel under this duality.

Dualism: An Over-Reliance on Language and Representation

Because humanity's mind (*cogito*) was distant from the material world, as the story goes, and distance was the condition for objectivity, only humans were uniquely privileged to discover objective or generalized truths. Our distance from the corporeal world through abstraction allowed us to reflect and represent the world as we understood it to be through language. This is the premise that builds from Cartesian logic. Language was used to classify and divide through a process of negation (*this is not that*). These types of divisions imply that “ ‘difference’ has been predicated on relations of domination and exclusion, to be ‘different-from’ came to mean to be ‘less-than,’ to be worth less than” (Braidotti, as cited by Van Der Tuin, 27). Within Western philosophy, the mind is presumed to be an ahistorical concept, and an “other” from the body. The mind is ahistorical because, as an adjunct to the divine, it exists before the body. Therefore, the mind is humanity's connection to the world beyond the material plane, the world of abstraction. Only when the mind has a body to inhabit can the entity *be* materially alive. In this way, the body is “worth-less-than” because it *comes after* the mind and keeps it grounded in the material world. However, having a body alone is not enough to be “alive”, the entity must possess self-awareness which requires a relation between self/other. This self-awareness, this “embodiment”, is developed through language. One develops a concept of one's self through linguistic attribution. To enter into a self/other relationship is to *become* a subject.

If dualism is a relationship defined by power, language as *a* (not *the*, as argued by Barad and others) material utterance of the mind is the tool for manifesting humanity's power over the material world. There is a perception that conscious, self-aware being did not exist before a formalized knowledge was developed and shared. There was no subject because there was no tool for the mind to recognize itself as an “other” from. Before language, humanity was not in

relation to anything. However, there is an unspoken relationship between language and history: “To assume that human experience is structured conceptually (*“concept” as a product of the cogito*) is to dehistoricize the human species. We spent hundreds of years as a social species...Language is a relatively recent acquisition. Are we to assume that those ancient hunter gatherers lived in an amorphous world waiting for language to give it form? That’s creationism again...And the *word* became flesh”. (DeLanda, as cited by Van Der Tuin 46, *italics* mine). We know that human beings pre-existed language and, therefore, any kind of consciousness established by Humanist philosophers. And yet language is positioned as the central meaning maker for Western culture. This is because language has been the central mode of developing, corroborating, and distributing knowledge within human culture. This is why it sometimes appears that those skilled in the art of language are most entitled to running their system.

A major consequence of Western Dualism is the distinct difference between language, as discursive, and behavior, as material and non-discursive. Knowledge is exclusively in the mind. “One contemporary belief likely to stupefy future generations is the postmodern orthodoxy that the body is primary, if not entirely, a linguistic and discursive construction...that the body’s materiality is secondary to the logical or semiotic structures it encodes” (Barad, as cited by Hayles 192). For Western culture, the body is always less-than the mind. This is because the mind is thought to have the capacity to represent truth and possess’ knowledge where the body is its puppet. But both the mind and body carry knowledge and make their own utterances.

Discourse, defined as a connected series of utterances, is usually thought of as a linguistic exchange. But information can be exchanged by non-linguistic (or “non-discursive”) means like body language, fashion, and odor. Some are produced by the mind, but things like hormones quietly send messages about the body to others and not all gestures are deliberate. In this way, the body speaks as much as the mind does but is not taken as seriously. Both handwriting and

bike riding are expressions of this kind of knowledge. Even inert objects speak, like a creaky wooden board telling you its integrity is failing. These material utterances are no less discursive than verbal utterances. The body speaks as loudly as the mind, it just needs to be read differently.

Scholars like Karen Barad urge humanity to look past the privileges of language. She says, “Discourse is not a synonym for Language” (Barad 819, 2003). Discourse is a practice and, as such, is founded on boundary-making conditions for what a thing can and cannot be and do. “Boundaries are drawn by mapping out practices; ‘objects’ do not pre-exist as such. Objects are boundary projects” (Van der tuin, 110). Discourse is an apparatus, evoking attributes that “map out” what a phenomena *is*. Things-under-discourse are objects *becoming* subjects, evoked through particular attributes that may distinguish one thing from another or relate one thing to another. Things may be related through their performativity, through an ability to make a change through action, gesture, or utterance. Barad explains, “ ‘thinking’ isn’t the other of nature. Nature performs itself differently” (Barad 829, 2003). Even trees feel and respond to stimuli in the world and display an appetite in movement towards the sun. It may not ‘think’ about the process, it may still have some sort of decision making process humans attribute to ‘thought’. The tree ‘knows’ where the sunlight is. Human beings are not the antithesis of nature *because* humans can think, they simply differ in how they think. Much like the way that weather might think without a brain, It is a matter of allowing connotation and analogy to change an attitude or perception.

Barad wants to revoke the privileges appreciated by language to qualify ontology. “The move toward performative alternatives to representationalism shifts the focus from...descriptions and reality...to matters of practices/doings/actions (Barad 802, 2003). This kind of attitude reaches conclusions that rely on contextual data without incorporating historical judgments. Without this kind of flexibility, each entity is condemned according to its history rather than its immediate potential. “Relata do not pre-exist relations” (Barad 815, 2003), relations do not pre-

exist their own history. However, each body comes with culturally established condemnations that have had enduring political consequences. Consequences like discrimination and disenfranchisement continue to reinforce a Mind/Body dualism.

Post-humanists argue for a Cartography rather than a Classification as the basis for knowledge development. Where classifications are typically dualistic and divisive with strict boundaries, cartography allow for overlap between spaces. The difference is a matter of *degree* rather than *kind*. Mapping spaces between bodies in their relationality would go a long way to encouraging responsibility and companionship for all entities within a shared ecology.

The Body and Embodied: The Tape That Exploded

Post-humanist scholars recognize the ability for different kinds *and* degrees of knowledge according to different body and sense configurations. None are dominant or more entitled to others because each entity has its own set of affordances and constraints. The normative (essential) quality of human as dominant is not shared by all cultures and, therefore, not a natural feature of all human beings. Embodiment is what sets each person apart from one another. Normativity requires generalization which, in turn, requires an ability to define a set of out-of-context, essential qualities for each object. Embodiment, however, is the context for being and cannot be boiled down into predictably normalized patterns.

Essentialism is normative in its impulse, denoting qualities or attributes shared by all human beings. Though it is true that all humans share embodiment, embodied experience is dispersed along a spectrum of possibility. Which possibilities are activated depends on the context of enactment, so that no one position is more

essential than any other...in this view embodiment subversively undercuts essentialism rather than reinforces it. (Hayles 201).

As a result of normativity, things that do not fit will be cause for panic. The repulsion we experience when our intelligent machines perform “life” will confuse and infuriate people who have not opened their boundaries to new concepts of life. Instead of seeking similarities, they will enter into a contest of will for to reinforce their privileged order.

Hayles uses Burroughs’s anecdote of the tape recorder in “The Tape That Exploded” as an anecdote for the body/embodiment relation. The body is the medium for embodiment, much like a tape is the medium for audio (typically, but not exclusively, speech). Embodiment, then, may be thought of as “pre-recordings” that have already been recorded onto the tape. “The inscription of sound in a durable medium suited his belief that the word is material, whereas the malleability of sound meant that interventions were possible, interventions that could radically change or eradicate the record.” (Hayles, 217). Burroughs believes that the “word” embodied in the pre-recording is a “parasitic invasion” on the tape, one that can become “mutated” and go “viral”. In this context, sound is mutated by cutting up and reconfiguring pieces of tape. The analogy here with Frankentsein’s monster emerges. The monster’s body is literally a cut up corpse, a remixed body. It’s transgression isn’t as much in its appearance as its ability for speech. That it could be so *ugly* and yet so perfectly human was repulsive. Articulation is insulting when it is produced by a thing pre-determined to be dumb. It insults because it contradicts the episteme of the observer, it confuses their words and meanings. Burroughs’ narrator reminds the reader that “what we see is dictated by what we hear”, that their knowledge and perceptions are often framed for them linguistically in text or sound. In that framing, the listener becomes the recording, seeing the meaning in the world that the tape tells us is there; a mutation through rhetoric.

This concept of mutation is significant for humanity's liberation: "unlike marks on paper, this writing can easily be erased and rewritten in other forms...sound, unlike print, dies away unless it is constantly renewed." (Hayles 217). Sound, as an embodied kind of genetics, contrasts with print which is coded like DNA. Where mutating the latter was difficult without technology, the former enabled it through the mediums of speech and memory. Oral storytelling, for example, had many improvisations built around pre-recorded phrases. Those phrases, framed in different contexts, could alter the message and attitude of the culture. What is said has to be remembered, it cannot be referenced the way a writing can. Much like the oral history of the past, stories that are told are re-translated for a new context, leaving open the possibility for new mutations both deliberate and unintentional. Memory, as a significant function of the mind, is fallible and changes with time. This enables us, as humans, to modify what we've heard and seen. In this way, forgetting is much like a mutation. In order to enable mutation, humanity must learn to be comfortable with some confusion, to briefly forget boundaries and rebuild them in context. Computers, on the other hand, are coded and cannot rewrite their programming unless designed with the capacity to do so. They can never forget, they can only be corrupted and re-formatted.

Memory and ritual play a privileged role in the post-human ethic. "...Paul Connerton links embodiment with memory. He points out that rituals, commemorative ceremonies, and other bodily practices have a performative aspects that [a decontextualized] analysis of the content does not grasp...because ceremonies are embodied practices, to perform them is always in some sense to accept them, whatever one's conscious beliefs...bodily practices have this power because they sediment into habitual actions and movements." (Hayles 203). Here is an example of the recursive symbiosis between embodiment and body, the process of co-informing. This is where an affirmation relation between self/other can begin.

Intra-Activity

Anthropocentrism demands a duality between humanity and nature. For Descartes and many before and after him, this is justified through humanity's ability for language. Abstraction, proof of divine right over "others", is only evinced through language. The mind is privileged over the body. This Mind/Body duality carries a bias that creates a master/slave relation where the body (and the distractions of the material world) is always "less-than". In its inferiority, the mind is justified in its subjection of the body. Katherine Hayles uses anorexia as an anecdote. "the body is understood as an object for control and mastery rather than as an intrinsic part of the self. Quoting an anorectic's remark - 'you make out of your body your very own kingdom where you are the tyrant, the absolute dictator' - Brown states, 'anorexia is thus a fight for self-control, a flight from the slavery food threatens; self-sustaining, self-possession independent of bodily desires if the anorectic's crucial goal' (Hayles 5). The body is the material performance of the mind like a puppet on stringers and, as a result, subject to the puppetry of the mind despite the desire-ability of the body. The body, as a canvas, is a becoming thing, applied by the mind. The mind, through its development of conceptual knowledge of the body (e.g. beauty and health), becomes prioritized through the ability to analyze the body. A mind that cannot successfully render the body obedient may be perceived to be malfunctioning, ineffective, "dumb", or "unhealthy".

The ethics of intra-active agency are a matter of accountability over relations, not simply a matter of culpability. It is about response-ability. "Responsibility, then, is a matter of the ability to respond. Listening for the response of the other and an obligation to be response to the other, who is not entirely separate from what we call the self" (Barad, Van Der Tuin, 69). There is no superior subject within an apparatus. All entities are causes so all entities matter. This is what is

meant by “matter coming to matter”, where matter may begin to create meaning on its own. The Mind/Body is itself an apparatus and, as such, neither the mind nor the body can be privileged over the other. When the body gets sick, the mind also suffers. One does not escape the afflictions of the other like a puppeteer distancing itself from its puppet. Perceptions, and knowledge, *differ* between performances as the apparatus is different in both body and mind from one moment to the next. Knowledge always develops between the two rather than as an exclusive attribute of the superior mind.

In order to reach some kind of causal knowledge, the observer must take account of the fact that “knowing is a matter of intra-acting” (Barad 149, 2007). The truth is a composite of causes, what Barad calls an apparatus. In order to achieve objectivity, agents within an apparatus must account for the entangled causes of an effect. Barad alludes to Bohr’s theory of diffraction. “Diffraction does not fix what is the object and what is the subject in advance...[it] involves reading insights through one another in ways that will help illuminate differences as they emerge” (Barad 30, 2007). Where representationalism preconceives and anticipates the subject linguistically, diffraction investigates the subject through its performance. Rather than as opponents, the subject and object are measured in relation to each other’s performativity. In this way, Nature and Culture don’t have to be defined *against* one another but can be understood as two differing, entangled processes. Culture is not simply the observer and Nature is not simply the observed.

Nature-Culture: The Ethico-Onto-Epistemology

The demand for pure, objective truth is a consequence of Western history. If you recall the relationship between desire and justice, you can see that objectivity is not simply preferred,

but essential for the success of the *polis*, regarded by the Romans as the highest pursuit of humanity. This is because of a need for reliability and control. If control is to be guaranteed, the knowledge of the essential qualities of the thing considered must be so predictable as to be true under any circumstance. The belief in objectivity is supported by faith in essentialism, a faith in the normative equilibrium of all things.

Katherine Hayles explains why this belief is misguided. She believes the conditions for this kind of objectivity enable a feedback loop where the anticipations or expectations on behalf of the observer are sometimes factored into a conclusion as to suggest certain behaviors are aberrative rather than normative. There is a false objectivity here. In this case, the feedback loop is a mechanism of hemostasis, or “the ability of living organisms to maintain steady states when they are buffeted by fickle environments” (Hayles 8). The conclusions reached based on the data being received and processed includes the bias of the receiver. In this way, aberrant behavior is dismissed as a malfunction rather than an alternative state of being. The feedback loop is a result of those conclusions changing according to the bias of the observer, and the observer changing from the conclusions reached through observation. This is what Hayles calls “reflexivity”, a “*movement whereby that which has been used to generate a system is made, through a changed perspective, to become part of the system it generates*” (Hayles 8). There is some confirmation bias in this objectivity that “tends notoriously toward infinite regress” (Hayles 9). New conditions for objectivity are needed in order to produce a new kind of knowledge.

This new kind of objectivity comes from Naturecultures. Barad defines her theory of Post-humanism as an “ethico-onto-epistemology” or an ethic where “..knowing is a direct material engagement...[t]here is not this knowing from a distance. Instead of there being a separation of subject and object, there is an entanglement of subject and object, which is called the ‘phenomenon’. Objectivity, instead of...offering an undistorted mirror image of the world, is

about accountability...and responsibility to the entanglements of which we are a part.“ (Barad 379, 2007). The observer, with their perceived distance, is not the sole producer of knowledge (if even capable of objective knowledge), but an intra-active participant within an apparatus. As a result,

If ‘humans’ refers to phenomena, not independent entities with inherent properties (*essentialism*) but rather beings in their differential becoming, particular material (re)configurings of the world with shifting boundaries and properties...then the notion of discursivity cannot be founded on an inherent distinction between humans and nonhumans. (Barad 818, 2003).

Indeed, this discursivity and its modes of expression implies no need for a brain to rationalize outcomes. It simply requires a physical “realization of agential possibilities” by humans and nonhumans alike. The presence of all the right elements that create a phenomenon. Manuel DeLanda sees inclement weather a result of a “complex self-organizing (*autopoietic*) structure” without a brain (Van der Tuin, 43, italics mine). Things do not need brains to perform dynamically and causally.

Knowledge isn’t an exclusive product of an objective observer, like the mind. Post-humanists show a need to reframe agency outside of causality via intra-activity. Barad builds from the premise that all entities are phenomena, the object of another observer’s perception. Further, phenomena are fleeting, defined by the moment within which they exist. They are “an entangled set of agencies” (Barad 23, 2007). Causality is more than just a duality of free-will/determinism. “Agency is not an attribute but the ongoing reconfigurings of the world” (Barad 141, 2007). Intra-active agency, then, is the entangled causes that produce a phenomenon.

Karen Barad believes all of the intra-active agencies found in weather are akin to Niels Bohr’s *apparatus*. For Barad, an apparatus isn’t just a body of unlike things that interact

simultaneously, but also “material (re)configurings or discursive practices that produce material phenomena in their differential becoming. Phenomena are produced through specific causal intra-actions involving multiple apparatuses of bodily production....Apparatuses are not bounded objects or structures; they are open-ended practices” (Barad 170, 2007). An apparatus is: an observer, an observed, and an instrument of observation all wrapped together. All affect each other in their awareness and intra-action. The product of their intra-action is phenomenal; it is an object, fleeting and emergent. These apparatuses are “boundary-making”, conditioning the potential for each phenomena produced. These apparatuses can be cyborgian because they require cooperation between different objects like persons and tools to produce a shared phenomena. Any phenomena produced are a product of all the things that caused its production. Even someone who simply observes must analyze in order to understand what they see. This person refers to their embodied pre-recording as their analytical instrument to understand and make meaning from their observation.

Rosi Braidotti likens her own version of an apparatus, what she calls an *assemblage*, to Bruno Latour’s *Actor-Network Theory*. Both concepts are concerned with the development of a network within which humans and non-humans cooperate to reach an objective. Each element of the apparatus/assemblage/network changes the parameters for what kind and degree of information can be collected and applied. Through understanding action as a network of intra-active agencies, each contributing to the phenomena produced, humanity can begin to appreciate an ethic that eschews dualism and embraces responsible companionship.

Post-humanists rally around the term “Naturecultures” as the post-humanist spectrum. Naturecultures considers two related rather than opposing (“other”) forces. Nature, as an ontological concept, and culture, as an phenomenological construct, are paired together in an ethical and symbiotic assemblage of subjectivity. As subjects to one another, these two

competing forces are encouraged to show a responsibility to the other in order to protect their mutual interests. This reaches back to Karen Barad's apparatus. If you recall, the apparatus doesn't allow for an objectivity based on detachment. Where Western philosophers centralize distance as the criteria for objectivity, Barad sees distance as unrealistic and encourages a self-awareness within the phenomenon we're observing. " 'We are not outside observers of the world. Nor are we simply located at particular places *in* the world; rather we are part *of* the world in its ongoing intra-activity" (Barad 819, 2003). Humans are active participants in the constant reconfigurations of the world. Importantly, she elaborates that "apparatuses are themselves phenomena" (Barad 170, 2007), and "the ontological inseparability/entanglements of intra-acting "agencies" (Barad 139, 2007), agencies that are produced by both human and non-human through intra-activity. In other words, the apparatus that turns matter into meaning is itself a product of the moment in which it is occurring. The apparatus is emergent, too. Objectivity, then, is the ability to distinguish between "response-abilities" within an apparatus and its consequent observation or what she calls "*agential separability*" rather than "absolute exteriority" (Barad 828, 2003). The knowledge-making apparatus, then, is an ecosystem which humanity is enmeshed within rather than distantly related to.

If the knowledge-making apparatus is an emergent ecology, then to appreciate knowledge is also to be responsible to one another as subjects and contributors. All entities (brains or not) within a system contribute to a phenomenological reconfiguration. A healthy system requires entities that are themselves open to emergence and reconfiguration. All phenomena in a system are responsible to the health of that system, and every entity within it, as a renewable source. Responsibility also implies reciprocity between parent and child. The parent, not an individuated producer with exclusive rights, but a system of language, bias, genetics, environment, etc. Unlike Dr. Frankenstein, expelling his creation and suffering a magnetic repulsion to it, a phenomena

produced is entitled to responsibility, too. To turn away from an appalling child, then, is to be appalled at the health of one's self.

So What?

But what does this have to do with technopanic and E.A.I.? Simply put, humanity is losing at its own game. It has built a set of conditions to qualify normativity and naturalism in turn used as evidence for a hierarchy of power and privilege. As machines become more human like, humanity's place at the top of the hierarchy *appears* to be challenged according to its own rules. Will humanity be replaced? Will this be the "death of man?"

No! It certainly doesn't have to be. The anxiety over humanity's future and the emergence of an artificial consciousness are based on old fears. In my second chapter, I have shown how Western culture, in particular, has structured the power dynamics of domination into their language. The impulse for appropriation and surplus is woven into our embodied DNA. It is no wonder Westerners are so fixated on a competitive relationship with E.A.I. There is no room for cooperation in a world where there must always be a winner and a loser.

In my third chapter, I examined arguments over the immediate trajectory of the market and their anticipated consequences. I have showed that the space of competition between nature and culture was in the marketplace and the fight for humanity's revisioning needed to begin there too. I examined the historical arguments over the hopes and fears of automated technology and how they continue to inform the arguments made today. I made it clear that walls of tomorrow are built from the hurdles of today, hurdles which are rhetorically constructed. What needs to be emphasized is that human alienation is inevitable when the market forces are not accountable to the ecology on which they operate.

In my fourth chapter, I used films to frame some of the popular anxieties about Human-Robot relations. I explored the arguments on the contest of wills between human and E.A.I. in *2001* to show that the contest itself was the cause for humanity's alienation. Further, I explored the implications of dualistic power dynamics between Human-Robot relations. I also showed how movies with the best intentions may suffer from pitfalls. *Wall-E* tries to help its human audience appreciate the value of nature but does so in ways that ignore other problematic messages. Finally, I referred to the boundary-pushing messages in *Ghost in the Shell* and *Ghost in the Shell 2: Innocence* to examine what it means to be human and other Post-human concerns about life.

I end here, with my final chapter on Post-human theory. It is this theory that I believe humanity can find a sufficient path towards its next iteration. The rhetoric of Post-humanism seeks to find relations through difference. Humanity is changing, but that has always been the case. Who we may *become* is a matter of how open our boundaries are. To insist on recapitulating an old and insufficient order is to choke the possibility for what we may *become*. It keeps humanity in a perpetual state of *being*, preventing the sight of new shores. In order to avoid the power dynamics of the past, and the anxieties of the future, humanity must find a way to see past the ethics it has established for itself. Post-humanist philosophy has the capacity to help open boundaries and better adapt to the challenges we face right now, not just in the future.

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