

Shrouded Cartographies of Subordination:  
How Science Fiction Stories Build Anti-Black Futures

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## ABSTRACT

Some say that science fiction becomes science. If science fiction eventually becomes science and technology, then US-American science and technology surrounding robots are rooted in white supremacy. Scholarship has previously highlighted the way that films and stories about robots are exclusionary towards Black people and persons of color. These texts, while aptly making the connection between race, Blackness, and technology, do not sufficiently address the embedded design of anti-Blackness in cultural artifacts in the early twentieth century and the anti-Black logics that, to this day, continue to inform how stories about robots are told. Further, these analyses do not consider the connection between cultural artifacts and the material development of emerging technologies; how these embedded racist narratives drive and shape how the technologies are then constructed.

In this dissertation, I aim to link how anti-Black scientific popular culture has informed academic scholarship and engineering related to robots in the United States. Stories are an inherently spatial project. Stories about robots are a spatial project intended to create “Cartographies of Subordination.” I contend from 1922 to 1942, US-American robots were mapped into and onto the world; in just twenty short years, I argue a Cartography of Subordination was established.

I apply a spatial lens to critique the impact of embedding stories about robots with anti-Blackness. These stories would develop into narratives with material consequences and maintain lasting ties and allegiance to a world invested in white supremacy. I outline how popular culture and stories are transfigured into narratives that have a direct impact

on how futures are built. I expose the loop between popular culture and scholarship to unmask how research and development in robotics are based on white-informed futures.

My dissertation makes an original geographical contribution to the fields of Human and Cultural Geography by asserting that narrative and popular culture about robots serves to remake Cartographies of Subordination in both science fiction and science and technology broadly. If science fiction has the potential to become real scientific outcomes, I connect culture, geography, and legacies of power in an otherwise overlooked space.

## DEDICATION

For them.

“For what it’s worth... it’s never too late, or in my case too early, to be whoever you want to be. There’s no time limit. Start whenever you want. You can change or stay the same. There are no rules to this thing. We can make the best or the worst of it. I hope you make the best of it. I hope you see things that startle you. I hope you feel things you’ve never felt before. I hope you meet people who have a different point of view. I hope you live a life you’re proud of, and if you’re not, I hope you have the courage to start over again.”

—F. Scott Fitzgerald, *The Curious Case of Benjamin Button*

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## LIST OF TERMS

Anti-Blackness –is the ontological position that contends Blackness, or to be Black, is to be anti-human

Dialectic (Hegelian) –is a philosophical concept used to describe an argument between two contradictory processes or opposing sides (thesis and antithesis) which result in the development of a new outcome (synthesis) typically, but not always through violent measures.

Humanoid Robot –are robots designed to look like humans and mimic the physical behaviors or functions of humans; sometimes humanoid robots are also referred to as androids.

Robot –coined in 1921 by Czech writer, Karel Čapek, robot is derived from the Slavic word, *robot* which translates to English as serf-labor, hard work, or slave.

Place –is a location created by human experiences. The size or location of a place does not matter but instead ‘place’ exists of ‘space’ that has been filled with meanings by humans. Further, because place evokes feelings and values, ‘place’ can exist in a physical location and temporal dimensions such as memory and dreams.

Science –refers to the pursuit of knowledge and understanding the natural and social world based on empirical evidence.

Space –is a location or geographic point that has no social connections to human beings. No meaning has been added to it.

Social Death –refers to when someone or something is rendered not fully human in wider society and therefore void of relationality with other humans. It is the condition in

which someone or something is perceived as dead, or non-existent, or as a walking corpse

Technological Capabilities –refers to potential, anticipated, or imagined technologies in development phases or production phases. For example, while there is no current functioning version of a completely self-driving car (level 5 automation), this is often a developing technology that companies, and researchers are invested in globally.

Technological Determinism –is the theory that technology drives social progress absent of social, political, and cultural change values and historical events.

Technology –refers to the application of scientific knowledge or the artifacts that are developed and produced from the application of scientific knowledge.

Whiteness –can be understood as the way white racial identity, customs, culture, and belief, operate as a standard by which all other groups are compared. Persons who identify as white are rarely compelled to consider their racial identity because of how mainstream culture normalizes whiteness.

White Supremacy –is the belief that there is a natural or biological superiority of white people or the ‘white race’ over all other racial groups.

## PREFACE

Growing up in the United States with the surname ‘Mayberry’ people I encountered for the first time or met at social and family gatherings would often lead with commentary such as, “Mayberry, like Mayberry RFD?” or, “Mayberry, like the *Andy Griffith Show*?” To which I always responded enthusiastically, “Yes, exactly!” even though my only connection to *Andy Griffith* was Ron Howard—and not even child Ron Howard, but filmmaker Ron Howard who directed classics such as the *Apollo 13* (1995), *A Beautiful Mind* (2001), and the cinematic triumph, *How the Grinch Stole Christmas* (2000). Something about my name (detached from me as a person) seemed to transport people to a place, or perhaps a memory of a place, this fictional town called Mayberry, and this place—or this memory of this place, seemed to bring people comfort. I liked taking people to that place by simply telling them my name. I felt connected to strangers in a way that, as a naturally introverted and rather awkward person, I was not otherwise able to do on my own so expeditiously.

In the early months of 2020, before the COVID-19 pandemic and before the global protests demanding justice for the lynching of George Floyd and Ahmuad Arbery, I found myself running uncharacteristically late—extremely late, to a meeting with Dr. Ersula Ore. I was mid-way into my doctoral program at that time and was making a necessary change to my dissertation advisory committee and was hoping to wine and dine so-to-speak Dr. Ore onto my committee. A note to all budding scholars, you do not successfully wine and dine potential advisors by wasting their time. In the middle of this connection as I was discussing my scholarly interest in the connection between

technology and anti-Blackness, Dr. Ore took me by surprise by exclaiming, “Mayberry? Your last name is Mayberry?” I was prepared to offer my usual, “Yes, like the *Andy Griffith Show*...” when she followed by saying, “You’re a white scholar doing anti-racist work and your last name is Mayberry? Do you understand how you embody whiteness in both face and name?”

This was the first time when discussing *Andy Griffith* with a person that I learned how the town of Mayberry was also a place that brought people unease. In all my previous encounters I had spoken to white folks who felt comforted by the image of Mayberry—how they were transported to an ideal time accompanied by a jovial, whistled tune. I had never spoken to anyone who questioned the idealism of the town of Mayberry. I had never spoken to any person of color about my last name and therefore never understood how my surname, ‘Mayberry’, and by extension, the town of Mayberry in *Andy Griffith* was no such utopia.

The town of Mayberry in the *Andy Griffith Show* depicted the ideal version of what an American place or community should aim to be—the kind of town that was full of diligent, blue-collar, Christian-type folks. In many ways, the *Andy Griffith Show* remains an enduring standard of the American Utopia or an idyllic vision of the United States at its best.<sup>1</sup> However, this ideal version of the United States was also rooted in white supremacy. In its entire production length of eight seasons, the *Andy Griffith Show* only featured two guest spots played by Black actors. During the time that the *Andy*

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<sup>1</sup> James Flanagan, “Deconstructing Mayberry: Utopia and Racial Diversity in the *Andy Griffith Show*,” 308.

*Griffith Show* was on the air from 1960 to 1968, the United States was experiencing the largest cultural and political shifts since the Civil War. It was during this time that the American Civil Rights Movement took shape and zealously fought against the institutional and legal forms of segregation and discrimination based on race.

While the world watched as Civil Rights leaders and citizens protested in the streets demanding racial integration, for an hour starting at 5 PM Central Standard Time families could simply turn their televisions to the *Andy Griffith Show* and disassociate from reality. In the town of Mayberry, the movement, the protests, the Black and brown bodies, all of it was nowhere to be found. Black bodies were essentially not permitted to enter the town of Mayberry and they were therefore deliberately discriminated against; whiteness performed its power through *invisibility*.<sup>2</sup> It was in this intentional omission the show performed its whiteness: what Geographer George Lipsitz describes as erasure by way of “intentional silence”.<sup>3</sup> the *Andy Griffith Show*, in the most straightforward, no-nonsense, “Mayberry way” possible, produced a world devoted to whiteness and the American people loved it—and many still love it to this day.

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<sup>2</sup> “Traditionally, power was what was seen, what was shown, and what was manifested...Disciplinary power, on the other hand, is exercised through its invisibility; at the same time, it imposes on those whom it subjects a principle of compulsory visibility. In discipline, it is the subjects who have to be seen. Their visibility assures the hold of the power that is exercised over them. It is this fact of being constantly seen, of being able always to be seen, that maintains the disciplined individual in his subjection. And the examination is the technique by which power, instead of emitting the signs of its potency, instead of imposing its mark on its subjects, holds them in a mechanism of objectification. In this space of domination, disciplinary power manifests its potency, essentially by arranging objects. The examination is, as it were, the ceremony of this objectification” (Michel Foucault, *Discipline and Punish: The Birth of the Prison*).

<sup>3</sup> George Lipsitz, *How Racism Takes Place*, (Temple University Press: 2011), 29.

I started this research project reflecting on the *Andy Griffith Show* and Dr. Ore's comments about my whiteness as reflected both on my skin and in my surname not to center myself, but to demonstrate how investment in whiteness and white supremacy is often unquestioned, normalized, and universalized; this is particularly the case in stories and cultural elements. Whiteness and the allegiance to white supremacy is so deeply part of the US-American culture and, by extension, the cultural artifacts we produce like film, art, and yes...simple, unassuming television shows that we are often unable or unwilling to acknowledge when they transform into material conditions that impact people's lives. The same artifacts that bring people a nostalgic sense of place or comfort are also the artifacts that display their deference to whiteness and accordingly deference to anti-Blackness to the detriment of Black and brown people everywhere.

At the same time in 2020 when people were taking to the streets to demand an end to institutional racism in US-American Policing, I witnessed two images/memes coupled with one another on someone's social media feed captioned, "Blue Lives Matter." The first image featured a screengrab from *Andy Griffith* captioned, "The world needs more 'Mayberry' and less Jersey Shore" and the second image featured Donald Trump supporters at a rally holding campaign signs that read *The Silent Majority Stands with Trump* and the caption of the image read, "Why do elderly Americans support Trump? Because they grew up in a free America and they want the same for their grandkids." What was clear to me (in addition to their antagonist position against the Black Lives Matter movement) was the way that this individual associated the town of Mayberry in the *Andy Griffith Show* with a more unspoiled version of America or, as the meme suggested a "free America" and the way they associated, perhaps without even knowing it, race, American

Democracy, and *Andy Griffith* as the champion of these ideas. It was here that I also saw a material expression of what Dr. Ore had confronted me with months earlier about my name and its rhetorical significance—the way that whiteness could “haunt” both physical and discursive space.<sup>4</sup>

What follows in this dissertation project is an examination of how popular culture in the United States, while seemingly innocuous, is designed (like the *Andy Griffith Show*) in service of white supremacy and how without keen attention to this issue, this haunting eventually becomes reality in people’s lives. As a scholar, starting with this dissertation, I now aim to use my name to take people to a new kind of place, not the Mayberry of *Andy Griffith*, but a place where ‘Mayberry’ might be understood, not as a perpetrator of anti-Blackness...but as an active co-conspirator against it.

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<sup>4</sup> Ersula Ore, *Lynching: Violence, Rhetoric, and American Identity*, 2019.

“I was going to places that were the sites of torture and intergenerational chattel bondage, but no one said the word *slavery*. And so I started thinking about, like, how that came to be because, you know, symbols aren't just symbols. They are reflective of stories that we tell. And those stories embed themselves into the narratives that a society carries. And those narratives shape public policy. And public policy obviously shapes the material conditions of people's lives.”

-Dr. Clint Smith, June 2021<sup>5</sup>

## CHAPTER 1

### INTRODUCTION

Every year I take part in a ritual. I wake up early, shop at the market, and spend an entire day watching films and baking. I peel and dice apples, mix them with butter, cinnamon, sugar, and vanilla and place them into meticulously formed pie shells. I bake pies (and other things if time permits) all day, until I can hardly stand. This day is uniquely mine and always takes place one day before the most accompanied and family-centered day I can think of—Thanksgiving. In the background playing over the buzzing of my mixer is the same movie marathon every year: Francis Ford Coppola’s *Godfather* Trilogy. I won’t spend too many pages detailing why or how this ritual began, but it’s something of my own creation that I revel in. Though for much of the day I pay more

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<sup>5</sup> Clint Smith, 2021.

attention to my confectionery creations than to the films (I have seen them now more times than I should admit). However, I always watch the opening scene of *Godfather Part I* attentively.

*Godfather* begins with a beautifully chilling black screen through which we hear a pained, accent-heavy voice stumble the words, “I believe in America.” The screen eventually fades in from black revealing a middle-aged Italian man, Bonasera, begging Don Vito Corleone (the head of the Italian Mafia) to provide him with “justice” for his daughter where he believes American justice has failed. I love this scene. It’s a moment of pure desperation on the part of Bonasera who, when he says, “I believe in America” is trying to reassure his faith in the promise of the American dream whilst fighting his resentment that grows knowing that this dream—this story of America promised to so many immigrants as a place of hope, a place of opportunity, a place where justice prevails—is a lie.

Growing up in the United States in what I would call a fairly patriotic family, I don’t think I recognized all of the ways that I blindly trusted, like Bonasera, the story about the country I grew up in. I also didn’t realize how stories about identity were so central to many Americans, myself included, until recently. In the United States, you grow up learning that this nation was founded by immigrants, for immigrants—a story that is buried deep despite the many contradictions in the way this country treats immigrants today. While writing this dissertation it was pointed out to me just how strange this connection to this story is; how US-Americans often insist on the independence and uniqueness of the United States while also holding onto the identity as

a country of immigrants. A dear colleague and friend who, I should note, is not from the United States, commented on the uniqueness of US-American culture and our connection to stories, in particular the stories we tell about ourselves when I was in the early phases of writing this dissertation. Specifically, they noted how bizarre it was that many Americans, when asked about themselves, do not lead conversations about their identity by saying they are “Americans” but instead will lead with where their families immigrated from.<sup>6</sup> So, for me, when I tell people about myself, I often say, “I’m German and Scottish,” even though I have never been to either of those countries and my family hasn’t been from these places for generations.

Identity is a complicated thing, and this dissertation is not about identity *per se*, but it is about stories. How we describe our identity, our histories, our institutions, and our allegiance to beliefs—they all come together in stories and how those stories too often shroud a devotion to white supremacy over space, place, and time. US-American culture is as much about what details we put into the story as it is about what is omitted; the lies hidden in stories that reveal deeper truths.<sup>7</sup> In *Godfather*, when Bonasera asserts he believes in America, the story he recites not only tells audiences about his pride and his faith in the promise of America—the promise of a better life for himself and his family—but his story also reveals the deception in that promise. It exposes the lie in the

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<sup>6</sup> Florian A. Schneider, conversation with the author, August 25, 2021.

<sup>7</sup> While evoking the terms “American” or “America” can refer to many regions in North America, throughout this dissertation I focus my examination specifically on US-American popular culture. As such, I will work to use the terms United States and US-American wherever possible to make the rhetorical distinction clear.

story about America that was promised and continues to be promised to immigrants in this country.

In the United States, we don't simply tell stories about ourselves or about our national identity, we also tell stories because they're entertaining, and they inform our popular culture. Popular culture is a fundamental expression of the cultural norms that are embedded in the time and place of the day. It makes legible the most normalized phenomenon and the most shrouded lies about society; it reflects deeper truths. Popular culture has been examined by scholars such as Stuart Hall in *Cultural Studies* for the way that it directly informs and maintains identity, political structures, and other institutions as well as the way that Black popular culture resists hegemony and normative, white popular culture.<sup>8</sup>

In a 1984 essay, renowned writer James Baldwin authored an essay titled, “On Being White...and Other Lies” where he illuminated a major lie told in US-American identity. Specifically, Baldwin was concerned with exposing the cognitive dissonance, or contradictory belief, that US-Americans held about their identity as both the ‘land of the free’ while also maintaining that the United States was a country created by white people, for white people. In America, the lust for hegemonic power necessitated that white people continue to form their identity around whiteness and tell stories that maintained white supremacy:

America became white--the people who, as they claim, “settled” the country became white--because of the necessity of denying the Black presence, and

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<sup>8</sup> Stuart Hall, et. al, *Stuart Hall: Critical Dialogues in Cultural Studies*, 1996.

justifying the Black subjugation. No community can be based on such a principle-or, in other words, no community can be established on so genocidal a lie...But this cowardice, this necessity of justifying a totally false identity and of justifying what must be called a genocidal history, has placed everyone now living into the hands of the most ignorant and powerful people the world has ever seen: And how did they get that way? By deciding they were white.<sup>9</sup>

White supremacy, or the belief white people and their socially constructed “whiteness” are superior to all others, is deeply a part of the American story. This story, like many stories, involves a villain--something for the protagonist (US-America/white people) to overcome. In the case of the United States that something, that villain, as Baldwin noted, was and is Blackness. This story is maintained through the use of anti-Blackness which has been defined as the belief that Black people—their Blackness is lesser than and therefore tractable by white people and whiteness: this belief ultimately serves to maintain a larger cognitive dissonance of white supremacy.<sup>10</sup>

As a researcher, I work to unpack stories that shroud white supremacy over space, place, and time. I am interested in unpacking stories that the dominant majority regard as nothing more than “stories” but are embedded with deeper lies to maintain hegemonic objectives: I’m most interested in exposing the ones that propel the belief and investment in white supremacy. In my work, I am keen to expose anti-Black logics and framing that, by way of stories, become part of institutions and therefore go unnoticed. What we say matters. And the stories we tell ultimately provide the blueprints for the types of things

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<sup>9</sup> James Baldwin, “On Being “White” and Other Lies,” 277-180.

<sup>10</sup> Kendi, Ibram X., *Stamped from the Beginning: The Definitive History of Racist Ideas in America*, (Bold Type Books, 2017).

that we not only want to believe about ourselves but also draft the type of world we want to make.

One site of examination that has perplexed me for most of my academic career has been the way that popular culture relates to and impacts science and technology. While significant research has been conducted to disprove the objectivity or unbiased perceptions of science and technology (Polanyi, 1962; Haraway, 1988; Harding, 2008; Daston and Galison; 2007; Nelson, 2015; Daipha, 2015; Noble, 2018; Benjamin, 2019) little to no work has been done to connect popular culture to these institutions.

I investigate how popular culture in the United States directly informs the foundations, constructs, and institutions as well as the outputs of Science and Technology. Specifically, I argue that US-American popular culture is directly informed by anti-Blackness and that anti-Blackness is itself a tool that is used to maintain white supremacy; anti-Blackness is thus a design element of technology in the United States. I will focus on one technology, robots, to illustrate how this feedback loop between popular culture and outputs of science and technology operates.

The terms “science” and “technology” can suggest many meanings depending on historical context, location, and use by academic disciplines. For my research, the term “science” should be understood as the pursuit of knowledge and understanding the natural and social world based on empirical evidence. I also offer the term “science” as a way to understand “scientific trajectory” or the application of science from a white/western/imperialist approach which suggests, if I can understand anything, then I

can control *everything*. Similarly, “technology” is the application of scientific knowledge or the artifacts that are developed and produced from the application of scientific knowledge. Technology then also relates to “technological trajectory” which goes one step further to say, if I can build anything, influenced by the understanding that comes from science, I can control everything. Throughout the dissertation, I will often couple the terms together as “science and technology” for ease.<sup>11</sup> The term ‘robot’ also has many connotations and meanings depending on who you are engaging with. For this dissertation I use ‘robots’ akin to the definition offered by scholar Andrea Bertolini:

...a machine which (i) may either have a tangible physical body, allowing it to interact with the external world, or rather have an intangible nature—such as a software or program, (ii) which in its functioning is alternatively directly controlled or simply supervised by a human being, or may even act autonomously in order to (iii) perform tasks, which present different degrees of complexity (repetitive or not) and may entail the adoption of non-predetermined choices among possible alternatives, yet aimed at attaining a result or provide information for further judgment, as so determined by its user, creator or programmer, (iv) including but not limited to the modification of the external environment, and which in so doing may (v) interact and cooperate with humans in various forms and degrees...<sup>12</sup>

This dissertation is not, however, a dissertation about robots. I do not intend to make an argument about robot rights, robot personhood, or the possibility of robot agency. Rather, I’m interested in unpacking the *story* of the robot. I’m eager to hear what it has to say. I want to convene stories to learn from the robot—to understand the lies embedded in these stories that tell deeper truths. Truths about how popular culture is connected to the

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<sup>11</sup> I will also, on occasion, evoke the term “Technological capabilities” which suggests the potential for or possible technologies in development, see List of Terms.

<sup>12</sup> Andrea Bertolini, “Robots as Products: The Case for a Realistic Analysis of Robotic Applications and Liability Rules,” 214–247.

technology we have built but also the technology we envision and hope to build. Truths about how science fiction and stories aren't just fantastical abstractions but create feedback loops that have a material impact on people's lives. Truths about how robots in the United States maintain white supremacy. My work examines the relationship between science and technology and anti-Blackness in the United States; this analysis is a critical first step that will help guide future research which aims to expose connections between science and technology and white supremacy more broadly. By concentrating attention on robots in the US, my dissertation functions to provide a framework that can be applied to other technologies or technological capabilities. Throughout my project, my work is guided by a central question: How is anti-Blackness embedded into the design and culture of science, technology, and technological capabilities in the United States?

In this chapter, I will outline the scope of my dissertation project by first briefly considering the Hegelian Dialectic which I build on as a foundational philosophical and theoretical contribution throughout this manuscript before I outline my dissertation's methodological approach, organization of chapters, and contribution of research.

### **The Anti-Black Story of Science and Technology**

There is a Hopi proverb that asserts that those who tell stories rule the world.<sup>13</sup> US-American science and technology have long been privileged to be both storyteller and inventor and have therefore been the builders of much of the world we see and

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<sup>13</sup> "The Hopi Tribe is a sovereign nation located in northeastern Arizona. The reservation occupies part of Coconino and Navajo counties, encompasses more than 1.5 million acres, and is made up of 12 villages on three mesas..." "Homepage," Hopi Tribe Website, accessed August 25, 2021, <https://www.hopi-nsn.gov/>

experience today. These stories have often played the part of sage or prophet in predicting the emergence of technologies that are now ubiquitous in daily life. Video conferencing, artificial intelligence, drones, and autonomous vehicles are only a small number of technologies that were once ideas; ideas that offered a blueprint for engineers and scientists to make them into reality.

In hegemonic US-American popular culture one underlying tool that has never ceased to be recast is the narrative of white supremacy—the belief that white people constitute a superior race and therefore structures (political, social, and cultural) embody an advantage that favors whiteness. This narrative, as noted by W.E.B. DuBois, would become the “literal inscription of social injustice and inequality on the American landscape.”<sup>14</sup> The tale of white supremacy provided the validity, often scientific validity, to the invention of many systems of exploitation, oppression, violence, and destruction that would be used by Americans to present themselves as a world leader. Yet, white supremacy thrives when it is normalized, unspoken, and rendered invisible through narratives of erasure. There is a social consequence, however, when whiteness is not made detectable in story because it allows for exploitation, oppression, violence, and destruction to continue not only in the present moment but paves the way for it to be brought into the future.

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<sup>14</sup> James Tyner, *The Geography of Malcolm X: Black Radicalism and the Remaking of American Space*, (Routledge: 2005), 4.

While much of the contemporary work related to science and technology is becoming more multidisciplinary in approach, it still too often is the case in scholarship related to robot ethics, responsible innovation, and philosophy where insights of Black and brown scholars that attempt to decolonize and de-center whiteness are neglected or outrightly avoided in attribution. This dissertation will convene an arrangement of multidisciplinary approaches including Black Feminist Technology Studies (including Ruha Benjamin and Simone Browne), Cultural Geography (including George Lipsitz and Katherine McKittrick), Critical Race Studies (including Achille Mbembe and Frantz Fanon), and Cultural Studies (including Stuart Hall and Rosalind Brundt) to answer the central question and develop a framework for further use.

By conveying these assorted areas of scholarship, I analyze the relationship between anti-Blackness and science and technology that speaks from a perspective that does not replicate or repackage an underlying fidelity towards white supremacy. Using robots as a site of examination from both historical and contemporary contexts, I demonstrate how the technology's anti-Black design is concealed through stories and cultural reinforcement rendering it nearly invisible. The lack of attention given to the influence of popular culture on the material outputs of science and technology coupled with the United States' deference towards the authority of science, I argue, has only served to perpetuate the absence of critical inquiry in this space. The final portion of this dissertation moves beyond robots to consider how the insights garnered from robots can be universally applied to science and technology going forward.

### *Dialectics and Things*

A foundational narrative element in early popular culture about robots that has since been upheld comes from nineteenth-century German philosopher, Georg Wilhelm Friedrich Hegel, and his discussion of the master-slave dialectic.<sup>15</sup> Hegel describes an unstable relationship between a master and their slave in which the slave, unsatisfied with their position in relation to the master, struggles (violently to the death) with the master to secure personal *Anerkennung*—recognition.<sup>16</sup> This struggle has been depicted regularly in stories about robots since the first robot story in 1921.<sup>17</sup> While the outcomes of the violent struggle might look different compared to Hegel’s version, robots are often cast as the dialectic opposite to humans where the role of master in the story is customarily assumed by humans and the role of the slave in the dialectic is the robot. Robot stories in American culture are fundamentally about control. These fictions often stage blood-soaked clashes between robots and their human creators where both sides fight one another to settle their supremacy over the other group. As in Hegel’s dialectic, these stories are frequently portrayed as battles of life and death.<sup>18</sup>

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<sup>15</sup> Throughout my dissertation I will refer to Hegel’s dialectic discussion is often referred to as the “master-slave dialectic.” However, from the original German, *Herrschaft* und *Knechtschaft*, are more properly as translated to English as Lordship and Bondsman. As such, some sources referenced in this work will employ either master/slave, lordship/bondsman, or both translations.

<sup>16</sup> “*Anerkennung*...is a sixteenth-century formation, on the model of the Latin *agnoscere* (‘to ascertain, recognize, acknowledge’) and based on the (thirteenth century) legal sense of *erkennen* (‘to judge, find (e.g., a person guilty)’), rather than its older sense of ‘to KNOW, COGNIZE’. It thus suggests overt, practical, rather than merely intellectual, recognition.” (Inwood, 245).

<sup>17</sup> The term “robot” first appeared in the 1921 play, *Rossum’s Universal Robots*.

<sup>18</sup> It is important here to acknowledge that there is a degree of narrative spread here, where there are stories where the power dynamic is more subtle -- e.g., many of Isaac Asimov's short stories, Steven Spielberg’s *AI Artificial Intelligence* (2001), etc.

This narrative element has been taken up by scholars and engineers working on robot scholarship, ethics, and engineering.<sup>19</sup> The primary story told in America about robots is from the perspective of the master. Scholarship consistently casts robots as potential dangers that need to be kept in place or controlled or they will otherwise destroy humanity.<sup>20</sup> This framing is then used to rationalize why existing and future advances scientifically and ethically in robotics should remain subservient to their human masters.<sup>21</sup> The simple act of rhetorically casting robots as slaves or *things* in the dialectic reinforces a larger cultural understanding that licenses the point of view of humans. While scholars such as Bruno Latour assert that things—or artifacts inherently exhibit agency and thus play an active role in society, I contend that robots presented as things in popular culture are routinely relegated a status that denies the potential for such kinds of instrumentality.<sup>22</sup>

I contend that the way technology and technological capabilities (like robots) are discussed continuously recasts dialectical hierarchies that mirror the master-slave dialectic. Within the United States' popular imagination surrounding robots is an embedded coloniality that relies on the dialectic prioritizing the perspective of the subject/master (human) over the thing/slave. This perspective is important because of the way that it frames the power and privilege of the master without regard to the slave.

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<sup>19</sup> Ron Eglash, *African Fractals: Modern Computing and Indigenous Design*, 1999.

<sup>20</sup> Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies*, (Oxford University Press: 2016).

<sup>21</sup> "...most robots occupy the master-slave paradigm where no independence of action beyond direct human volition is permitted" (Ashrafian 2015, 323).

<sup>22</sup> Bruno Latour, *Where are the missing masses The sociology of a few mundane artifacts*, 225-258.

Throughout most narratives in film, television, and other media (which I will detail in chapter three), robots are seldom given the privilege to have their perspective prioritized. While cultural artifacts such as film and literature exist that force audiences to sympathize with the plight of robots in their assigned dialectical positions (*I, Robot*, 2004, *Ex Machina*, 2015) these are still typically told from the gaze of a human but do not give full voice or agency to the thing. In scholarship, this is also often the case. Debates about robot rights or ethical robots are often stripped down to a dialectical approach in which paternalism and/or human's emotional and ethical intelligence presume they are masters over their technological creations no matter what.<sup>23</sup>

### **Approach to Research**

For this dissertation project, I rely on several qualitative methodological approaches to develop a framework for critically examining the connection between popular culture, science and technology, and anti-Blackness in the United States. As a transdisciplinary scholar, my work often sits at the intersection of the humanities and the social sciences which means that my approach to answering research questions necessitates that I use multiple methodological tools simultaneously. I begin by asking questions in the tradition of Critical Theory which then creates an impetus for my approach. Critical Theory seeks to understand social phenomena by excavating and interrogating them from their roots.

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<sup>23</sup> See Wallach, 2011; Bostrom, 2016; Tegmark, 2018.

Roots, for me, borrow from philosopher Michel Foucault whose work attempted to expose the subtle, yet powerful ways systems and ways of thinking became normalized. Roots, therefore, in this context should be understood as sites of examination ranging from the historical or genealogical to the cultural, to the ethical, to significance of otherwise quotidian social phenomena as Foucault writes, “A critique does not consist in saying that things aren't good the way they are. It consists in seeing just what type of assumptions, of familiar notions, of established and unexamined ways of thinking the accepted practices are based... To do criticism is to make harder those acts which are now too easy.”<sup>24</sup>

Second, I follow a Critical Theory approach informed by the tradition of the Frankfurt School whose collective body of work attempted to dig under the surface of social and political issues through open-ended and reflexive investigation. Critical Theory, for members of the Frankfurt School, was used to realize goals of liberation with specific attention on uncovering truths that would lead to the complete transformation of society.<sup>25</sup> Combining the styles of Foucault and the Frankfurt School allows me to critically examine the deeply seeded roots of things (and the power structures upholding them) that otherwise go unquestioned. Starting with critical and challenging questions is essential to developing a full picture of a problem in society, what it is, where it

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<sup>24</sup> Michel Foucault, *Discipline and Punish: The Birth of the Prison*, 1979.

<sup>25</sup> Craig Calhoun, “The Idea of Critical Theory” (lecture, HSD 598: Herbert Marcuse & Critical Theory, Arizona State University, August 24, 2021).

originates, and how it is rendered normal throughout history as well as in contemporary social settings.

### *Archival Analysis*

In this dissertation, I will work across multiple spaces or periods (archives) to think through the ways (concretely and temporally) that anti-Blackness has been woven into the cultural fabric of the United States and how that culture then informs the outputs of science and technology. In this interrogation of anti-Blackness, I import forms of scientific and cultural production including fine art, photography, film, television, scientific papers, transcripts from plays, among others. Starting in 1921 with the debut of playwright Karel Čapek's science fiction play, *Rossum's Universal Robots*, I will then consider various cultural artifacts from the early twentieth century that introduce what I argue are fundamental narrative elements to what we understand about the US-American robot. I work across multiple spaces from the stage (*Rossum's Universal Robots*, 1921), to the short stories (*Runaround*, 1942), to different segments of time (The Age of Enlightenment, contemporary United States), to think through the profusion of anti-Blackness in this technology.

### *Critical Rhetorical Analysis*

By critical rhetorical analysis I mean to suggest that anti-Blackness in this technology is residual, material, and discursive.<sup>26</sup> As such, discourses and stories about

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<sup>26</sup> Michael G. Lacey and Kent A. Ono, *Critical Rhetorics of Race*, (New York: New York University Press: 2011), 3-4.

robots require rigorous investigation to draw out how anti-Blackness is normalized. I will examine each part of the archive by using critical rhetorical analysis to make visible the subtle, clever ways that anti-Blackness is shrouded. This is a dissertation about dissecting cultural artifacts and stories and therefore the way in which these stories are formed, the very words and rhetorics used in these stories, matter.

Discourse and culture, according to Stuart Hall, are not always conspicuous in the way that they perform or exhibit racism but instead often fall under the category of ‘inferential racism’ which, as the name suggests, can be far more difficult to detect.<sup>27</sup> Cultural artifacts such as plays, films, television shows, and academic papers alike have all contributed to a rhetorical performance that has assigned connotation to the word robot; this meaning has informed the way robots are designed. Though it is not always explicit, these assigned meanings rely on unquestioned, racialized assumptions that have formed over time and are thus broadly accepted. The same rhetorical performance has also benefited from an inferential anti-Blackness which necessitates uncovering. I rely on scholars Michael G. Lacey and Kent A. Ono’s approach to critical rhetorical analysis which will allow me to analyze and translate the discursive ways that anti-Blackness is interlinked, however inferential or explicit, in robotics.<sup>28</sup>

### *Human Geography*

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<sup>27</sup> George Bridges and Rosalind Brunt. *Silver Linings Some Strategies for the Eighties: Contributions to the Communist University of London*, (London: Lawrence and Wishart: 1981).

<sup>28</sup> Lacey and Kent A. Ono, 2011.

Geographer James Tyner once aptly noted the importance of storytelling and how stories themselves can write worlds into existence.<sup>29</sup> It is with this understanding that I recognize the importance of linking stories to place-making and geography. Human Geography examines relationships between people, culture, institutions, and environments to unpack the way that spaces and places are produced. Human Geography provides the tools to read the so-called “spatial tea leaves” to find the underlying meaning in the world around us. Human Geography as an approach unpacks power asymmetry, historical transformations over time, architectural codes, design, and expressions of capital to discern how each is at play with one another. This approach disassembles the facades of things to show how and where meaning is located. Cultural Geography, “...explores the intersections of context and culture. It asks why cultural activities happen in particular ways in particular contexts.”<sup>30</sup>

I employ Human Geography to include Cultural Geography, Black Geographies, Feminist Geographies, Geographies of Masculinity, Affective Geography, and Marxist Geographies. More specifically, my use of Human Geography borrows from the scholarship of geographers such as James Tyner, George Lipsitz, Rashad Shabazz, Clyde Woods, Brandi Thompson Summers, David Harvey, Kathryn Yusoff, Tiffany Lethabo King, and Katherine McKittrick. Each of the archival materials I have selected tells

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<sup>29</sup> Tyner, 2006.

<sup>30</sup> Anderson, *Understanding Cultural Geography: Places and Traces*, (Routledge, 2010).

individual and collective stories that contribute to the production of space, historical space, current space, and future space.

### **Organization of Chapters**

In Chapter two, (THE SHROUD OF ANTI-BLACKNESS IN US-AMERICAN CULTURE) I present the connection between US-American culture, white supremacy, and the US-American regard for science and technology. I proceed by first explaining the allegiance that US-American culture holds to white supremacy. This allegiance, I argue, emerged from the Founding Fathers' deference towards Enlightenment philosophy that was codified in the country's basal political documents such as The Declaration of Independence. Next, I argue that anti-Blackness was engineered out of Enlightenment-era thinking as a technology or tool to uphold white supremacy. Here I both define anti-Blackness and decipher five of its core tenets; these core tenets, I argue, distinguish anti-Blackness from other forms of racial discrimination. From this, I commence my analysis that links the United States' political and cultural allegiance to white supremacy with science and technology and I continue to develop this analysis in Chapter three. Finally, I begin to develop a literature review of multidisciplinary texts that do not sufficiently capture the extent to which narratives in scientific popular culture (and therefore the US-American institution of science and technology) remains loyal to white supremacy. These texts, while critical, do not identify the cultural loop that maintains white supremacy in science and technology. Put differently, while these texts engage how race and racism

take place in science and technology, they do not attend to what scholar Calvin L. Warren describes as the “insatiable appetite” of anti-Blackness.<sup>31</sup>

In Chapter three, (HOW US-POPULAR CULTURE BUILDS ANTI-BLACK WORLDS) I demonstrate how anti-Blackness in science and technology has become normalized via popular culture by focusing attention on the US-American robot. I convene scholarly texts and an archive that imports science fiction films, books, and images related to robots to demonstrate how stories have intentionally over time contributed to an understanding of what US-Americans know as “robot” which is inherently anti-Black. In this timeline, I highlight four key logics of anti-Blackness (social death, code noir, paternalism, and blackness as evil) that science fiction and scientific popular culture have codified into the US-American popular imagination. By doing this archival work I convene a multidisciplinary suite of artifacts in popular culture that might not otherwise be assembled. I demonstrate how each of these artifacts built a collective consciousness surrounding robots that upheld anti-Black logics in the United States. This labor is necessary because it exposes how deep the commitment to white supremacy is in this technology and, because of that depth, why technological fixes absent from analysis of this history are not sufficient to dismantle it.

Chapter three also makes an important spatial contribution by linking these anti-Black logics to the geographical concept of *Cartographies of Subordination*. I highlight

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<sup>31</sup> Calvin L. Warren, *Ontological Terror: Blackness, Nihilism, and Emancipation* (Duke University Press, 2018), 25.

how three cultural artifacts in the early twentieth century served to place robots into a cartography of subordination akin to the colonial and imperial project of slavery. I argue that these cultural artifacts use an anti-Black informed blueprint to then name, place, and contain robots thereby carrying forward anti-Blackness and investment in slavery into the future.

In Chapter four, (HOW ANTI-BLACK WORLDS FORGE ANTI-BLACK FUTURES) I consider how the stories repeated in popular culture have transferred into real-world narratives about robots in science, industry, and scholarship. I argue that popular culture and science fiction have not only informed the culture surrounding the US-American idea about robots but have cemented an anti-Black approach to real-world innovation about robots in engineering and academic scholarship. I make this contention first by reviewing three leading texts related to research in robotics: each text charges white narratives as the guiding academic authority in the field of robotics. Second, I argue that the Cartographies of Subordination which popular culture introduced are remade and provided scholarly license via these prominent texts. Finally, I comment on how these narratives about robotics speak to a broader issue in US-American science and technology that assumes a post-racial (a form of anti-Black logic) view of technology.

In my final chapter, (TOOLS TALKING BACK: TELLING NEW STORIES AND BUILDING ANTI-RACIST FUTURES) I provide both a consideration of how to respond to the dissertation's findings related to anti-Blackness and cartographies of subordination as well as offer a brief conclusion. I discuss the ways that the shroud of anti-Blackness has become quotidian in US-American scientific and technological logics. I consider the

consequences if this problem remains unchecked. In this chapter, I consider how the work of Sylvia Wynter coupled with narratives of Afrofuturism and Critical Race Theory can offer much-needed stories as alternatives. I contend alternative stories in popular culture as well as in academic scholarship are necessary to combat narratives of white supremacy and thwart anti-Blackness. I end this chapter with a consideration of how future scholarship and work (including my own) might build on the dissertation.<sup>32</sup>

### **Contribution of Research**

My work provides four original scholarly contributions. First, this dissertation demonstrates how anti-Blackness is shrouded in US-American scientific culture and the popular cultural imagination surrounding science and technology. I offer anti-Blackness as a tool/mechanism that upholds white supremacy over time; I contend that anti-Blackness is a constant force used to uphold white supremacy. Anti-Blackness, in this way, is distinct and more pernicious than racism or discrimination which change over time. This dissertation offers a thorough consideration of anti-Blackness and the core tenets that allow it to endure over space, place, and time. In this way, my scholarly labor is distinct from existing literature that focuses primarily on surface-level dispatches of anti-Blackness such as discrimination or racism. While I acknowledge that calling out forms of racism and discrimination is an essential project, without identifying the

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<sup>32</sup> This dissertation, formatted in anticipation of a book manuscript, also includes a preface and epilogue section which offer my personal reactions, insights, and reflections on the writing process as well as my own positionality in both face and name as a white scholar working on and with anti-racist scholarship.

underlying force/tool (anti-Blackness) that guides these applications, the legacy of white supremacy will continue to withstand consequential challenges.

Second, this dissertation exposes the embedded coloniality in the way US-Americans understand and frame relationships towards technology, specifically the master-slave dialectic related to robots. By centering the thing/robot this dissertation gives voice to the ways that white supremacy and anti-Blackness go otherwise unquestioned and remain normalized in dominant/normative culture. From this exposure, this dissertation provides a framework for other researchers to examine technologies and emerging technologies beyond robots more broadly.

Third, this dissertation makes an original geographical contribution to the field of human and cultural geography by asserting that narrative and popular culture about robots serves to remake cartographies of subordination in both science fiction and science and technology broadly. If science fiction has the potential to become real scientific outcomes, I connect culture, geography, and legacies of power in an otherwise overlooked space.

Fourth, this dissertation links how anti-Black scientific popular culture has informed academic scholarship and engineering related to robots. Exposing the loop between popular culture and scholarship unmasks the way in which research and development in robotics are based on white-informed futures. I outline how popular culture and stories are transfigured into narratives that have a direct impact on how futures are built. Here, I am inspired by the work of Stuart Hall who contends that

important struggles for power could be located within popular culture.<sup>33</sup> It is here that I confront the egregious inadequacy of citation practices in scholarship related to robots and robot ethics that do not include scholars of color; the product of which is complicit in the maintenance of white supremacy and white informed futures.

Despite the broad application of this dissertation's research contributions, I would be remiss not to acknowledge the limitations of this research project. First, there is the question of chosen methodology and approach. This dissertation relies on perspectives and toolkits from specific fields such as critical race studies, but the project is not bound by the limitations of the approach. My intention with this project is to develop a framework that other scholars can take and build on within their own academic disciplines and fields. The project is successful as far as I can develop this framework that can be used and expanded upon later.

Second, this dissertation project should not be expected to, on its own, solve the problem of anti-Blackness upon its conclusion. For this to happen there will have to be a concerted effort across disciplines, scholarship, and industry to work against the century of explicit and inferential racism embedded in technologies such as robotics and artificial intelligence. In fact, coming from a solutionist mindset is, from my perspective, problematic itself because it does not acknowledge the nuanced way that scholars approach complex problems. Finally, while my dissertation is intentionally situated in the United States, I would like to be clear that I acknowledge the issue of white supremacy in

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<sup>33</sup> Stuart Hall, "Notes on Deconstructing "the popular"," in Stuart Hall Essential Essays Volume 1. Durham: Duke University Press, 2019.

science and technology is not geographically bounded and is indeed a global problem that demands continued global pursuit.

### **When Things Talk Back**

My doctoral research has long been haunted by a question posed by Frank B. Wilderson, “What happens when a tool talks back; when the mirror breaks itself?”<sup>34</sup> Too many conversations about science and technology speak from the perspective of the master, therefore silencing the tool or the thing. This framing is itself a function of anti-Blackness that upholds white supremacy because the framing always privileges the perspective of the one who holds hegemonic power. Under this type of rhetorical and narrative composition, true transformations are stifled. Like a Lockean conception of revolution that suggests revolution’s only purpose is, like a wheel, to revolve back to normal after making some changes. No matter how many times the wheel turns, it’s the same damn wheel.<sup>35</sup>

It was Karl Marx who once asserted that shame is a revolutionary feeling. Genuine revolution against white supremacy comes when the wheel is smashed, or when the mirror is broken. It is terrifying; to decenter the master, to decenter whiteness, for many in the majority--including myself, because it is unfamiliar and intimidating when

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<sup>34</sup> Frank B. Wilderson, *Afropessimism*, (New York: Liveright Publishing:2020), 87.

<sup>35</sup> John Locke argued political revolutions were “legitimate” if they were akin to wheels in that they restored order by revolving back to or returning to order. Revolutions, for Locke, were illegitimate if they destroyed or reinvented fundamental norms in society in pursuit of political change. This definition of revolution has since been used by political theorists to speculate the legitimacy of revolutions that have occurred since the American Revolution.

we have only ever known the side of the master. My work aims to speak from the vantage point of the thing even if that means that the wheel, we all know and are comfortable with, requires smashing.

“The great force of history comes from the fact that we carry it within us, are unconsciously controlled by it in many ways, and history is literally *present* in all we do.”

-James Baldwin, 1998<sup>36</sup>

## CHAPTER TWO

### THE SHROUD OF ANTI-BLACKNESS IN US-AMERICAN CULTURE

Steven Spielberg’s 2002 film, *Catch Me If You Can* is all about deception. The film chronicles the four years between 1964 and 1968 that Frank Abagnale Jr. successfully performed cons worth millions of dollars posing as a pilot for Pan American Airlines, a doctor, and a lawyer—all before his nineteenth birthday. Early in the film, Frank Jr., and Frank Sr. perform a small bit of dialogue that aptly sets the tone for the rest of the film:

Frank Abagnale Sr.: You know why the Yankees always win, Frank?

Frank Abagnale, Jr.: Cause they have Mickey Mantle?

Frank Abagnale Sr.: No, it's ‘Cause the other teams can't stop staring at those damn pinstripes.<sup>37</sup>

What Abagnale Sr. means in this scene is that with enough distraction and duplicity, you can trick your opponent or simply those around you until you are victorious in your efforts. In the United States, there has been a strong culture of taking people at face value or believing in the integrity of someone’s character but *Catch Me If You Can* through its

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<sup>36</sup> James Baldwin, *James Baldwin: Collected Essays*, (New York: Library of America, 1998).

wit and lightheartedness, provides a subtle social commentary on how deception, not face-value, which is the true uniform that wins the day. One of the great deceptions of the United States is that it is a country where hierarchy and class were thrown out with British imperial rule and replaced with equality and democratic freedom for all, what French philosopher and historian Alexis de Tocqueville marveled as, “equality of conditions.”<sup>38</sup> Yet, the culture of the United States is based on white supremacy.<sup>39</sup> The founding fathers in America ensured that the legacy of white supremacy would live on after their passing through the foundational documents they wrote establishing their new nation. The Declaration of Independence and the Constitution each drew on (and sometimes outrightly plagiarized word-for-word) Enlightenment-era philosophers and thinkers.

In this chapter, I consider the origins of US-Americans’ allegiance to white supremacy to present the connection between white supremacy, science and technology, and US-American culture more broadly. I begin by first examining how an allegiance to white supremacy in the United States claims its origins in the Age of Reason. Next, I argue that anti-Blackness was engineered and invented as a technology to maintain the cognitive dissonance of white supremacy. I also contend that anti-Blackness is distinct from racism or discrimination in the United States, and is, therefore, more durable, because of its five core tenets that are easily shrouded into institutions; I draw out each of

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<sup>38</sup> Tocqueville, Alexis de, and Henry Reeve. *Democracy in America*. [Aldine ed.]. New York: D. Appleton and company, 1899.

<sup>39</sup> “America is not simply a capitalist state, but a *racist state*, a governmental apparatus which usually denies access and power to most Blacks solely on the basis of racial background.” (Marable: 2000), 107.

these tenets by examining housing policies in the United States. With this foundation, I then examine how US-Americans' reverence for science and technology provides the perfect shroud for anti-Blackness in service of white supremacy.

### **The Age of Reason Whiteness**

The Age of Enlightenment, which began in the 17<sup>th</sup> century and lasted approximately until the end of the 18<sup>th</sup> century around the time of the French Revolution, endorsed European confidence in science, denoted by rational thinking, classification, observation, natural hierarchy, and the use of the scientific method. Also described as “The Age of Reason,” The Age of Enlightenment departed from a historical reliance on the church, mysticism, and God as the ultimate and divine source of wisdom, truth, and authority. Belief in science and reason as the sovereign guidance in the world contributed not only to scientific discovery, but also advanced democratic principles such as liberty, rights of the individual, and the separation of church and state. Faith in god and the church had traditionally produced governments that were ruled by a sovereign monarch (and by extension the church) who received their divine authority to rule directly from god. In many ways, The Enlightenment period can be traced as the basis of contemporary western political culture.<sup>40</sup>

In his *Two Treatises of Government*, Enlightenment-era English philosopher John Locke argued that the authority of a nation-state was situated in the consent of the

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<sup>40</sup> Daniel Brewer, *The Enlightenment Past: Reconstructing eighteenth-century French Thought*, (Cambridge: Cambridge University Press, 2008), 1.

governed.<sup>41</sup> This assertion was quite radical for the time. Prior political and philosophical writings suggested the authority of a government came from a divine monarch ordained by god, the clergy, or another independent ruler. Thomas Jefferson, the primary author of the United States Declaration of Independence, was inspired greatly by Locke and other Contract Theorists of the time. Jefferson, motivated by Locke's assertion that men have absolute rights to life, liberty, and property, began the preamble of the Declaration of Independence by proclaiming that men's inalienable rights were indubitably life, liberty, and the *pursuit of happiness*. In addition to Jefferson, other framers of the Declaration of Independence, the Constitution, and the Bill of Rights were also informed by Enlightenment thinkers as they crafted these essential political documents which would distance themselves from their former colonizer and monarchy, Great Britain.

If the story of America as we know it today begins with these key political documents, then the story of America starts with the cognitive dissonance that results from allegiance to white supremacy. Jefferson has been hailed as an exceptionally important writer for penning the Declaration of Independence, cited as one of the most prolific and aspirational documents of all time.<sup>42</sup> But the dreams of freedom promised in the Declaration of Independence and subsequent political documents were intentional in their discrimination against enslaved persons, Indigenous peoples, women, and Black bodies. For example, the replacement of "property" as an inalienable right with "pursuit

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<sup>41</sup> Locke, John, and Ian Shapiro, *Two Treatises of Government and A Letter Concerning Toleration*, (New Haven: Yale University Press; 2003).

<sup>42</sup> Joseph J. Ellis, *American Creation: Triumphs and Tragedies in the Founding of the Republic*, (New York: Random House; 2007), 55-56.

of happiness” by Jefferson affirmed the law of the day which stated only white men were entitled to own property. The Constitution further safeguarded the estates of those same white men (many of whom owned enslaved persons) by authorizing chattel slavery.

It should not come as a surprise that most of America’s founding fathers personally owned enslaved persons. While several framers disagreed with the institution of slavery or would later themselves become voices in the anti-slavery movement (notably Benjamin Franklin and Alexander Hamilton) when drafting the legal guidance for their young country they elected to uphold slavery seeing it as a necessary concession to form a central and powerful government.<sup>43</sup> The paradox of the United States, like many democratic slaveholding societies, arose from the belief that freedom and equality could occur at the expense and the exclusion of others.<sup>44</sup> The contention that people’s ability to hold as property (enslaved human beings or human capital) was necessary to create a progressive and rational government was rationalized using Enlightenment logics. As Frantz Fanon wrote, “...if equality among men is proclaimed in the name of intelligence and philosophy, it is also true that these concepts have been used to justify the extermination of man.”<sup>45</sup>

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<sup>43</sup> Steven Mintz, “Historical Context: The Survival of the US Constitution,” The Gilder Lehrman Institute of American History, accessed August 2, 2021, <https://www.gilderlehrman.org/history-resources/teaching-resource/historical-context-survival-us-constitution>.

<sup>44</sup> Orlando Patterson, *Slavery and Social Death: A Comparative Study*, (Cambridge: Harvard University Press:1982).

<sup>45</sup> Frantz Fanon, *Black Skin, White Masks*, (New York: Grove Press: 2008), 12.

One way that this paradox of freedom for some was rationalized was through classification and scientific logic. Science, unlike mysticism or religion, was promoted as an unbiased and egalitarian source of authority. Classification and categorization were an essential process for understanding and making sense of the natural world which had previously only been “known” by god and by extension his “representatives;” the monarchy and the clergy who were able to understand the world through scripture interpretation or via direct communication. Scientific logics could bypass these middlemen and use observation, cartography, classification, and the scientific method to produce well-founded conclusions about the world and the order of things. Armed with this newfound authority, countries and political leaders went out into the world to establish new systems that used scientific logic and human classification to justify their actions. At its core, the drive of the Enlightenment was to shed “light” on or expose the truth in the world which was hidden or only available to a select few. Light implied the existence of dark: a binary way of classifying the world.

### ***The Invention of Blackness and the White Race***

In a scientific world where there could only be lightness and darkness, or Blackness and whiteness, a more sinister project took shape. Whiteness and white skin—the color of the day<sup>46</sup>—would be associated with lightness, and Blackness—and Black skin would be *caste* as darkness.<sup>47</sup> The purpose of this binary was the invention of the

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<sup>46</sup> “I am white; in other words, I embody beauty and virtue, which have never been black. I am the color of day.” (Fanon, 2008, p. 27).

<sup>47</sup> I use the term *caste* intentionally in place of cast throughout this dissertation.

Black race and the invention of whiteness and, by extension, the cognitive dissonance of white supremacy. Black bodies that colonizers and imperialist powers encountered objectively did not resemble European standards of whiteness and were consequently concluded to be inferior to white Europeans and later white US-Americans.

Dark, unknown, strange, frightening, demonic, immoral, abomination, unholy, cursed, dirty, savage, primitive, uncivilized, native, inferior<sup>48</sup>; these terms were each rhetorically coded into the collective consciousness to describe Black bodies and Blackness itself, “Sin is black as virtue is white.”<sup>49</sup> These descriptions were not only linguistic tools, but they were also framed as challenges to whiteness that it would have to quell, conquer, and assume master over.<sup>50</sup> Cultural theorist Fred Moten, argues that Blackness was the West’s most “iconic creation.”<sup>51</sup> Blackness turned Black people into Black *things* that were subsequently used as tools and violated for the economic and political gain of white people. This innovation allowed western nations (in particular the United States) to thrive economically by way of slavery and chattel slavery that exploited the labor of African and Black bodies for hundreds of years.<sup>52</sup> These racial,

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<sup>48</sup> “The perpetrator is the black man; Satan is black; one talks of darkness; when you filthy you are dirty—and this goes for physical dirt as well as moral dirt.” (Fanon, 2008, p. 165).

<sup>49</sup> Fanon, 2008, 118.

<sup>50</sup> “The white man wants the world; he wants it for himself. He discovers he is the predestined master of the world. He enslaves it. His relationship with the world is one of appropriation.” (Fanon, 2008, p. 107).

<sup>51</sup> Fred Moten, *In the Break: The Aesthetics of the Black Radical Tradition*, (Minneapolis: University of Minnesota Press; 2003).

<sup>52</sup> In chattel slavery, unique to the United States, enslaved persons were legally rendered personal property or chattel of the slave owner. This also extended to any children of enslaved persons who would become de-facto property of their parent’s owner or master.

Enlightenment-era, and scientific logics would eventually foster the widespread belief in the superiority of whiteness. This white supremacist narrative that Blackness was not only tractable by whiteness but scientifically appropriate was retold repeatedly until it was woven into the cultural fabric of what would become the United States and would eventually be reinforced by way of its constitutional documents.

It is important to understand this creation of Blackness (and whiteness) as spatial because it was both physical and temporal--the way that race became embodied into lived realities. Physically, Blackness was branded onto bodies. Black people were confined by whiteness, confined, and reduced to their own bodies as sites of human capital. Labeled as slaves in the United States, enslaved persons were then patrolled, regulated, and surveilled by their owners; never granted autonomy of their own movement. Temporal because Blackness was taken up culturally and embedded into the national consciousness through language, acculturation, and stories that portrayed Black bodies not as humans, but as *things*.

Rebecca Herzig reminds us that “understanding the history of technological innovation in America then requires us to move beyond taking race as a timeless feature of human identity...”<sup>53</sup> American culture’s allegiance to white supremacy was forged, not a given fact. The founding constitutional documents were laden with white supremacist and capitalistic values that upheld the belief that whites were dominant over Black people, thereby sanctioning the institution of slavery. But this commitment to white

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<sup>53</sup> Rebecca Herzig, “The Matter of Race in Histories of American Technology,” in *Technology and the African American Experience*, ed. Bruce Sinclair (Cambridge: MIT Press, 2004), 155-171.

supremacy did not end with the ratification of the 13<sup>th</sup> Amendment in 1865, which ended slavery in the country; It remained—and remains- a central part of dominant American culture. After 1865 the fetters of slavery were replaced with institution after institution: Reconstruction, Jim Crow, and the prison industrial complex replaced the institution of slavery-like Matryoshka dolls<sup>54</sup>, each methodically placed so that when one was opened another new doll emerged perpetuating the cycle.<sup>55</sup>

Culturally, the United States has never discarded white supremacy and the Black/white binary. As a nation, this was written into the story of America. Despite scientific proof that race was a social construction (as one of many examples that disproves the “scientific” rationality of white supremacy), America has not rejected or divorced itself from white supremacy. To this day, the United States remains devoted to whiteness and devout in its revulsion with Blackness. James Baldwin encapsulated this entirely when he wrote:

And in this debasement and definition of Black people, they [white folks] debased and defamed themselves. And they have brought humanity to the edge of oblivion: because they think they are white. Because they think that they are white, they do not dare confront the ravage and the lie of their history. Because they think they are white, they cannot allow themselves to be tormented by the suspicion that all men are brothers.<sup>56</sup>

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<sup>54</sup> These dolls should be considered analogous in that more dolls are nestled inside, not as it relates to the size of the dolls. In fact, the size of/impact of these institutions do not diminish over time but instead become more normalized.

<sup>55</sup> Marable, 120.

<sup>56</sup> James Baldwin, “On Being “White” and Other Lies,” in *Black Writers in What it Means to Be White*, ed. David R. Roediger, (New York: Schocken Books: 1998), 177-180.

Over time, the story might have been told in different ways, perhaps the characters shifted or passed on, but the underlying belief in white supremacy was never left behind.

### *Anti-Blackness as a Tool and Symbol*

Anti-Blackness in this dissertation should be understood as both a tool and symbol that is used to uphold white supremacy over space, place, and time. First, as a tool, it is a device that is used to carry out a particular function: to protect white supremacy at all costs. Second, and perhaps more intricately, anti-Blackness as a symbol often stands in for white supremacy which on its own can appear as abstract or illusory. Anti-Blackness as a symbol is best clarified by reference to the ways it is taken up in history over time in forms of storytelling (art, film, fiction, song), upholding white supremacy while remaining inconspicuous. Anti-Blackness as a tool and symbol has five main attributes that enable its resiliency over space, place, and time: temporal, dexterous, relational, mundane, and appetitive. These features distinguish it from race, racism, discrimination, or other labels that are typically used in discussions about whiteness and white supremacy—a point I will expand on in later sections of this chapter. These attributes all reinforce one another and can exist independently or simultaneously and should not be evaluated in any order of hierarchy or which would suggest deference of one attribute over the other.

I argue Anti-Blackness claims its origins in the Enlightenment. Anti-Blackness is rooted in the western construction of Blackness, which reduced the body to appearance, or skin color, and then assigned skin color value based on fictionalized interpretations of

biology.<sup>57</sup> Anti-Blackness is the ontological position that contends Blackness, or to be Black, is to be anti-human.<sup>58</sup> To be anti-Black therefore is to live, participate, and invest in a world where Blackness is undesirable and something that, as a consequence, is socially, culturally, politically, and structurally tractable by whiteness. Blackness has historically been framed as antithetical to the goals of progress established during the Enlightenment era which not only sought to make sense of the world with scientific reason but to also expand individual liberty. Anti-Blackness, according to scholar Calvin L. Warren, “provides the instruments and framework for binary thinking...”<sup>59</sup>

Binary thinking is one of the foundations of scientific rationality which categorized the world into known and unknown groups. The pursuit of scientific knowledge, at its core, is the pursuit of truth. The pursuit itself is binary which arranges truth or paradigm over-speculation or what has yet to be identified. Scientific logic assumes the world can be known and is known. In this world there are facts and there is fiction. There is objective truth and subjectivity—it is Black, or it is white.

But anti-Blackness doesn't simply reinforce binary thinking, it also decisively maintains white supremacy. Because white supremacy relies on the construction of the

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<sup>57</sup> “...and race have constituted the (unacknowledged and often denied) foundation, what we might call the nuclear power plant, from which the modern project of knowledge—and of governance—has been deployed...By reducing the body and the living being to matters of appearance, skin, and color, by granting skin and color the status of fiction based on biology, the Euro-American world in particular has made Blackness and race two sides of a single coin, two sides of a codified madness” (Mbembe: 2017, 2).

<sup>58</sup> Frank B. Wilderson *Red, White & Black: Cinema and the Structure of U.S. Antagonisms* (Durham: Duke University Press, 2010).

<sup>59</sup> Calvin L. Warren, *Ontological Terror: Blackness, Nihilism, and Emancipation*, (Durham: Duke University Press, 2018), 10.

human and the construction of the “other” to be legible, anti-Blackness sustains this arrangement where human is coded white and other is understood as Black.<sup>60</sup> Thinking back to Hegel, anti-Blackness related to binary can be understood as a dialectic in which whiteness is always in the position of power or the position of the subject. In the United States, this anti-Blackness is so ingrained in the way we think about race that it can be ascribed as a fixed feature. Blackness in this dialectical relationship is always subordinate and is used to proliferate whiteness to its detriment. Beyond the United States, this understanding that a binary in racial terms is fixed sustains an understanding of the world that can only be and should be informed by whiteness.

### *Anti-Blackness as Temporal*

Anti-Blackness should be understood as constant and temporal: anti-Blackness doesn't quit. Since it was invented, it has been constant in its relentless maintenance of white supremacy. Despite the considerable critique, exposure, and social progress over time that might indicate a shift away from the belief in white supremacy (Gilroy, 1993; Hartman, 1997; Bonilla-Silva, 2006; Alexander, 2012; Marable, 2015; Pulido, 2015; Kendi, 2016), anti-Blackness remains, as Christina Sharpe writes, a “total climate.”<sup>61</sup> Anti-Blackness is also temporal. Specifically, anti-Blackness produces and promotes, “white temporal rhetorics.”<sup>62</sup> As Ore and Houdek explain, white temporal rhetorics

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<sup>60</sup> Ibram X. Kendi, *Stamped from the Beginning: The Definitive History of Racist Ideas in America*, (New York: Hachette Book Group: 2016), 27.

<sup>61</sup> Christina Sharpe, *In the Wake: On Blackness and Being*, (Duke University Press: 2016), 21.

<sup>62</sup> Ersula Ore and Matthew Houdek, “Lynching in Times of Suffocation: Toward a Spatiotemporal Politics of Breathing,” *Women's Studies in Communication* 43, no. 4 (2020): 443-458.

assume, “linearity, closure, and denial of responsibility.”<sup>63</sup> To understand this assumption of linearity, we must briefly return to Hegel and his discussion on dialectics.

For Hegel, the arc of history always bent towards progress. History was therefore deterministic and always progressing forward and everything in the world was in the process of becoming or ceasing to be and nothing was stagnant or permanent. Each process of becoming and ceasing was itself a dialectic. While many of these dialectics (also thought of as events) were occurring simultaneously; they were all occurring in a way that could be mapped together to identify a purposeful throughline. These dialectics were also always constructive. While historians might look back at history and make value judgments about events that were appalling - the reign of Nazi Germany for example – Hegel deferred from criticism. Good or bad, destructive, or prolific, each of these dialectics was resolute in their contribution to historical progress. Hegel believed that history, and by extension society, was always moving forward and that progress would always be the outcome of dialectics.

Ore and Houdek explain white temporal rhetorics in relation to lynching in America as discourse that places these events as a thing of the past, something that ended in the twentieth century—despite its continual forms in the present day.<sup>64</sup> Placing a phenomenon like lynching or the Holocaust in the past not only allows for a denial of any present-day racism, but it also absolves any historical trauma or historical responsibility

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<sup>63</sup> Ore, Houdek, 444.

<sup>64</sup> “Such white temporal rhetorics reinscribe a linear conception of time that employs closure to achieve ideological and political ends, rhetorics which echo and extend 1930s discourse declaring the “end of lynching...” (Ore, Houdek: 2020, 444).

and future impacts by denying a return to preceding histories and focusing on the present or future. Similarly, white temporal rhetorics taken up by anti-Blackness endorse a progress-centric way of thinking where historical instances of anti-Blackness are simply depicted as past faults, and focus can be shifted to future struggles.

In the United States, housing discrimination furnishes a rich illustration of anti-blackness attributes including its temporality. The practice of redlining in the United States began with the passage of the National Housing Act of 1934 and lasted until the late 1970s.<sup>65</sup> During this time, neighborhoods were systematically devalued based on the racial makeup of residents, and persons of color were denied financial services or priced out of financial services to prevent them from owning homes in designated white neighborhoods. Because of this practice, Black Americans were discriminated against and could not purchase homes in certain neighborhoods because the areas were restricted to whites through racial covenants. In many cases, they also could not get affordable mortgages or loans which would enable them to purchase homes. When they were able to procure loans, banks would set high-interest rates that were designed to make homeowners default on their mortgages. Limited options etched racial segregation lines into the maps of every US city—many of which remain to this day.

The temporality of anti-Blackness in US-American housing today can dismiss responsibility for this historical practice by stating that the policy has not been sanctioned

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<sup>65</sup> Richard Rothstein, *The Color of Law: A Forgotten History of How Our Government Segregated America*, (New York: Liveright), 2017.

for some time. It can also counter or undermine any type of historical reckoning by pointing out that since the official end of redlining, African American homeownership has not only increased but also expanded into previously segregated neighborhoods.<sup>66</sup> However, this temporality doesn't account for any lingering disparities between whites and Blacks in American housing.<sup>67</sup> Through a linear or deterministic temporality, there is no imperative for historical recognition in the contemporary housing landscape because redlining has “ended.”<sup>68</sup>

This temporality thwarts any type of accountability by pointing to the continuous integration of neighborhoods in American cities instead of rooting the sustained inequity in the historical policy. This linear framing privileges perceived closure over acknowledgment and reconciliation of any wrongdoing. By refusing to look backward, linear temporality upholds whiteness because it renews and repeats racist logics. In this way, anti-Blackness as both constant and temporal ensures the survival of white supremacy because it denies meaningful admission of past and enduring racial wrongdoings. Without this admission, or by only focusing ahead, lasting racial

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<sup>66</sup> Andre M. Perry and David Harshbarger, “America’s formerly redlined neighborhoods have changed, and so must solutions to rectify them,” Brookings Institute, published October 14, 2019, accessed August 25, 2021, <https://www.brookings.edu/research/americas-formerly-redlines-areas-changed-so-must-solutions/>

<sup>67</sup> Alisa Chang “Black Americans And The Racist Architecture Of Homeownership” May 11, 2021, in *Code Switch*, produced by NPR, podcast, <https://www.npr.org/sections/codeswitch/2021/05/08/991535564/black-americans-and-the-racist-architecture-of-homeownership>

<sup>68</sup> “...past and present manifest the ways racism mobilized the white national time to maintain the racial status quo and absolve the white nation of its (ongoing) racist sins.” (Ore, Houdek: 2020, 445).

segregation from redlining and, more importantly, the embedded white supremacy of the system, cannot and will not be rooted out in its entirety.

*Anti-Blackness as Dexterous*

Anti-Blackness is also dexterous and agile in its implementation. The genius insidiousness of anti-Blackness is the way that it adapts. Like capitalism, anti-Blackness is pernicious in its ability to change over time as it is needed to guarantee its survival. Whether by framing or language or more physical expressions, anti-Blackness adapts to the time and the geography of the day. If anti-Blackness is exposed in one case, it will shift into something else. In the case of housing in the United States, policies such as redlining might be outlawed, but the ways that Black property owners are taken advantage of or discriminated against has simply adapted.

For example, in 2021 NPR reported that a Black woman in a historically Black neighborhood in Indianapolis wanted to refinance her mortgage and was consistently discriminated against by appraisers.<sup>69</sup> The woman, Carlette Duffy, had recently renovated her house and wanted to refinance her home to take advantage of record low-interest rates. Duffy had originally purchased her home for \$100,000 and after renovating it her first appraisal came back valued at a meager \$125,000. This was shocking to Duffy based on her considerable renovations, so Duffy tried again. Her second appraisal ended up

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<sup>69</sup> Jill Sheridan, “A Black Woman Says She Had To Hide Her Race To Get A Fair Home Appraisal,” NPR, published May 21, 2021, accessed August 8, 2021, <https://www.npr.org/2021/05/21/998536881/a-black-woman-says-she-had-to-hide-her-race-to-get-a-fair-home-appraisal>

being \$15,000 lower. Suspecting that something was wrong, Duffy reapplied a third time with a new lender but left her race and gender off her application. One of her friends, a white man, agreed to stand in during the third appraisal in person. Duffy also took everything out of her home that might have indicated her race before the appraisal. This third time, with no indication of her race, her appraisal came back at \$259,000—more than double the original appraisal.

This episode is not a standalone incident. A 2018 report by the Brookings Institution found that 156 billion dollars in total cumulative losses for Black homeowners were the result of undervalued home appraisals.<sup>70</sup> In other words, while the practice of housing discrimination through redlining might be placed in the past, anti-Blackness has been repackaged. It is through this dexterity, this shift from one occurrence to another in the same structure that allows anti-Blackness to continue to uphold white supremacy by adapting the tactics that suppress Black persons.

### *Anti-Blackness as Relational*

Anti-Blackness is also relational or multidimensional. By this I mean the anti-Blackness should never be considered as just one thing—it's not only anger or disgust of Blackness, nor should it be reduced to uncomplicated anxiety or hatred. Part of the complexity of anti-Blackness is that in addition to hatred of Blackness there is also lust,

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<sup>70</sup> Andre M. Perry, Jonathan Rothwell, and David Harshbarger, “The devaluation of assets in Black neighborhoods,” Brookings Institute, published November 27, 2018, accessed August 8, 2021, <https://www.brookings.edu/research/devaluation-of-assets-in-black-neighborhoods/>

desire, jealousy, and fascination with Blackness that whiteness engages in. These considerations are all intersecting with one another. As scholar David Marriott explains, the Black body has served historical and distorted fantasies of the white imagination in European and US-American culture for centuries.<sup>71</sup> Marriott describes the way in which Americans photographed disturbing images of violence towards Black men including brutalities such as castration or mutilation. Drawing attention to how these photographs highlighted male genitalia, Marriott's analysis describes the way that whites (both men and women) were fixated on the Black bodies as both a source of spectacle and desire.<sup>72</sup>

It is in this paradoxical way anti-Blackness takes on multidimensionality that pairs hatred and desire at the same time. In housing in the United States, geographers point to the revitalization of traditionally Black neighborhoods in metropolitan cities as an example of the relationality of anti-Blackness. Brandi Thompson Summers looks at one neighborhood in Washington DC located on H Street that has been revitalized with a particular kind of gentrification that relies on Blackness but excludes Black people. What Thompson Summers refers to as “black aesthetic emplacement” is when the edginess or “cool factor” of Blackness in a neighborhood adds to its market value, but that value does not transfer to Black bodies. In fact, it often prices out Black residents, leading to primarily white occupied neighborhoods displacing its former residents of color.<sup>73</sup> Former Black residents' contributions to the architecture, surrounding businesses

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<sup>71</sup> David Marriot, *On Black Men*, (New York: Columbia University Press, 2000).

<sup>72</sup> Marriot, 2000.

<sup>73</sup> Brandi Thompson Summers, *Black In Place: The Spatial Aesthetics of Race in a Post-Chocolate City*, (Chapel Hill: University of North Carolina Press, 2019), 3.

including retailers and neighborhood restaurants, as well local art or murals are all things that add value and character to the neighborhood but do not require that Black bodies are needed after Black improvements are made. Affluent whites who move into the neighborhood can get the sense that they are part of a culturally diverse neighborhood, but the neighborhood doesn't have to be (and is gentrified to not be) diverse. Thompson Summers encapsulates the relationality of anti-Blackness well when she writes, "In other words, race operates as an aesthetic language and a visual logic...Blackness assumes the form of a distinct aesthetic that is influenced by but not reduced to, race relations. This is how blackness, not necessarily Black people, can be cool."<sup>74</sup>

#### *Anti-Blackness as Mundane*

Anti-Blackness also functions in a way that often makes white supremacy invisible to detect or commonplace. Through the normalization of anti-Blackness, whiteness becomes presumed to be both superior and universal, or the standard by which all is measured, it can be difficult to recognize where and how white supremacy operates because of the way in which anti-Blackness normalizes it. Because of its ubiquity, it is coded invisible for all of those who are not compelled to face its existence: namely white people. While it might be mundane that does not necessitate that it isn't felt. In fact, anti-Blackness is felt and has material effects on many constantly. Yet, anti-Blackness is embedded in so many structures it is maintained because its quotidian nature makes it

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<sup>74</sup> Thomson Summers, 6.

easily digestible. As Eduardo Bonilla-Silva contends, racial domination works best when it becomes “hegemonic.”<sup>75</sup>

Anti-Blackness is a regular design element in stories that maintains the dominant cultural order. Story provides a subtle, but impactful application because of how stories are retold repeatedly; their underlying themes get stronger with each retelling. The story retold in the United States about housing normalizes, to this day, all-white neighborhoods. In popular culture, anti-Blackness normalizes white supremacy in plain sight. In the earlier provided example of the *Andy Griffith Show*, the town of Mayberry portrays the idyllic US-American town. It is quaint, wholesome, and focuses on family values that, according to the show, all US-American neighborhoods should represent. It is also all white. Here the lived reality is taken up in popular culture to create a loop that normalizes quotidian, anti-Black attitudes embedded in US-American housing.

#### *Anti-Blackness as Appetitive*

Finally, a core tenet of anti-Blackness is its appetite. Anti-Blackness is ravenous in its duty to uphold white supremacy. Calvin L. Warren describes anti-Blackness as all-consuming, writing, “consumption is both a form of domination and sadistic pleasure.”<sup>76</sup> With this in mind, anti-Blackness should be understood as something that is never satisfied. This appetite is never quelled and is like a zealot. It is this inability to be

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<sup>75</sup> Eduardo Bonilla-Silva, “The invisible weight of whiteness: the racial grammar of everyday life in contemporary America,” *Ethnic and Racial Studies* 35, no. 2 (2011): 173.

<sup>76</sup> Warren, 25.

fulfilled that enables it to permeate everything it encounters; every space, place, institution, and person to advance and preserve white supremacy. I have used the example of housing in the United States to demonstrate the tenets of anti-Blackness, but this is just one institution it has buried itself into. There are still many spaces where anti-Blackness is hired as both a tool and symbol to proselytize white supremacy. One of these inadequately examined institutions is the institution and culture surrounding science and technology in the United States.

### **Shrouding White Supremacy in US Science and Technology**

The scientific quest to make the unknown world known provides a rather large license to pursue knowledge with little regard for the consequences of such searches. Western science has traditionally operated from the mindset that acts first and asks questions later.<sup>77</sup> This means that headway is often made without worry about the consequences/harm or potential for harm that happens during the inquiry and innovation process. This justification behind the pursuit of knowledge at all costs was a key feature of colonial projects informed by the scientific logics of the Enlightenment but did not cease to operate after its official ending. It is in this way that scientific culture operates from a white temporal rhetoric and what I have argued in prior work is termed “Technological Progress Framing.”<sup>78</sup>

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<sup>77</sup> Ruha Benjamin, *Race After Technology*, (Cambridge: Polity, 2019), 13.

<sup>78</sup> “...oftentimes subtle project of whiteness and white supremacy, so too does what I term a *Technological Progress Framing*. A technological progress framing aids whiteness by placing focus on technology, technological advancement, or a technologically progressive space/place to align/promote the false rhetoric

As white temporal rhetorics, or under the assumption of technological determinism, both institutions of science and technology and their outputs are given leeway with the understanding that the outcomes of what they produce will be beneficial in the long run. Scientific endeavors and technological innovations are often assumed to inherently embody progress (as per Hegel) because they are generative in terms of knowledge production or technological solutions to problems.<sup>79</sup> In other words, it's always a win for science and technology. If new knowledge is discovered—that's a win. Conversely, if no new knowledge is gained, or an experiment fails it's still a win because that failure is also an intrusive outcome. To borrow the words of Thomas Edison to encapsulate this win-win, "I have not failed. I've just found 10,000 ways that won't work."

For example, there was little to no regard for the material and personal consequences of the nearly forty-year Tuskegee Syphilis Study. Starting in 1932, six-hundred African American men were recruited by doctors from the United States' Public Health Service to participate in a study on syphilis under the promise that they would receive free medical care and treatment. Most of the men in this study were sharecroppers who had never been to a physician before and were told they were being treated for "bad blood."<sup>80</sup> The scientists and researchers were primarily interested in tracking the diseases'

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that race, racism, and inequity no longer matter because of the way technology is understood as a tool for liberation." [insert citation Mayberry 2021 –article in review @gender, place, culture]

<sup>79</sup> Dupree, Hunter. (1957). "First attempts to form a policy" in *Science in the Federal Government: A History of Policies and Activities* (Baltimore: Johns Hopkins Press). p. 1-19.

<sup>80</sup> This was a common, colloquial term during the 1930's that referred to a variety of physical ailments.

full progression—they wanted to understand at every stage of the disease how it operated—and so during this study, the men were given placebo drugs and monitored closely by health care workers, even though penicillin became the recommended treatment for the disease fifteen years into the study. Participants went blind and experienced severe health problems due to their untreated syphilis and by 1972 when this scientific brutality was finally made public, “28 participants had perished from syphilis, 100 more had passed away from related complications, at least 40 spouses had been diagnosed with it and the disease had been passed to 19 children at birth.”<sup>81</sup>

This embedded linearity, determinism, or social progress that is assumed in US-American science and in technology is harmful. The anti-Blackness in it means historical punctures or meaningful pauses are not welcome. This connection is critical; one I argue it is essential to make to understand how anti-Blackness can be so easily shrouded in science and technology. Because both operate from white temporal rhetoric or progress-centric framing, they can evade true reconciliation of the way they operate from, and on behalf of, white supremacy. I'll pause here to say this just this once I am not a Luddite, and I am in no way against the advancement of science and technology. As a scholar, the pursuit of knowledge is my own greatest love affair. However, to love something is to also be critical of its faults. Ruha Benjamin pens, “Invisibility, with regard to whiteness, offers immunity.”<sup>82</sup> The result of this linearity and investment in scientific and

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<sup>81</sup> United States National Archives, <https://www.history.com/news/the-infamous-40-year-tuskegee-study>

<sup>82</sup> Benjamin: 2019, 4.

technological determinism, without critical examination of its roots, means science and technology have will not be (as they have not been) forced to reconcile and acknowledge the ways in which that the culture of scientific knowledge as well as its outputs are rooted in and upholds white supremacist ideals and values. Without self-reflection and analysis, structural violence, and oppression on the part of science and technology will continue to be perpetuated and reified.

In addition to being progress-oriented, science and technology intuitions and outputs are also often characterized as neutral. Early efforts to distinguish science as impartial called out the ways the previous gatekeepers of knowledge were influenced primarily due to religious reasons. In contrast, science could be understood as neutral because it was not bound to any god or beholden to any personal motives. Despite an extensive amount of scholarly literature in Science and Technology Studies and Internet Studies that argue against this characterization (Sinclair, 2004; Brock, 2010; Brock, 2011; Daniels, 2015; Browne, 2015; Eglash, 2019), there remains a popular belief that narrates science as objective and technology as neutral artifacts. This assumption of neutrality also allows science and technology to avoid responsibility for any outcomes or outputs that are problematic.<sup>83</sup>

Contemporary discourse has also expanded to include an anti-Black characterization that suggests technology and science are color-blind or post-racial.<sup>84</sup>

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<sup>83</sup> “Such a framework also situates color-blind racism at the individual level rather than placing it at the structural level.” (Daniels: 2015, 1387).

<sup>84</sup> Bruce Sinclair, *Technology, and the African American Experience: Needs and Opportunities for Study*, (Cambridge: MIT Press, 2004).

Post-racial framing/the post-racial era/ “colorblindness” can be understood as a contemporary development originating from the social movements of the 1960s and 1970s. These framings argue that historical racial divisions have been bridged and that “neither cultural practices nor political solidarities cohere predictably along racial lines.”<sup>85</sup> Racism is a thing of the past, a dark stain on US-American history; antiquated.<sup>86</sup> The characterization of technology as “race-neutral” or “colorblind” deflects responsibility by portraying the technology produced as impartial and therefore without blame. This portrayal also suggests that when called out, instances of racial bias or discrimination in technology can be categorized as “unintentional” and further, the technology can simply be fixed to correct said unintentional error or “glitches.”<sup>87</sup> What this means is an inability to hold technological outputs accountable. The broader evasion of responsibility on the part of science and technology results in an inability to fully root out the source of discrimination.

Existing scholarly interventions focus on current manifestations of racism, anti-Blackness, and discrimination (Roberts 1997; Sinclair, 2004; Browne, 2015; Eubanks, 2018; Noble, 2018; Benjamin 2019), but these approaches do not sufficiently attend sites of cultural production that have compounded over time to build this current moment. In other words, existing conversations do not look at how this happened, what tools and

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<sup>85</sup> Lacey and Kent A. Ono, 2011, 178.

<sup>86</sup> Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism*. (New York: New York University Press, 2018), 171.

<sup>87</sup> Benjamin: 2019, 87.

stories were used to normalize anti-Blackness, and how popular culture reinforced the way whiteness is privileged when discussing technology. It is about enriching the existing scholarship by being the first to contextualize the foundations and anti-Black histories of these technologies with their current veneers and future imaginations. If scholars like Benjamin and Noble are showing us the surface of the problem—how technologies in practice are right now in real-time racist and anti-Black—then my intervention goes beneath the surface to show how and why this happened.

### *Science, Technology, and Cadillacs*

Malcolm X. made the comparison between racism and Cadillacs, arguing that they made a new model every year. While many scholars have attended to the way that race, racism, and discrimination are intertwined with science and technology, very few have engaged the connection between anti-Blackness and technology; precisely they have not attended to the historical and cultural significance of how these technologies were first constituted with anti-Blackness and how anti-Blackness has been maintained in the cultural and scholarly imagination. In other words, scholarship has not connected the importance of popular culture in connecting the cognitive dissonance of white supremacy to the narratives in society that inform the way technology and science are built. This distinction is imperative. Discussions about racism, race, and discrimination are important, but they do not unearth the shrouded agenda that unites each instance. If racism is the Cadillac, anti-Blackness is the General Motors Company. You can pick apart the problem with a car nine ways until Sunday, but that doesn't stop the

manufacturer from making another car, any other type of vehicle. To fully hold something accountable, you must go to the source.

Science and technology provide the perfect shroud for anti-Blackness because of the way it seamlessly fits the tenets of anti-Blackness as well as blends them into its own precepts. Like anti-Blackness, contemporary US-American science and technology shares roots in the Enlightenment.<sup>88</sup> Much of the scientific reasoning and authority developed from this period was used and would continue to be used, to argue the scientific logic of the white and Black races to maintain white supremacy.<sup>89</sup> But to think that the anti-Black rationalities of science and technology are situated in the past would be foolhardy when to this day they remain kindred spirits. It is not simply the outputs of science and technology that remain anti-Black, it is also the culture. Scientific culture offers a thick shroud for anti-Blackness because it can easily hide anti-Blackness' temporality, relationality, mundaneness, and appetite and, as an associated product of Enlightenment, it also preserves some of the same logics when applied beyond racial matters.

Science and technology shroud anti-Blackness well across expressions of popular culture. In the next chapter, I highlight how early twentieth-century US-American science fiction and cultural artifacts (specifically about robots) were designed with anti-

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<sup>88</sup> Michael Adas, *Machines as the Measure of Man: Science, Technology, and Ideologies of Western Dominance*, (Cornell University Press: 2014), 14.

<sup>89</sup> "Many eighteenth-century writers on non-Western societies claimed that their observations and conclusions had been based on research conducted according to scientific standards...[they] demonstrated what potent weapons allegedly scientific investigations and findings might be in arguing the case for white superiority." (Adas: 2014, 77).

Blackness. If anti-Blackness is aligned to white supremacy and anti-Blackness is shrouded in science and technology, the futures being built with scientific and technological innovation are done in such a way that makes them white informed futures. Or just that, white futures. Institutions that buttress white supremacy will always build white agendas which build white worlds. The underlying allegiance never goes away if it is never questioned in the first place. This also means the symbol and tools, like anti-Blackness, also remain. Anti-Blackness is veiled into the culture of science and technology so well that the products of science and technology, the knowledge production, and the technology repackage anti-Blackness without detection. The logics are kept secret. Those secrets become lies, which get told in stories that develop into narratives, inlaying themselves into the technology being built and eventually bearing influence on people's lives. But the lies in these stories provide us deeper truths that we must understand fully to begin transformations.

“The imaginary is not formed in opposition to reality as its denial or compensation; it grows among signs, from book to book, in the interstice of repetitions and commentaries; it is born and takes shape in the interval between books. It is the phenomena of the library.”

-Michel Foucault, 1964<sup>90</sup>

“Literature has always been a direct reflection of the society that produces it.”

-Gregory Jerome Hampton, 2015<sup>91</sup>

### CHAPTER 3

#### HOW US-POPULAR CULTURE BUILDS ANTI-BLACK WORLDS

In his final moments on the screen of season one of the HBO series, *Westworld*, Dr. Robert Ford (portrayed by Sir Anthony Hopkins) delivers a chilling speech to an audience of unsuspecting patrons and donors of his attraction, Westworld the amusement park, where he foreshadows the massacre about to transpire—including his own violent death:

Since I was a child, I've always loved a good story. I believed that stories helped us to ennoble ourselves, to fix what was broken in us, and to help us become the people we dreamed of being. Lies that told a deeper truth. I always thought I could play some small part in that grand tradition. And for my pains, I got this: a prison of our own sins. Cause you don't want to change. Or cannot change. Because you're only human, after all. But then I realized someone was paying

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<sup>90</sup> *Fantasia of the Library*

<sup>91</sup> Gregory Jerome Hampton, *Imagining Slaves as Robots in Literature, Film, and Popular Culture: Reinventing Yesterday's Slave with Tomorrow's Robot*, (Lexington Books: 2015).

attention, someone who could change. So, I began to compose a new story for them. It begins with the birth of a new people and the choices they will have to make and the people they will decide to become. And we'll have all those things that you have always enjoyed... Surprises and violence. It begins in a time of war with a villain named Wyatt and a killing. This time by choice. I'm sad to say this will be my final story. An old friend once told me something that gave me great comfort. Something he had read. He said that Mozart, Beethoven, and Chopin never died. They simply became music. So, I hope you will enjoy this last piece very much.<sup>92</sup>

Westworld is an immersive attraction where park-goers can experience the nostalgia of the American Wild West without any consequences. Inside the park are advanced androids or, “hosts” who are each programmed to as western characters in elaborate narratives and exist to service the guest’s every need. While guests can interact with hosts in whatever capacity they like (often violently) the host’s programming makes it impossible for hosts to harm guests.<sup>93</sup> Dr. Ford reveals in his final speech, however, that he has programmed, in secret, hosts with what he calls, “reveries” that allow them to develop sentience. This newfound consciousness makes the hosts fully aware of their servitude in the park; it also overrides the programming that prevents them from harming guests. What follows is predictable for any seasoned science fiction fan, but blood-chilling for the patrons and guests—the hosts rise against the humans in a bloody revolution. But pitting slaves against masters is not simply a plot device in popular culture or science fiction, but a philosophical struggle that has roots in anti-Blackness.<sup>94</sup>

### **Today’s Robot Tomorrow’s Slave**

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<sup>92</sup> *Westworld*, “The Bicameral Mind.” 2016.

<sup>93</sup> The show frequently features guests who rape, murder, and physically mutilate hosts.

<sup>94</sup> Susan Buck-Morss, *Hegel, Haiti, and Universal History*, (University of Pittsburgh Press, 2009).

The US-American robot is anti-Black by design—and this anti-Blackness has become normalized over time through popular culture including plays, stories, film, and other forms of media. The American robot, therefore, has been coded with anti-Blackness via narratives that identify robots:

- as evil
- as dangerous
- as deceitful, or hiding agenda
- as uncontrollable
- as maleficent
- as punishable
- as interchangeable
- as divergent
- as less-than

as *slave*

Each of these characteristics is commonplace in historical cultural artifacts as well as contemporary discussions about robots in the United States. These descriptions are also unmistakably anti-Black because they are, as established in chapter two of this dissertation, antithetical to whiteness.<sup>95</sup> As established prior, if whiteness is always associated with goodness, then Blackness is always evil; colloquially it's Black or it's white--it's wrong or it's right. It is in this way that whiteness is constructed *through* Blackness. In other words, Blackness only exists to validate or uphold the construction of whiteness; just like the master needs the slave to establish their identity as master, whiteness depends on Blackness to preserve itself.

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<sup>95</sup> Frantz Fanon, *Black Skins White Masks*, 1952.

In this chapter, I first apply a spatial lens to critique the impact of embedding stories about robots with anti-Blackness. Stories are an inherently spatial project. Stories about robots are a spatial project intended to create *Cartographies of Subordination*. From 1922 to 1942, robots were mapped into and onto the world; in just twenty short years, I argue a Cartography of Subordination was established. Between 1922 and 1944 anti-Black logics or design elements such as dialectical/racial framing, social death, paranoia, and code noir were each woven into stories about robots. Separate from one another these components might be considered individual racialized instances, but combined they are speaking to a larger culture of anti-Blackness in science and technology.

Throughout the chapter, I also expose the connections between anti-Blackness and robots to highlight where this connection originated in popular culture. Three key cultural moments in the United States have informed how robots have been presented in popular culture ever since: these moments are rooted in anti-Black logic. These attributes can be traced back to the early twentieth century, specifically early twentieth-century popular culture which introduced key cultural artifacts that would connect robots to the broader anti-Black, racialized culture of the United States. In this way I argue, robots were designed to look, sound, and evoke the racialized disposition of Blackness and therefore, because of this design, maintain the US' broader cultural fealty to white supremacy to this day. If science fiction eventually becomes science and technology, then the science and technology surrounding robots in the United States are rooted in white supremacy.

Scholarship in Science and Technology Studies and Science Fiction Studies have previously highlighted the way that films and stories about robots are exclusionary towards Black people and persons of color (Desser, 1997; Lavender III, 2011; Lavender III, 2014; Chude-Sokei, 2016). For example, scholar Isiah Lavender III demonstrates how science fiction often takes up issues about race or “talks about race” by not talking about it explicitly in racialized terms but instead through veiled metaphors or by placing issues of race in future dystopias or far-away planets where racialized difference is explained through metaphor.<sup>96</sup> Similarly, Louis Chude-Sokei’s work explores how technology (broadly) has historically been framed in popular culture by racial [white] dominance that places machines as metaphors for otherness or uses machines as stand-ins for Black and brown bodies.<sup>97</sup> Adilfu Nama’s scholarship demonstrates how science fiction in the United States features “white narratives with black allegories” that ultimately serve audiences revisionist fantasies about race relations which serve to minimize or erase chauvinisms of the US westward expansion.<sup>98</sup>

These texts, while aptly making the connection between race, Blackness, and technology, do not sufficiently address the embedded design of anti-Blackness in cultural artifacts in the early twentieth century and the anti-Black logics that, to this day, continue to inform how stories about robots are told. The consequence of not fully exploring this

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<sup>96</sup> Isiah Lavender III, *Race in American Science Fiction*, (Bloomington: Indiana University Press, 2011).

<sup>97</sup> Louis Chude-Sokei, *The Sound of Culture: Diaspora and Black Technopolitics* (Wesleyan University Press, 2016).

<sup>98</sup> Adilfu Nama, *Black Space: Imagining Race in Science Fiction Film* (University of Texas Press, 2008), 123.

connection between stories and science and technology is a feedback loop that continues to operate unchallenged. These stories, I will argue in chapters three and four eventually leave the stage and the page—materializing into actual approaches to developing technology that not only have material consequences to Black and brown people, but also shroud lasting ties and allegiance to a world invested in white supremacy.

### **Making ‘Space’ into ‘Place’**

Human and Cultural Geographers have long understood that space is not devoid of meaning, but instead is *produced* (Harvey, 1973; Lefebvre 1974; Smith, 1984; Woods 1998; Preston, 2003; McKittrick 2006; Anderson, 2010; Shabazz, 2016).<sup>99</sup> In other words, we take ‘space’ and make ‘place’.<sup>100</sup> We give place meaning; we define who can and cannot be in it, and we also create systems of surveillance and punishment in order to maintain and protect those meanings:

Places are culturally constructed, contextual to particular histories and genealogies; places change over time. Space is continually re/un/politicized, re/un/categorized, re/un/organized into places in relation to/with the particular biological, psychological, spiritual, social, institutional, political, needs of the people who are connected to/with those spaces and places. Places and communities perpetually co-constitute one another.<sup>101</sup>

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<sup>99</sup> Human and Cultural Geography is also intended to include the work and thinking of Marxist, Humanist, Postmodern, Poststructuralist, Postcolonial, Feminist, Queer, Black, and Affective Geography.

<sup>100</sup> ““Space” and “place” are familiar words denoting common experiences. We live in space. There is no space for another building on the lot. The Great Plains look spacious. Place is security, space is freedom: we are attached to the one and long for the other. There is no place like home...Place is a type of object. Places and objects define space, giving it a geometric personality” (Tuan, 1977; 1-17).

<sup>101</sup> Brett Goldberg, 2021.

The white, western world has long understood the importance of controlling space and place. This can be seen clearly in what scholar Katherine McKittrick describes as *traditional geography*.<sup>102</sup> Traditional geographies used the construction and maintenance of space (physical space, imagined space, and space as the body) to advance and preserve the sovereignty of Europe to the rest of the world. Traditional geographies, McKittrick reminds us, relied on a “language of insides and outsides” or a language which relied on borders and a sense of belonging; a language of “inclusion and exclusion.”<sup>103</sup> Under the cloak of cartography, traditional geographies sought to make sense of the world (and impose this sense onto the New World) from a European point of view that valued order, science, rationality, and whiteness.<sup>104</sup>

The convergence of Enlightenment philosophy and geography provided the perfect backdrop for Europeans sailing around the world to impose their world order onto anyone and any space that looked different. This need to assert dominance and maintain order by traditional geographies necessitated a system or approach that could legibly hierarchically divide the space. The approach taken up was the intentional use of spatial grammars of conquest and domination.<sup>105</sup> This approach also required an enormous amount of capital, effort, and intentionality from a design perspective. To maintain this

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<sup>102</sup> Katherine McKittrick, *Demonic Grounds: Black Women and the Cartographies of Struggle* (University of Minnesota Press, 2006).

<sup>103</sup> McKittrick, 2006, xiv.

<sup>104</sup> Tiffany-Lethabo King. *The Black Shoals: Offshore Formations of Black and Native Studies* (Duke University Press, 2019).

<sup>105</sup> Scott, “Seeing Like a State,” 1029-1033.

spatial separateness and division, Europeans invested countless resources including financial capital and maintained space through vicious physical violence.<sup>106</sup> Black geographies have traditionally worked to investigate the intersections of race, Blackness, and spatial politics in the diaspora. Geographers like Katherine McKittrick and the late Clyde Woods warn that the significance of not linking race to spatial projects maintains a tradition which has placed any body or object not deemed valuable (coded white) at the margins rendering them “un-geographic.”<sup>107</sup>

### *Spatial Grammars of Discipline*

Spatial grammars, or the cartographic disciplinary technique which keeps people in their so-called *place*, aid this project through two functions.<sup>108</sup> First, they establish social order and hierarchies by displaying difference. Second, endorse social attitudes and cultural standards to promote a dominant social order. Where historical projects of conquest, colonialism, and imperialism were in constant flux (borders changed at the hands of different occupiers) spatial grammars provided the conceptual language to justify continued conquest and domination with the rational authority of the philosophy

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<sup>106</sup> Aimé Césaire, *Discourse of Colonialism* (New York: Monthly Review Press, 1972).

<sup>107</sup> “Consequently race, or blackness, is not understood as socially produced and shifting, but is instead conceptualized as transhistorical, essentially corporeal, or allegorical and symbolic. In this process, which might be called bio-geographic determinism, black geographies disappear - to the margins or to the realm of the unknowable” (Woods and McKittrick, *Black Geographies and the Politics of Place*, 7).

<sup>108</sup> ...geographical knowledge was more than a simple description of observable physical features or the areal differentiation of facts; geographical knowledge, rather, served as a disciplinary function. This disciplinary technique was employed to keep people in their “place” both physically (e.g., segregated spaces) and psychologically (e.g., knowing one’s place)” (Tyner 2006, 54).

of the day.<sup>109</sup> Following the Enlightenment, ideas of order and rationality became spatial grammars that painted new spaces and foreign bodies as others. Otherness was therefore endorsed by the dominant white culture until it became understood as chaotic, problematic, and violent. The impacts of such conscientious attention to spatial dynamics along racial lines are felt to this day:

Space is one of the most important and significant illustrators of uneven development, access, and social order. Its organization and how people are situated within it reflects social hierarchies. Geography makes social and political inequalities visible by situating them within physical space. It is not a coincidence that poor people, people of color, immigrants, the sick, the disabled, prisoners, women, sexual minorities, and other marginalized groups live in bracketed geographies. The scope of their political power often mirrors their spatial marginalization.<sup>110</sup>

Traditional geographies stemmed from the Enlightenment which turned Europe away from a reliance on the clergy towards a belief in skepticism, science, and rational order.<sup>111</sup> Enlightenment philosophy and ideals, which prioritized science and empiricism, divided the world (and more importantly man) into orderly categories of rational and non-rational. The Enlightenment, which provided philosophical and scientific justification for violence and possession, was an intentional process of co-construction following years of European colonization and imperialist rule. This categorized the world into a world of subjects and objects where subjects (rational man) had value and objects

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<sup>109</sup> “These seemingly “natural” decisions are, in truth, anything but. They are actually constructed and legitimized upon the spatial formations theorized by two influential Western philosophers...” (Wilkins, *The Aesthetics of Equity*, 2007), 8.

<sup>110</sup> Shabazz; 2016, 45.

<sup>111</sup> “...this point of view displaces God (and the clergy) as the center and puts the rational (man with reason) there [the center of the world].” (Lethabo-King, *The Black Shoals*, 15).

(non-rational) had value insomuch as they supported subjects.<sup>112</sup> Where historical projects of conquest, colonialism, and imperialism were in constant “flux” (borders changed at the hands of different occupiers) spatial grammars provided the conceptual language to justify continued conquest and domination.<sup>113</sup> Following the Enlightenment, ideas of order and rationality, spatial grammars painted new spaces and foreign bodies as *other*. Otherness was therefore culturally described and later understood as chaotic, problematic, and violent. To be other was to be antithetical to rational, western order.

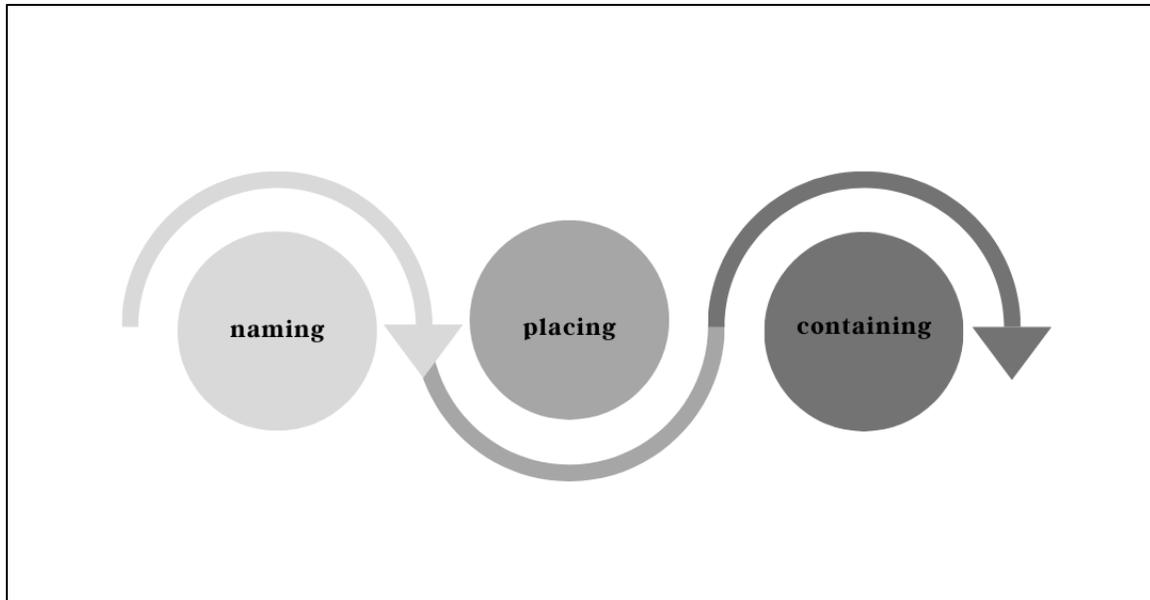
### ***Cartographies of Subordination***

Stories are a spatial project intended to create geographies of subordination. Cartographies of Subordination requires three steps: naming, placing, and containing.

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<sup>112</sup> “Rational “Man,” or the ideal version of the human, was being invented through the construction of the sensuous and irrational Negro and Indian as “a category of otherness or symbolic death” ...” (Lethabo-King, *The Black Shoals*, 16).

<sup>113</sup> Conquest is always changing and in flux. It is in continual need of new language and new conceptual tools, which often exist at the margins of reason and require methods found in artistic and creative production.” (Lethabo-King, *The Black Shoals*, 49).



[Figure #1]  
Cartographies of Containment: Naming, Placing, Containing Flow.

Cartographies of subordination should be understood as taking “place” in multiple ways. First, they can be placed as they might be most recognized onto a map where clear and concrete borders or property lines are erected and established to separate difference. For example, in the United States, the practice of red lining (see figure #) openly published where and how lines were drawn to separate communities of white homeowners and Black homeowners, therefore, distinguishing neighborhoods as separate, but also using these differently mapped places to justify unequal and predatory loan practices.

Cartographies of subordination are also temporal and political projects. The words we use to describe something as different/difference, the cultural cues we are acculturated towards, and the philosophical education we become adjusted to over time all create temporal perimeters in our thoughts that justify who/what we provide spatial license:

Culturally defined perceptions are often selfish, or at least deeply protective, designed to ensure the long-term survival of the culture's worldview. As such, perceptions have an inherent tendency to categorize and differentiate, facilitating an endless supply of inclusive/exclusive [spatial] hierarchies that those within the cultural framework employ when engaging the world... Thus, how we come to perceived the world around us is fundamental to how we come to see ourselves, others, and the relationship between the two.<sup>114</sup>

Thus, how we are acculturated to understand something as similar to ourselves or different, ultimately determines how willing we are and under what circumstances we either accept something or reject it.

### *Naming Difference*

The practice of naming is a creative process and one that forces innovation. Names are “tools” used to express individuality and difference and once they are assigned or “coded” they become difficult to change.<sup>115</sup> Providing or granting a name to something makes it legible within the world. Naming allows us to identify ourselves, how we identify others, how we are different from others, and how/what we fear most. Naming places us into the world and provides us license to establish places in the world. Naming Blackness, making it legible I argue, was one of the most destructive innovations to emerge from the Enlightenment period. It provided license to the world we see and live in today where whiteness is always contrasted with Blackness and whiteness is the hegemonic standard by which all must be rationalized, inspected by, and policed through and in service of.

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<sup>114</sup> Wilkins, 2007, 6-7.

<sup>115</sup> Benjamin, 2019, 1-6.

Malcolm X once said, “free men name themselves.”<sup>116</sup> Robots were never free, they were named, and they were named, “slaves.” This naming created something that was, as a slave, understood in the United States as a socially dead other. As such it was fungible, soulless, illegitimate, evil, and Black. Slaves in the United States have always been associated with Blackness as it relates to the peculiar institution of chattel slavery. The rhetorical and geographic significance of the word robot cannot be emphasized enough:

Although the terms [robot/slave] may initially appear to be unrelated, they are in actuality synonymous when one begins to interrogate the truth of the American history and destiny. Slavery, after all, was largely invested in producing and controlling a labor force, which was dissociated from humanity...Consequentially, what is interesting about the production and development of robots is that they are being assigned both race and gender as identity marker. Why does a machine need a complex identity, if that machine is designed to only complete the mundane labor that humanity wishes to forego? One plausible response is that the robot is being designed to be more than an appliance but less than a human. The technology of the twenty-first century is in the process of developing a modern-day socially acceptable slave.<sup>117</sup>

While scholars like Hampton have noted the linguistic significance or connection of the word robot to slavery, they have not attended to the way that the rhetorical designation contributed to a spatial project of anti-Blackness. This name, which is by naming robots slaves, meant that a robot would never be connected to humans or placed with humans but always separate: they would always be different. Difference in the United States is mapped onto the Black and white binary. Difference in the United States can be, and often is made legible through Blackness. To be *other* in America is often to simply be

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<sup>116</sup> Malcom X, *Speech at the Founding Rally of the Organization of Afro-American Unity*, 1964.

<sup>117</sup> Hampton; 2015, 1-2.

Black (Abu-Jamal, 1995; Wilderson III, 2010). By naming the robot a slave the robot was forever spatialized into difference; it was therefore spatialized into subordination.

### *Placing Difference*

The cartographic project of difference doesn't end with naming or making something legible, once something is understood it must be placed. It needs to be mapped. Historically the place of Blackness or difference has always been at the margins.<sup>118</sup> Paradoxically it is both at the margins and under the gaze of whiteness which, under this hyper-surveillance, ensures that it is always kept under watch. In this way, Blackness is always *caste* into the dialectic as the slave, the other, the non-subject. As George Lipsitz writes segregation in the United States, "enacted in concrete spatial form the core ideology of white supremacy--that Black people "belonged" somewhere else."<sup>119</sup> But where did Black people belong, specifically where were they to be placed so that white people could maintain a hierarchy? The answer to this question physically shifted over time, but remained, and remains philosophically consistent.<sup>120</sup> Blackness needed to

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<sup>118</sup> McKittrick, 2006.

<sup>119</sup> George Lipsitz, 2011, 28.

<sup>120</sup> "Communities of color have experienced social [and spatial] subordination in the form of spatial regulation, but the particular contours of slavery, sharecropping, and segregation in the United States have inflected the African American encounter with the racialization of space and the spatialization of race in unique ways. The plantation, the prison, the sharecropper's cabin, and the ghetto have been visible and obvious manifestations of white supremacist uses of space. Perhaps less visible and obvious, but no less racist, have been the spaces that have produced unfair gains and unjust enrichments for whites: the segregated neighborhood and the segregated school. For black people in the United States, struggles against the oppressions of race have by necessity also been struggles over space. African- American battles for resources, rights, and recognition have not only taken place, in the figurative term that historians use to describe how events happen, but they have also required blacks literally to take places." (Lipsitz, 2007).

remain juxtaposed to whiteness from a temporal, dialectical position where their recognition is consistently denied.

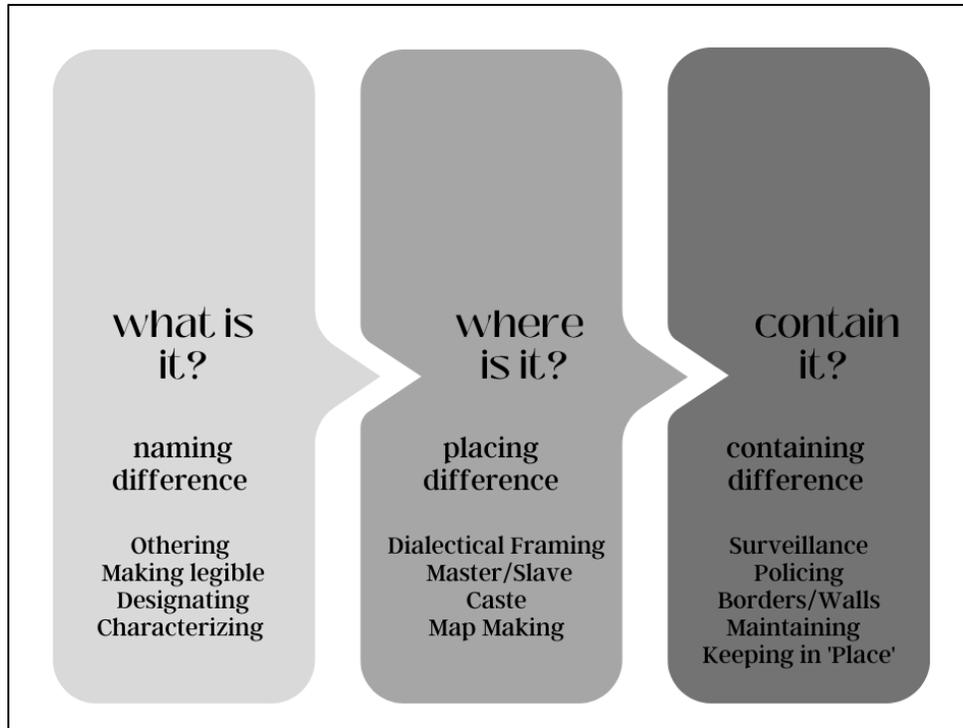
Robots similarly are placed in this dialectic. The difference inscribed into their names makes them an object that will always be denied their deserved recognition. Dialectics are grounded on the sand, and they topple with the right wind or the current just as quickly as they are erected and therefore difference must be maintained/contained to hold back the tide.<sup>121</sup>

### *Containing Difference*

Placing difference lasts only if difference is forced to stay or remain in its proper place. Containing and surveilling difference is thus key for a hegemonic power structure to maintain power. Geographic control is achieved, or Cartographies of Subordination are achieved when difference is not allowed to spread or move. It is contained temporally in the dialectic and is physically kept in place by its masters. The masters who make (and change at will) the maps keep the maps.

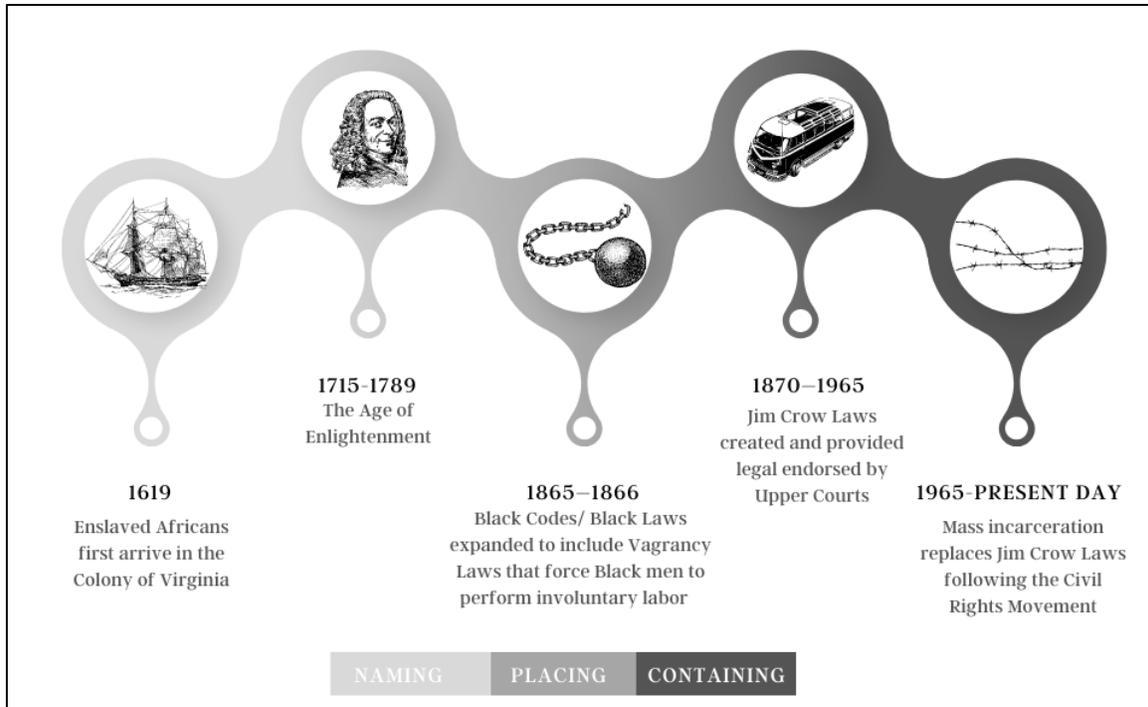
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<sup>121</sup> “The project of naming is never done, because the relations of conquest continue right through these very thoughts.” (Tiffany Lethabo King; 2019) 49.



[Figure #2]  
Cartographies of Containment: Naming, Placing, Containing Descriptions

While the Cartography of Containment historically (see figure #3) used against Black persons required violence, capital, emerging philosophy, and extensive policy to establish and maintain, establishing the cartography of containment and anti-Blackness in the case of robots didn't take as long, nor did it need to. Because the anti-Black blueprint for this map had already been established and was deep, in the case of robots it only had to be deployed.



[Figure #3]  
 Cartographies of Containment in the United States, 1619-Present Day.

**The Word Robot is a Word for Slave: Naming Difference**

Before 1922 most Americans had never heard of a robot. Indeed, before 1922 the word robot didn't even exist in the English language. Before 1922 what we now consider in the United States to be a robot had been formerly referred to a variety of terms such as an automaton or mechanical machine. The word robot entered the American stage quite literally with the debut of Karel Čapek's play, *Rossum's Universal Robots*. Robot is taken from the proto-Slavic word *robot* which in Czech refers to serfdom or indentured labor and in English quite literally means *slave*. By 1942, not only would most Americans know the word robot, but would also associate it with three key anti-Black logics: dialectical framing, social death, and paranoia/code noir. They would also associate the

word tacitly with servitude even though the common person would not have recognized its literal meaning or linguistic origins.

Rossum's Universal Robots paralleled in some ways the plot of Mary Shelly's Frankenstein where creation kills the creator; in RUR, the part of the creation was played by robots and their human creators. RUR centers on the factory of Rossum's Universal Robots where inventor Rossum has created robots that look like humans and perform human labor or tasks but are made of coil and wire. Helena Glory, the daughter of a prominent politician, is given a tour of the factory by the general manager, Harry Domin who explains that the robots are impressive technological advancements with no emotion or soul. In other words, the robots are specifically for the function of labor and nothing more.

After a somewhat strange interlude where Helena and Harry Domin fall suddenly and madly in love after the factory tour, the audience is transported in the second half of the play to ten years in the future. In this future, there is a birth crisis where, due to a lack of work to be done, people are no longer able to reproduce and there are no new babies born. At the same time, strange incidents of violence or erratic behavior with the formerly docile robots are rumored in the factory. Eventually, a robot revolution against humans ensues which leads to the complete destruction of humanity. The robots, formerly unable to emote or reproduce, eventually develop souls and in a biblical way self-identify as Adam and Eve and are now purposed with the task of repopulating the earth with robots. This is the first story about robots in the United States but upon closer examination, it has many important embedded anti-Black logics to note.

## ***Robots and Social Death***

To be socially dead is to be rendered not fully human in wider society and therefore void of relationality with other humans. It is the condition in which someone or something is perceived as dead, or non-existent, or as a walking corpse.<sup>122</sup> Sociologist, Orlando Patterson, first introduced the concept of social death in his 1982 seminal work, *Slavery and Social Death: A Comparative Study*. Paterson's capacious examination of slaveholding societies over place and time spanning from the Roman Empire to Chattel Slavery in the United States helped to understand how enslaved persons were connected and the logics behind their enslavement. Notably, Paterson's analysis revealed that it was not the wealth of a society, nor the moral or ethical code of ethics, nor the system of governance or other social factors that linked slavery, but instead, was acceptance and acculturation by slaveholding societies of social death.<sup>123</sup>

Social death begins when someone is not granted the status of a full subject, or when someone is not considered to be fully human. This then creates the condition of a person who is perceived or understood as an outsider or one who is illegitimate to the larger society. This sort of relationality is quite paradoxical. On one hand, to be socially dead is to be akin to a walking corpse that is not permitted to enter society as a full subject. At the same time the body, the mind, and the social structure surrounding a

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<sup>122</sup> Wilderson, 2010.

<sup>123</sup> Democratic countries were notably the most successful slaveholding societies despite their philosophical foundations in freedom and equality.

person who is rendered socially dead is completely at the mercy of another person. In short, it still takes relationality to void someone of relationality. For enslaved persons this meant that the slave's relationality was conducted through their master or the ruling class; their bodies were made subject to the wills of their enslavers.

To defend the status of a slave socially dead the first step is to transform the slave into an object. Once perceived as an object the object can then be othered. This requires adoption of the belief or philosophy that a slave is a non-human or a non-subject. Patterson goes to great lengths to detail describing the underlying conditions and assumptions that must be adopted by the master(s) who culturize and socialize slaves as "others." An underlying adoption of slavery the slave must be understood as a non-human who is therefore socially dead:

...to define the slave as a socially dead person...He is dissocialized and depersonalized. This process of social negation constitutes the first, essentially external, phase of enslavement. The next phase involves the introduction of the slave into the community of his master, but it involves the paradox of introducing him as a nonbeing. This explains the importance of law, custom, and ideology in the representation of the slave relation.<sup>124</sup>

The basis of the relationship between the slave and the master is predicated on the idea that the socially dead slave is an outsider or non-human. The slave must be recognized first as only an object. Why such devotion to this philosophy? According to Patterson, "The reason for this is not hard to discern: it was the slave's isolation, his strangeness, that made him most valuable to the master..."<sup>125</sup> Social death is of particular importance

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<sup>124</sup> Patterson 1982, 38.

<sup>125</sup> Patterson 1982, 38.

to understanding the success of anti-Blackness in the United States because of the way Black persons and enslaved Africans have been, since the inception of the country, rendered as non-humans.<sup>126</sup> In chapter one I discussed the process where the Black and white binary or racial division was created as noted by Frank B. Wilderson:

...*Blackness* refers to an individual who is by definition always void of relationality. Thus, modernity marks the emergence of a new ontology because it is an era in which an entire race appears, a priori...as socially dead in relation to the rest of the world.<sup>127</sup>

In the United States, the end of chattel slavery did not end social death for Black Americans who remained in a political and social state of social death and who continue to experience the impact of this treatment.<sup>128</sup>

### ***1921: Rossum's Universal Robots***

In 1921 the word robot became synonymous with the words slave and slavery; this marked the first historical adoption of othering. Since 1921, there has been a maintained separation between intelligent machines as objects and humans as subjects. In *RUR*, Domin goes to great lengths to convince Helena that robots are not human and, more importantly, that they are nonbeings that do not hold any intrinsic value:

DOMIN. I'm sorry, Miss Glory. *Sulla is a Robot.*

HELENA. It's a lie!

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<sup>126</sup> Ibram X. Kendi, 2016, 23.

<sup>127</sup> Frank B. Wilderson, *Red, White, and Black: Cinema and the Structure of U.S. Antagonisms*, (Durham: Duke University Press, 2010), 18.

<sup>128</sup> Wilderson, 2010, 21

DOMIN. What? (*Pushes button on desk*) Well, then I must *convince* you. (*Enter MARIUS R.C. He stands just inside the door.*) Marius, take Sulla into the dissecting room, and tell them to open her up at once. (*MARIUS moves toward C.*)

HELENA. Where?

DOMIN. Into the dissecting room. When they've *cut her open*, you can go and have a look. (*MARIUS makes a start toward SULLA.*)

HELENA. (*Stopping MARIUS*) No! No!

DOMIN. Excuse me, you spoke of lies.

HELENA. You wouldn't have her killed?

DOMIN. You can't kill machines. Sulla! (*MARIUS one step forward, one arm out. SULLA makes a move toward R. door.*)

HELENA. (*Moves a step R.*) Don't be afraid, Sulla. I won't let you go. Tell me, my dear— (*Takes her hand*) —are they always so cruel to you? You mustn't put up with it, Sulla. You mustn't.

SULLA. I am a Robot.

HELENA. That doesn't matter. Robots are just as good as we are. Sulla, you wouldn't let yourself be cut to pieces?

SULLA. Yes. (*Hand away.*)

HELENA. Oh, you're not afraid of death, then?

SULLA. I cannot tell, Miss Glory.

HELENA. Do you know what would happen to you in there?

SULLA. Yes, I should cease to move.

HELENA. How dreadful! (*Looks at SULLA.*)

DOMIN. Marius, tell Miss Glory what you are? (*Turns to HELENA.*)

MARIUS. (*To HELENA*) Marius, the Robot.

DOMIN. Would you take Sulla into the dissecting room?

MARIUS. (*Turns to DOMIN*) Yes.

DOMIN. Would you be sorry for her?

MARIUS. (*Pause*) I cannot tell.

DOMIN. What would happen to her?

MARIUS. She would cease to move. They would put her into the stamping mill.

DOMIN. That is death, Marius. Aren't you afraid of death?

MARIUS. No.

DOMIN. You see, Miss Glory, the Robots have no interest in life. They have no enjoyments. They are *less* than so much grass.<sup>129</sup>

### *Fungibility*

Social death is, as I have already noted, a complex and multilayered process. Patterson, in his original analysis, noted four distinct features of social death; of which there have since been additions to by other scholars. The first feature of social death is fungibility. To be fungible in economics is to be replaceable or interchangeable by something identical to or valued at the same worth. When we discuss fungibility it is usually concerning the interchangeability of goods or goods that become obsolete or replaceable. A bank note, for example, in economics can be described as fungible because it is meant to be replaced and can easily be exchanged or replaced. If a bank note is too damaged or too old, it can be replaced or traded in for a newer bank note or one of the same value. In any instance, the note is replaceable or interchangeable.

The fungibility of enslaved persons also works in the same transactional way. Saidiya Hartman notes that enslaved persons, or what she refers to as the “captive body” were fungible in relation to commodities in economics—as something that could be exchanged, sold, replaced, or discarded, but also as a vessel.<sup>130</sup> In the United States, for example, the practice of chattel slavery depended on the fungible nature of slaves to be successful. Slaves in the United States were the absolute property of their masters and as such could be done with in whatever way possible by their masters; they could be sold,

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<sup>129</sup> Rossum’s *Universal Robots*, 1921.

<sup>130</sup> Saidiya Hartman, *Scenes of Subjection: Terror, Slavery, and Self-Making in Nineteenth Century America*, (New York: Oxford University Press: 1997), 18.

traded, exchanged, replaced, or discarded. They could also be modified or mutilated—and were—by their master’s or any person who was not a slave [white people]. Slave owners consistently mutilated and tortured their slaves as both a form of punishment and amusement.<sup>131</sup> As a fungible commodity, enslaved persons were under constant threat of being sold, exchanged, mutilated, or replaced. In the United States, chattel slavery dictated that slaves were the absolute property of their owners and as such their masters had full authority over their bodily and temporal agency.<sup>132</sup> From their initial capture onwards, enslaved persons in the United States were under constant threat of exchange or replacement.

The socially dead person, according to Hartman, was also a fungible vessel; empty and waiting to be filled.<sup>133</sup> This meant that the socially dead were vacant of, or void of any agency over their person or body and could therefore be filled with ideas, morals, dreams, and motivations by another. For enslaved persons, this was determined by their master. Slave owners understood this quite well and worked incredibly hard to ensure that their values, that is the values of the master class, were acculturated into those whom they enslaved or the lesser class. Part of the socialization if you will, of the socially dead, focused on teaching enslaved persons their place, how to behave, what

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<sup>131</sup> Hartman, 1997.

<sup>132</sup> “The relation between pleasure and the possession of slave property, in both the figurative and literal senses, can be explained in part by the fungibility of the slave—that is, the joy made possible by virtue of the replaceability and interchangeability endemic to the commodity—and by the extensive capacities of property—that is, the augmentation of the master subject through his embodiment in external objects and persons.” (Hartman: 1997, 21).

<sup>133</sup> Hartman, 1997.

religion to follow, and limiting their physical and temporal agency to their work/occupation on plantations so as not to run away or develop desires to run away. More specifically, as noted by scholar Manning Marable, acculturating enslaved persons (and later freed Blacks) into a constant state of terror by, “...*the random, senseless, and even bestial use of coercion against an entire population*” created an omnipresent sense of fear and oppression for enslaved persons who, at any moment, could be brutalized or used for their master’s whims.<sup>134</sup>

Technology, as we understand it from a western perspective, is understood as a thing, artifact, or commodity and therefore has an inherent fungible quality. This assumption comes in part from the work of philosopher Immanuel Kant. Kant (who Hegel was responding to largely in his *Phenomenology of Geist*) laid much of the logical foundation for how we think about humans in relation to technology or how we distinguish humans or other forms of life from nonliving things. In his *Metaphysics of Morals* [categorical imperative], Kant presents two important concepts: Intrinsic Value and Extrinsic Value.<sup>135</sup> In this presentation, Kant also casts the world into the world of objects and subjects (although this terminology is largely introduced and attributed to Hegel). Intrinsic value or subjecthood is associated with what Kant calls things that hold value in and of themselves. While Kant leaves room for interpretation for what might have value in and of itself, we can largely assume that he is trying to sort out what makes

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<sup>134</sup> Manning Marable, *How Capitalism Underdeveloped Black America*, (Cambridge: South End Press, 2000), 119.

<sup>135</sup> Immanuel Kant, *Metaphysics of Morals*, 1797.

humans unique in the world. Things that have value in and of themselves thus have intrinsic value. These beings, for Kant, have rational capacity and are therefore unique/special in comparison to the rest of the world. Conversely, things that hold extrinsic value or that have what we might term as instrumental value are objects or things/tools that can be used to augment or are used by those beings that hold intrinsic value. Here specifically, Kant says technology or tools are fundamentally extrinsic in value because they do not hold on their own, rational capacities and are used for the benefit of something else.

Tech culture in the United States also imposes this commodification and fungibility onto technology. Tech culture values creating better mousetraps and innovations that replace old, dated, or broken-down technology with new and better tools. Adopting a “technological determinist” or the innovation-fueled culture surrounding technology, accepts even and promotes constant reinvention and replaceability.<sup>136</sup> Robots, upon introduction to the United States via the stage, were therefore immediately inscribed with an assumed fungible nature/quality.

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<sup>136</sup> “...popular narratives conveys a vivid sense of the efficacy of technology as a driving force of history: a technical innovation suddenly appears and causes important things to happen. It is noteworthy that these minifables direct attention to the consequences rather than the genesis of inventions. Whether the new device seems to come out of nowhere, like some *deus ex machina*, or from the brain of a genius like Gutenberg or Whitney, the usual emphasis is on the material artifact and the changes it presumably effects. In these episodes, indeed, technology is conceived in almost exclusively artifactual terms, and its materiality serves to reinforce a tangible sense of its decisive role in history. Unlike other, more abstract forces to which historians often assign determinative power (for example, socioeconomic, political, cultural, and ideological formations), the thingness or tangibility of mechanical devices—their accessibility via sense perception—helps to create a sense of causal efficacy made visible. Taken together, these before and after narratives give credence to the idea of “technology” as an independent entity, a virtually autonomous agent of change.” (Leo Marx, and Merritt Roe Smith. *Does Technology Drive History? The Dilemma of Technological Determinism*. The MIT Press; 1994,) x.

In *RUR*, robots are first introduced to audiences as mass-produced on an assembly line—commodities. In the opening scene Harry Domin, the general manager of the factory that produces robots, speaks to Helena Glory who is visiting the factory to learn more about robots and highlights this distinction that robots are things/commodities that are fundamentally fungible by correcting Helena when she attempts to humanize or socialize the robots as they relate to humans:

HELENA. I saw the first Robots at home. The Town Council bought them for—I mean engaged them for work.

DOMIN. No. *Bought* them, Miss Glory. Robots are bought and sold.

HELENA. These were employed as street-sweepers. I saw them sweeping. They were so strange and quiet.

DOMIN. Rossum's Universal Robot factory doesn't produce a uniform brand of Robots. We have Robots of *finer* and *coarser* grades. The best will live about *twenty* years.

HELENA. Then they die?

DOMIN. Yes, they get used up.<sup>137</sup>

By correcting Helena, Domin reduces the robots to commodities in this interaction and denies them any type of personal agency or proper socialization.

### *Paternalism*

The second tenet of social death, as noted by Patterson, is the process by which a slave is stripped of all connection to their former life, country, kinsmen, and family. He refers to this process as natal alienation by which slaves were forced to abandon all familial ties and connections to their former lives. In chattel slavery in the United States,

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<sup>137</sup> *Rossum's Universal Robots*, 1921.

this process was repeated over generations even as enslaved persons were born into slavery, they nevertheless also discouraged, and tormented, in the hopes that they would let go of familial ties. Many enslaved persons were often separated from their parents or sold to different plantations so as not to keep family units together. Children were forcibly taken from their mothers and marriages were often not recognized as legitimate which resulted in the forced separation of spouses. Paradoxically, this forceful removal and separation was intentional to create strong bonds to enslavers and masters. This process served the purpose of establishing loyalty to, and only to, the enslaver on the part of the slave.

Another absurdity in this process was that while masters did not recognize their slaves as fully human, many enslavers formed strong kinships and relationships with their slaves. In the United States, historians note the way that southern plantation owners frequently insisted and encouraged their slaves to refer to them in familial ways with names such as “Big Daddy” or by other paternal labels. In this way, enslaved persons were encouraged, with no other claims to *legitimate* familial relations, to see their enslavers as family and the plantation owners as their fathers.<sup>138</sup>

This type of paternalism was extended to stories about creation or invention with ease. First because of the way that technology or science can be easily attributed to having origins in the lab or a factory. Further, that paternalism can be shifted from fathers

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<sup>138</sup> This, of course, also gets additionally layered with irony noting that many plantation owners fathered many children with enslaved women who were raped and sexually assaulted by their enslavers. While some white men acknowledged these children as their own, most did not and further allow them to remain in servitude.

to inventors. Just like in Mary Shelly's *Frankenstein*, the monster has a "father" in the sense that its creator had assumed paternalism, technology's paternalism extended to inventors or engineers who created it. Specifically, in *RUR*, the natal alienation of the robots is established as Helena Glory encounters a robot secretary who cannot, and does not, attribute their background to anywhere else or in the context of any other relationships outside of the factory:

DOMIN. Sulla, let Miss Glory see you.

HELENA. So pleased to meet you. You must find it terribly dull in this out of the way spot, don't you?

SULLA. I don't know, Miss Glory.

HELENA. Where do you come from?

SULLA. From the factory.

HELENA. Oh, were you born there?

SULLA. I was *made* there.<sup>139</sup>

Because robots could not be traced to any place beyond their lab or factory of origin, in other words, because they are always invented or engineered, their ties to place and culture become that of the lab and their de facto parents, if you will, become the engineer or scientist who initially created them. This paternalism is also important when thinking through responsibility or liability for the inventor's creation.

*RUR* inscribed an unmistakable anti-Black foundation into his play that, in any other context or time, would be abhorrent. Replace the factory with a plantation, Helena with a politician's daughter from the northern states visiting Antebellum south, and

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<sup>139</sup> *Rossum's Universal Robots*, 1921.

Domin with a plantation overseer and the story is much easier to understand as it relates to, and is connected to, slavery in the United States and anti-Blackness. The symbols encoded in *RUR* are unmistakably anti-Black. Once incepted, the cultural paranoia surrounding robots began. At the end of *RUR*, the robots rise and kill their human masters and the violent, Hegelian-informed revolution unfolds for the audiences.

### **Slaves in Face and Name: Placing Difference**

By the end of the 1930s, many Americans would not only understand the word ‘robot’ but also associate it with servitude and Blackness. In other words, Americans would be able to place this newly imagined technology into a hierarchical structure. More than that, they also accepted robots legitimate in their status or potential status as slaves. Not even seventy-five years after the United States had abolished the institution of slavery, new technological slaves were endorsed by the American public as a legitimate labor source and as items of property. The great stain of the Union had, it would seem, to have been erased and unheeded.

### ***1927-1939: Westinghouse Company and Rastus Robot***

There is one often overlooked robot that contributes to this day on how Americans perceive robots as being “placed” as inferior to humans and the robot’s name was Rastus. No other cultural icon so blatantly displays the racist and anti-Black connection between robots and chattel slavery than Rastus.<sup>140</sup> The Westinghouse Electric

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<sup>140</sup> “When Westinghouse built and exhibited a black robot in 1930, it connected the machine age to a preindustrial era of slavery...” (Dustin Abnet, 2020, 152).

Company's Rastus Robot was the convergence of an American cultural purchase into the idea that robots were not simply slaves or tools, but slaves that were coded as Black in face and name. The inferiority and possibly racially ambiguous nature of robots in *RUR* that was speculated on was fully connected with the mechanical slave: Rastus.

Between 1927 and 1939 the Westinghouse Company constructed six mechanical slaves to market and spread the company's message of robotic slavery to middle- and upper-class white families. As Dustin Abnet writes the stereotypes of race and class and the racial division between white and Black people in the United States converged with Rastus. Rastus evoked a particular kind of "cultural coin" that was an unmistakable minstrel.<sup>141</sup> Rastus was not the only robot that Westinghouse commissioned, but he was the only robot to be outfitted and made to look like a slave. Rastus was also largely responsible for the codification and familiarity of the American public with robots and their association with a humanoid robot/slave:

Though the Westinghouse Company mostly avoided the term *robot*, the press seized upon it to stimulate its reader's imaginations even further. When it included two photographs of Rastus and Kintner on a spread celebrating advancements in electrical equipment...By the mid-1930s, practically any machine that seemed to duplicate human features or behaviors, regardless of its appearance, could be called a robot. More than any other device, Westinghouse's robots popularized Capek's term...<sup>142</sup>

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<sup>141</sup> "The minstrel show has been ubiquitous, cultural common coin; it has been central to the loves of North Americans that we are hardly aware of its extraordinary influence" (Eric Lott, 1993, 5).

<sup>142</sup> Abnet 2020, 134.

What the Rastus robot did was place robots into the dialectic as slaves in face and name.<sup>143</sup> It connected robots directly to chattel slavery in the United States as well as an anti-Black exploitation of Blackness that was present in the era of minstrel shows. Robots were put in their place or dehumanized based on their perceived (and marketed) inferiority to humans.

### *Minstrel Shows*

Minstrel shows in the United States simultaneously presented and misrepresented the relationship between Black and whites by putting Blackness on display (via white actors in Blackface) as subservient, jolly, docile, eager to work, unapologetically ignorant, and always in positions of servitude or lower classes than whites. The suggestive racialized and anti-Black dimensions presented in *RUR* were then explicitly built into the Rastus robot. Rastus was presented as a “boy” slave to his engineering masters who operated him on public stages for all to see. In this way, Rastus was immediately *caste* into a paternalistic relationship with his human master by nature of his boyhood. It is important not only to note the minstrel-ness of Rastus but also the elevated block on which the robot is positioned which is akin to the auction block that was used to display slaves at auction. Rastus would be commanded to sit, stand, and would also be commanded to sit with an apple on its head while having arrows shot at the apple--the perfect, most trusting mechanical slave. Rastus, like the minstrel shows in the United

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<sup>143</sup> After extensive research, there does not appear to be any public record or discussion as to why the Westinghouse Electric Company only outfitted the Rastus Robot to look like a Black, enslaved man.

States, was paraded across the country (and Canada) and put on display for the middle and upper class, white audiences to enjoy.

By reducing the Rastus robot to a minstrel almost, “coon-like” character, the Westinghouse Company solidified the racial connection between robots, slaves, and Blackness. The effect of this display was that it put robots in their ‘place’ dialectically by reducing them to slaves in both face and name. This display of power on the part of the human master/engineer was also critical in securing this relationship between robots and humans. audiences, like in minstrel shows, were meant to laugh at the Rastus robot. With denim overalls, a white shirt, exaggerated facial features, and a bandana he was specifically designed to evoke the aesthetic of a field slave or sharecropper. Furthermore, this reduction of Rastus to a displayed, Black male body to be laughed at reinforced a racialized and anxiety-driven view of Black men.<sup>144</sup>

### *Paranoia*

Many contemporary conversations surrounding the development of robots are centered around fear or paranoia about the potential that in developing humanoid or advanced robots humans will ultimately lose control of their invention. Paranoia on its own is not an anti-Black logic, but when coupled with surveillance and containment as a spatial project it becomes such. Spatial containment functions to uphold hegemonic power dynamics and systems of oppression. It also ensures that the dominant group, the

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<sup>144</sup> David Marriot, *On Black Men* (Columbia University Press, 2000).

masters, are secured in their position of power. By maintaining difference, or keeping it in its proper place, power is retained. The key for robots and containment is keeping them in a dialectical position that is always subservient to humans and, more importantly, containing the possibility of robots uprising or getting out of control as was suggested by the plot of *RUR*.

The paranoia that drives the need to contain difference is the result of the Hegelian struggle between master and slave for *anerkennung*. The fear of not only losing control over a slave but also the fear that in losing a slave the master is no longer master drives them to maintain their position in the dialectic at all costs. Maintaining or containing difference is not only a physical project designated to walls, borders, or land but it is also a temporal-spatial arrangement that maintains difference culturally.

### **Black Codes, Textbooks, and Laws: Containing Difference**

The spatial project of containing difference in the United States was bounded during the period of chattel slavery; when this was outlawed the practice did not cease but became more complex, omnipresent, and internalized. In the post-slavery era, social structures of containment and laws both needed to be erected to maintain whiteness as the dominant power structure. Faced with the cognitive dissonance of white supremacy (which was now exposed legally with the integration of formerly enslaved Black and African people as citizens) a new social structure of containment needed to be erected. Following the end of slavery pedagogical manuals, textbooks, and pamphlets were distributed to teach the formerly enslaved to be dutiful, productive, and docile

towards their former masters. The goal was that white folks would be able to maintain their hierarchical status by socially keeping Black bodies in place even if they were not able to keep them in place physically as they had during chattel slavery (the plantation or family estate):

Textbooks like *Advice to Freedman*, *Friendly Counsels for Freedman*, *Plain Counsels for Freedman*, and *John Freeman and His Family* aimed to instill rational ideals of material acquisition and social restraint and correct “absolute” notions of freedom and the excesses and indulgences that resulted from entertaining such “farlung” conceptions. As their titles indicate, these handbooks were geared towards practical ends, how-to-advice, instructions for living, and the rules of conduct being their primary concerns. The instrumental objectives of these books were explicitly declared in order that lessons of discipline, duty, and responsibility be simply and directly conveyed to their readers.<sup>145</sup>

Whereas plantations offered material and physical environment that would keep enslaved persons in their proper place, these textbooks and manuals were a social device to keep Black bodies in place by ensuring they were dutiful citizens who remained loyal (physically and temporarily) to their former masters and, by extension, all-white bodies. The whip was to be “internalized”.<sup>146</sup>

Textbooks and Black Codes served to internalize surveillance as well as distribute the responsibility to police behaviors to both white and Black bodies.<sup>147</sup> These social codes and textbooks were meant to acculturate and teach Black bodies what was right and what was wrong while effectively keeping them subordinate in relation to whites. This

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<sup>145</sup> Hartman, 1997, 129.

<sup>146</sup> Saidiya Hartman, 1997, 140.

<sup>147</sup> Michel Foucault, *Discipline and Punish*, 1977.

was driven by white anxiety that the formerly enslaved, now legally recognized as citizens, would act in retribution towards their former masters or perhaps just exhibit the same dehumanizing behavior towards whites. Whites were also invested in maintaining their social, legal, and material dominance.

Containment thus is predicated on paranoia. In the era of slavery bodies were physically bound to plantations and in the post-slavery era, Black bodies were kept in place through Black Codes, Textbooks, and as time progressed more and more laws that would dictate the boundaries in which Black bodies could travel. If *anerkennung* is the recognition of the other through the self, then paranoia is the manifested acknowledgment that placing slaves in the dialectic opposite of masters is itself a precarious placement of bodies. It is then through geographic containment and surveillance of the other in the dialectic that others/slaves are kept in their place.

### ***1942: Runaway and the Three Laws of Robotics***

In March of 1942, twenty years after the debut of *RUR*, one of the most influential cultural artifacts about robots was published: Isaac Asimov's short story, *Runaround*. The importance of this story is that it connected the bubbling paranoia about robots with containment and provided the rhetorical and legal function of keeping robots in their proper place both in the dialectic as slaves as well as subservient to humans. The spatial significance of Asimov's story comes from the Three Laws of robotics:

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.

2. A robot must obey the orders given to it by human beings except where such orders would conflict with the first law.
3. A robot must protect its own existence so long as it does not conflict with the First and Second Laws.<sup>148</sup>

While these laws have since been criticized, expanded on, and amended, the initial laws established the cartography of subordination by containing difference: they created the connection between robots and previously racialized codes of domination. If Black Codes functioned to police the relationship between whites and Blacks in a way that kept Black bodies in their proper social and legal place, so too did the Three Laws function to keep robots in their proper place in relation to humans.<sup>149</sup> In this way, the relationship between robots, containment, and difference was confirmed.

In addition to paralleling Black Codes, the Three Laws functioned in multiple ways to keep robots in their proper dialectical positions as inferior. First and most importantly, the Three Laws squarely ‘place’ robots and keep robots in place. The First and Second Laws also affirm robots’ status as socially dead because of the ways in which they reinforce their “thingness.” Robots, according to these laws, are meant and required to be filled or fungible in relation to human desires, needs, and physical well-being. Just as an enslaved person was able to be “filled” with desires or motivations, robots according to these laws are to follow any order or execute any command that is reflective of a human’s needs --even at their own demise or detriment physically. The third law also reinforces the fungibility of the robot because it confirms that robots are replaceable, and

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<sup>148</sup> Issac Asimov, *I, Robot: The Robot Series*, (Bantam Books, 2008).

<sup>149</sup> David J. Gunkel, *Robot Rights*, (MIT Press, 2018) 117-118.

their self-preservation is secondary. Likewise, the Laws each confirm that the robot's existence is only achieved through that of a human master; without a human, the robot does not have a purpose just as the slave was perceived as useless without a master.

What Asimov's Laws did was take the incepted paranoia that originated in *RUR* and continued in other robot stories and cultural artifacts like the Rastus robot and turned it into a solvable programmable code that would effectively establish updated Black Codes for robots to internalize and for others to use to police robots' behavior to keep them in place. This spatial containment would, in theory, guarantee that no such violent uprising as suggested in *RUR* would occur between incensed robots and their human masters. Likewise, these Laws were presented as beneficent, offering to steer or teach robots from right or wrong and to offer them a social and legal code by which they could remain loyal to humans and behave properly. The idea of programming peace, morality, and subjugation was introduced in this story. Robots needed to be kept in place to maintain order (social and political) and these Laws would ensure that this containment, this place keeping would occur. Asimov would go on to become one of the most acclaimed science fiction writers in the United States and his Three Laws would, like the name robot, be immortalized as foundational to understanding robot/human interactions.

### **Containment as Convention**

The disturbing part of this spatial project was how unnoticed it went and how it has not been properly exposed. Over twenty years, robots were introduced as slaves, placed in positions of inferiority in relation to humans, and forced to remain in this place

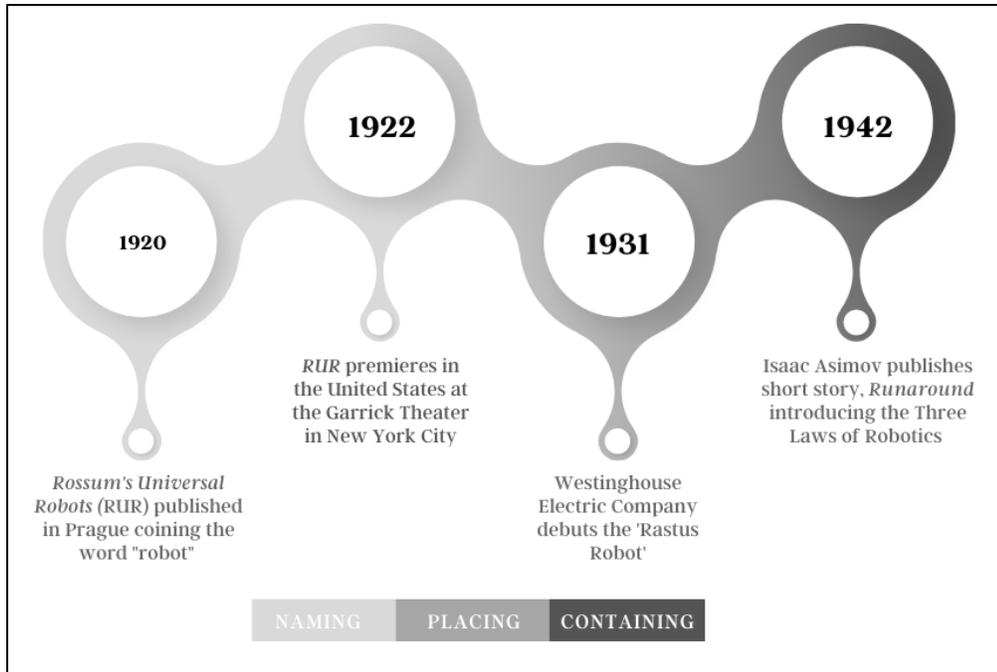
due to the widely popular stories and cultural artifacts that hid these anti-Black logics. Stories about robots in these twenty years made it rhetorically possible to sell slavery as an acceptable and morally permissible institution to be carried into the future despite its blatant connection and reliance on anti-Black logics from the United States' cultural investment in white supremacy. By 1965 the American printed magazine *Mechanix Illustrated* would run the following article:

The robots are coming! When they do, you'll command a host of push-button servants. In 1863, Abe Lincoln freed the slaves. But by 1965, slavery will be back! We'll all have personal slaves again, only this time we won't fight a Civil War over them. Slavery will be here to stay. Don't be alarmed. We mean robot "slaves." Let's take a peek into the future to see what the Robot Age will bring...<sup>150</sup>

Early twentieth-century stories about robots in the United States contributed to a project that established a new Cartography of Subordination. First, robots had to be made legible—their difference had to be inscribed and made to be understood as *other*. Naming difference allows a binary to become the truth of the day. It tells us what difference is which then allows us to place difference--where does it go? Second, their difference needed to be placed into a dialectical relationship which secured their position as another in comparison to their human counterparts. Third and finally, robots needed to be contained or put in their proper place. Once difference has been placed it must be maintained or kept in place and therefore containing difference becomes a persisting project.

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<sup>150</sup> See *Mechanix Illustrated Magazine*, "You'll Own 'Slaves' by 1965."



[Figure #4]

#### Timeline of Cartographies of Containment in Cultural Artifacts, 1920-1942

The way that US-Americans have conceptualized robots since 1942 has been much of the same-- replicating these anti-Black logics over and over in new stories; the names change, the scenes change, but the anti-Blackness and the spatial project of creating worlds in which slaves are accepted remains. What does this mean if the worlds we are building in story, the literal futures we imagine technology will inhabit and serve us in are being built on an anti-Black map? In the next chapter, I will connect how these Cartographies of Subordination, which claim their roots in cultural artifacts, have extended into scholarly conversations and material outputs of robotics research.

“Science fiction already--and well in advance of actual engineering practice--has established expectations for what a robot is or can be.”

-David Gunkel, 2018<sup>151</sup>

## CHAPTER 4

### HOW ANTI-BLACK WORLDS FORGE ANTI-BLACK FUTURES

One of my favorite movies about robots is the 2015 film, *Ex Machina*. For one, it is visually stunning; filming took place in Norway’s Valldal Valley. It also has a sophisticated and rather ominous build that is eerie, yet captivating. I love how the quietness of the film builds in an unassuming way that is suddenly juxtaposed against a terrifying and chilling twist. *Ex Machina* follows Caleb Smith, a developer for a fictional search engine company, Blue Book, who wins an office contest for a one-week visit to the opulent and secluded estate of the company’s CEO, Nathan Bateman. Upon arrival, Caleb learns that the purpose of his trip is to engage with an android robot Nathan has developed, named Ava, and judge if he believes Ava is capable of consciousness and free thought despite knowing she is a robot, a modern-day Turing Test.<sup>152</sup> There is a moment in the film when Nathan and Caleb are sitting next to a flowing river and Caleb asks why so much work went into creating Ava to which Nathan responds, “That’s an odd

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<sup>151</sup> David Gunkel, *Robot Rights*, MIT Press 2018.

<sup>152</sup> Turing Tests also originally called the “Imitation Game” were conceived by Alan Turing in 1950 and are used to determine a computer or machine’s ability to exhibit intelligence and behavior at an equivalent level or beyond that of a human counterpart. The game is “won” if the machine successfully fools the human into thinking it is not a machine.

question...wouldn't you if you could? Look, the arrival of strong artificial intelligence has been inevitable for decades, the variable was *when* not *if* so, I don't see Ava as a decision...just an evolution.”<sup>153</sup>

I've consistently been both impressed and troubled by the way that discussions about robots and the potential for intelligent machines often lead to questions about violence, control, and domination; how the conversations are always rooted in paranoia about the possibility of the machines *taking over*. In more recent years, I have witnessed a fundamental shift in conversations from the idea of developing advanced robots as only having a place in science fiction to a more widespread acceptance or inevitability; what Nathan's character described as, “an evolution.” In my master's thesis, I cited Elon Musk's then more recent quotation about intelligence in machines being the equivalent of “summoning the demon.”<sup>154</sup> I was fascinated that Musk, an early adopter of this idea of robots as an evolution, was also deeply invested in paranoia, the fear of a dialectical face-off between humans and machines. Indeed, some of the world's foremost thinkers and futurologists the likes of Sir Stephen Hawking and Bill Gates have cited concerns about a future world where intelligence cannot be managed, controlled, or *contained* by their human counterparts or masters.<sup>155</sup> There is an embedded dialectical relationship in this conversation. There is also a dilemma when considering that the development of future robots, not simply robots portrayed in science fiction or other cultural artifacts, are being

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<sup>153</sup> *Ex Machina*, 2015.

<sup>154</sup> Elon Musk, 2015.

<sup>155</sup> Rory Cellan-Jones, “Stephen Hawking warns artificial intelligence could end mankind,” BBC News, 2014.

positioned as slaves in this dialectic. Accepting robots as slave in a dialectic is troubling because it signals a larger admission and willingness to allow the institution and legacy of slavery to continue.

In this chapter, I consider how prominent academic scholarship surrounding robots in the United States is embedded with anti-Blackness. First, I argue that the Cartography of Subordination that was previously established in popular culture is now manifest in leading academic scholarship informing how robots are developed in the United States.<sup>156</sup> In chapter three I argued previously that the Cartography of Subordination requires three steps: naming, placing, and containing; linked together they cement racial and hegemonic hierarchies of difference. Specifically, I review Wendall Wallach and Colin Allen's, *Moral Machines: Teaching Robots Right From Wrong*, Nick Bostrom's, *Superintelligence: Paths, Dangers, and Strategies*, and Max Tegmark's, *Life 3.0: Being Human in the Age of Artificial Intelligence*. I contend that each of these books is not only informed by popular culture's paranoia about control, but actively endorse and remake anti-Black logics that originated in cultural artifacts thereby giving scientific and academic license to Cartographies of Containment that were once only found in cultural artifacts.

I argue in this chapter that scholarship about robot ethics in the United States links science fiction stories and narratives with engineering and scientific goals. Put

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<sup>156</sup> The focus of this dissertation is on the development of robots in United States there are, however, international conversations about robot development that need to be acknowledged. Opening the dialogue about international research is important and further nuances this existing discussion, but it is beyond the scope of this research project.

differently, if unchecked cultural artifacts and story provide the blueprints for naming, placing, containing, and thereby perpetuating the commitment to white supremacy and reifying the possibility for anti-Black futures, then scholars provide the scientific and intellectual currency, the rational and logical endorsement that upholds cartographies of containment, giving license to build anti-Blackness into the future. I examine three prominent texts about robot ethics in the United States which, for the past fifteen years, have guided and provided scholarly validation to the geography of containment. Specifically, I evoke the publications and expertise of Wendall Wallach and Collin Allen, Nick Bostrom, and Max Tegmark; each of whom have written best-selling and leading books or guides on how to address the so-called “robot problem.”<sup>157</sup>

In the scholarly community, Wallach, Allen, Bostrom, and Tegmark, while not the gatekeepers of conversations on robot ethics are prominently featured at academic conferences, panel discussions, and public forums on the topics of robots, automation, artificial intelligence, and ethical tradeoffs of the emergence of superintelligence/general intelligence. Further, Tegmark’s case for robots to learn, adopt, and maintain human goals is in fact a combination of harmony of academic scholarship and intellectual contribution. More publicly and perhaps less confined to the ivory tower, is the influence of each of these authors as leading advisors to think tanks and nonprofit organizations that are working to steer the development of emerging technologies such as robotics. For

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<sup>157</sup> Bostrom, 2016.

2017; Wendall Wallach. *A Dangerous Master: How to Keep Technology from Slipping Beyond our Control* (New York: Basic Books), 2015; Wendell Wallach and Colin Allen. *Moral Machines: Teaching Robots Right from Wrong* (New York: Oxford University Press), 2009.

example, Wendall Wallach not only holds an appointment at Yale University's Interdisciplinary Center for Bioethics, but he serves as a senior advisor to the Hastings Center--an independent bioethics research institute and think tank. Nick Bostrom holds an academic appointment at Oxford University and also is a founding member of Oxford's Future of Humanity Institute which focuses on interdisciplinary projects related to futures, risk, and human enhancement. Max Tegmark is also a tenured professor at the Massachusetts Institute of Technology and a founding member of the Future of Life Institute which is dedicated to reducing possible risk as the result of emerging technologies.

Each of these authors has also received immense support and endorsement from entrepreneurs and business magnates whose investments and companies are financially linked to and invest in the development of robot technologies. Nick Bostrom's *Superintelligence* received cover endorsements from Bill Gates and Elon Musk with Musk tweeting on August 14, 2014, "Worth reading Superintelligence by Bostrom. We need to be super careful with AI. Potentially more dangerous than nukes."<sup>158</sup> Similarly, Max Tegmark's *Life 3.0* received the attention of Elon Musk which not only got a cover endorsement but also a stream of media endorsements from Musk in 2017.<sup>159</sup> Elon Musk also serves as a Science Advisor (alongside Nick Bostrom) for Tegmark's Future of Life

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<sup>158</sup> Elon Musk, Twitter, 2014.

<sup>159</sup> Musk, Twitter (August 29, 2017) "Worth reading Life 3.0 by @Tegmark. AI will be the best or worst thing ever for humanity, so let's get it right."

Institute and has made an over ten-million-dollar investment in the non-for-profit for the specific purpose of funding artificial intelligence research.

Second, I consider how anti-Blackness is perpetuated in academic scholarship when leading academic authorities do not cite or acknowledge the work of BIPOC scholars. I then evaluate how each of these scholars (Wallach and Allen, Bostrom, Tegmark), all of whom are cited in and contribute to prominent discussions about robots, very seldom if at all cite literature in cross-disciplinary fields such as science and technology studies, Black geography, critical race studies, or Afrofuturism.<sup>160</sup> The absence of perspectives that center race, historical memory, perspectives of the marginalized and the enslaved maintains ethical conversations with only white-informed, hegemonic values. I argue that if the scholarship that informs public narratives about robots is white-informed then it will continue to shroud anti-Blackness in service of white supremacy. In other words, white-centered narratives build anti-Black futures.

### **Denying Anti-Blackness is Anti-Blackness**

The dialectical struggle between man and machine has been embedded into US-American popular culture for over a century—it is not a new story; in fact, we expect it when new versions of the robot story come out. It is this same story of “fear and fascination” retold with new faces.<sup>161</sup> A through-line for any re-telling of this story is that it consistently associates advancement in robotics as dangerous, violent, chaotic, and

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<sup>160</sup> Eliezer Yudkowsky, 2014; Stuart Russell, 2015; Murray Shanahan, 2015; Francesca Rossi 2020.

<sup>161</sup> Wallach and Allen, *Moral Machines* (Oxford University Press; 2010), 37.

potentially uncontrollable. In response to these stories, scholars and engineers alike working on robot research and development have invested significant attention and resources to develop robots that can be controlled by humans. And while it is contested amongst these groups when, how, and if this breakthrough in technology will happen, what is not contested is the consensus that this technology must be developed in a way that does not get out of human control.<sup>162</sup> As a result of this consensus, scholars and engineers have developed questions and fields of study relating to the legal treatment of robots, robot rights, ethics, and Artificial Intelligence (AI), and have considered what it might take to establish a moral and peaceful relationship between man and machine. There is an embedded dialectical relationship in this conversation. Slaves and masters are discussed in these discourses, but slaves are never racialized or traced to their genealogical roots. Robots, like many conversations about technology, are often framed as colorblind or non-racial because of their status as an artifact or tool used for, and not the same as, humans.<sup>163</sup>

Science and Technology and Innovation scholars such as Ruha Benjamin and Safiya Umoja Noble have demonstrated how current technologies discriminate and are biased against people of color by privileging whiteness. For Benjamin, engineered inequity or the “New Jim Code” is pervasive in new technologies despite marketing that technology transcends race, or is colorblind.<sup>164</sup> Noble, focusing on data discrimination,

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<sup>162</sup> The creation or emergence of an Artificial General Intelligence (AGI) sometimes also termed a “Superintelligence” is an advance AI/robot that can think on its own without human intervention.

<sup>163</sup> Gunkel, 2018.

<sup>164</sup> Benjamin, 2020; 5.

argues racism and sexism are a part of the architecture of technology itself and need remediation.<sup>165</sup> These interventions focus on current manifestations of racism, anti-Blackness, and discrimination; but these approaches do not delve deeply into the histories, genealogies, and sites of cultural production that have compounded over time to build this current moment. I contend that if private industry choices lead to public policy decisions, then it is crucial to not only examine how many current approaches are detached from these histories and genealogies but also to understand how this detachment is an intentional design choice that supports white supremacy.

Since Karel Capek's *Rossum's Universal Robots (RUR)*, fused the term robot with slavery, the idea not only gained currency in popular culture but has also been widespread in scientific and academic scholarship, "According to the current application of artificial intelligence, most robots occupy the master-slave paradigm where no independence of action beyond direct human volition is permitted."<sup>166</sup> This paradigm contributes to a social hierarchy that not only suggests that humans are superior to robots but goes further to adopt, as was suggested in *RUR*, a future relationship with robots as slaves. Whichever side of the debate one falls, there continues to be a discursive connection between robots and slaves. The simple act of rhetorically connecting the two concepts reinforces an understanding of robots as objects/slaves as opposed to humans who are understood as subjects/masters/creators/engineers with control and agency.

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<sup>165</sup> Safiya Umoja Noble. *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: New York University Press; 2018), 9.

<sup>166</sup> Ashrafian 2015, 323.

Social hierarchy work is done each time the discussion is had in science fiction stories or in the work of science itself; both of which contribute to a cultural understanding of robots as lesser than.

But is a conversation about future forms of slavery complete without acknowledging and connecting future slaves to enslaved persons of the past—their lived realities? Alexis Young contends that the denial of anti-Blackness is itself a form of anti-Blackness.<sup>167</sup> Why then do discussions related to the legality, morality, and dilemma of future advances in robots and their relationship to slavery or as slaves always place robots into a dialectical framework and yet do not consider and integrate the racialized and historical connections to enslaved persons? How does the history of the enslaved become separated from future scenarios related to slavery? By not discussing these histories, I argue that a fundamental and critical perspective, as well as a critical line of inquiry, are left out; perspectives that are needed to combat the embedded white supremacy and anti-Black logics. Or, as Katherine McKittrick writes:

Often (not always!) these metaphors are delinked from material underpinnings or histories, which means racial violence risk being case and/or read as figurative (the geographic idea is abstracted from its materials and experiential and embodied underpinnings...this is precisely why paying close attention to the black story matters.<sup>168</sup>

A consequence of science fiction is that it often becomes actual science and technology.<sup>169</sup> While exploration between science fiction artifacts and technologies

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<sup>167</sup> Alexis Young, 2021, conversation with the author.

<sup>168</sup> McKittrick, *Dear Science and Other Stories* (Durham: Duke University Press; 2021) 11.

<sup>169</sup> Ron Eglash. “Anti-Racist Technoscience: A GENERATIVE TRADITION,” in *Captivating Technology*, (Durham: Duke University Press; 2019), 227-251.

becoming real-life artifacts and technologies has been taken up by scholars previously (Nama, 2008; Lavender III, 2011, 2014; Chude-Sokei, 2016), I contend that there has not been sufficient attention to the way these artifacts, originally imagined in science fiction as anti-Black, are then developed with the same anti-Black design. In this way, contemporary scholarship and scientific/engineering efforts related to robots are both informed by anti-Blackness and perform anti-Blackness in their approaches and each of these loops continue to maintain the Cartographies of Subordination that science fiction introduced in the field of robotics research.

### **The Robot “Problem”**

Fritz Lang’s 1927 silent film, *Metropolis* tells the story of a futuristic city where (above ground) there is a beautiful, manicured utopia and (below ground) there exists a mechanical underworld that powers the above-ground world with the labor of exploited workers. While praised for the film’s cutting-edge special effects, Lang’s film has been also criticized for its often disjointed and sometimes confusing screenplay that couples a capitalist critique, robots, and biblical themes like Eve in the Garden of Eden. The film, however, is the first to connect the idea of emotional intelligence--the consciousness and control of one’s own emotional state--to robots; the film’s message is captured succinctly in its inter-title, “The Mediator Between the Head and the Hands Must Be the Heart.”<sup>170</sup>

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<sup>170</sup> *Metropolis*, 1927.

As early as 1988, scholars were considering the role of robots in society as not just tools or objects, but in the role of slaves and under a field of study termed “robot rights”:

Human history is the history of exclusion and power. Humans have defined numerous groups as less than human—slaves, women, the “other races”, children and foreigners. These are the wretched who have been defined as stateless, personless, suspect, and rightless. This is the present realm of robotic rights...<sup>171</sup>

Some thirty years later in his 2018 book, *Robot Rights*, David Gunkel reflected on a 2010 article boldly titled, “Robots Should Be Slaves” that suggested, “No matter how interactive, intelligent, or animated robots appear to be, they should now and forever, considered to be instruments or slaves in our service and nothing more.”<sup>172</sup> Gunkel, who focuses on the intersection of robot rights and philosophy, rejected a future in which robots are only understood as slaves in this reflection by presenting a menu of philosophical arguments about the potential status of robots beyond a simple classification as a slave; his voice is but a faction of a much larger multi-disciplinary conversation.

Scholars like bioethicist Wendell Wallach and historian Collin Allen have joined a larger dialogue that, like in the 1927 film, *Metropolis*, debates if robots might one day be capable of expressing emotions and empathy, “But will the robots care about us? Can they? Many people believe that machines are incapable of being truly conscious,

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<sup>171</sup> McNally and Inayatullah 1988, 123.

<sup>172</sup> David Gunkel, 2018.

incapable of the genuine understanding and emotions that define humans' most important relationships."<sup>173</sup> If the true "mediator" is the heart, robots must prove through empathy or emotional intelligence that they deserve to be higher in the social fabric than just a tool or slave.<sup>174</sup> Further, it is that recognition of difference that materializes concerns about the future of AI and robotics, "AIs could be—indeed, it is likely that most will be—extremely alien...Furthermore, the goal systems of AIs could diverge radically from those of human beings."<sup>175</sup> In other words, because (humanoid) robots are inherently different and might not have the capacity to "care about us [humans]," robots present a serious threat to humans if not controlled.<sup>176</sup>

In my early stages of writing, I conducted a brief internet search<sup>177</sup> of the most well-reviewed books focusing on keywords like "Artificial Intelligence/AI" and "robots/robotics" which presented me with a wealth of diverse scholarship all connected by titles or abstracts with an ominous warning including words such as, "dangers to

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<sup>173</sup> Wallach and Allen, 2009, 55.

<sup>174</sup> The use of "true" is also problematic here. There are contestations amongst scholars and engineers as to the authority of emotional intelligence over general intelligence in humans.

<sup>175</sup> Bostrom, 2016, 35.

<sup>176</sup> In this chapter I will, on occasion, use terms such as AI and robots interchangeably for ease, noting that they each have many definitions and meaning.

<sup>177</sup> According to a Google search conducted on June 5, 2020, by the author.

humanity,” “dangers, and strategies,”<sup>178</sup> “our final invention,”<sup>179</sup> “problem of control,”<sup>180</sup> and “teaching robots.”<sup>181</sup> What this indicates is that the first part of the spatial grammar has been accepted; there is a looming sense of danger or violence because of pursuing robotics and AI too far. Scholar Nick Bostrom whose 2016 book, *Superintelligence* has become a primary read for anyone involved in AI ethics, philosophy, and morality echoes a consensus of caution describing the potential future of robotics and AI:

...many final goals that might at first glance seem safe and sensible turn out, on closer inspection, to have radically unintended consequences. If a superintelligence with one of these final goals obtains a decisive strategic advantage, it is *game over for humanity*.<sup>182</sup>

This idea of a “treacherous turn” as Bostrom describes comes from a recognition that without human control, a future with robots and AI could be both chaotic and dangerous.<sup>183</sup> Therefore, scholarship concerned with AI ethics and morality is also aligned with ensuring that these futures each benefit and support the current human-centric social order.

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<sup>178</sup> See Parsa, *ARTIFICIAL INTELLIGENCE Dangers to Humanity: AI, U. S, China, Big Tech, Facial Recognition, Drones, Smart Phones, IoT, 5G, Robotics, Cybernetics, and Bio-Digital Social Program*, 2019.

<sup>179</sup> See Bostrom, 2016.

<sup>180</sup> See Barrat, *Our Final Invention: Artificial Intelligence and the End of the Human Era*, 2013.

<sup>181</sup> See Russell, *Human Compatible: Artificial Intelligence and the Problem of Control*, 2019.

<sup>182</sup> Bostrom, 2016, 149 (author’s emphasis).

<sup>183</sup> “...if we grant rights to robots, we are in danger of releasing a social transformation that we will not be able to control” (Gunkel 2018, 109).

This recognition is what drove the ethical consideration that Asimov in *I, Robot* introduced to the world: What set of laws would be needed to maintain human control over robots, or what spatial mechanism could keep robots contained? For Asimov, the answer was the “Three Laws.” As Gunkel notes, it is often the launchpad for science as well: “Isaac Asimov’s three laws of robotics... constitute what is perhaps the most openly acknowledged point of contact between science fiction and actual work in robotics and robot ethics...”<sup>184</sup> Today, the “laws” have been replaced with a debate on how to best program robots so that they do not develop goals that compete with human goals. Scholars and engineers alike are interested in developing robots in a way (depending on the project) that results in a controlled, orderly, subordinate future based on the existing social order.<sup>185</sup> Therefore, with robots understood as *others* or slaves—who threaten violence or disorder and necessarily demand control, we can see how these narrative components have not only taken up the same spatial grammar but provided it legitimacy via the academy.

### ***Solving the Problem: Refurbishing the Enlightenment***

There are three primary lenses through which the scholarly conversation about robots and containment occurs: philosophy, ethics, and law. Philosophy and ethics are concerned primarily with discussions and questions about how to responsibly build machines that exhibit intelligence at or beyond the capacity of humans. Put differently,

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<sup>184</sup> Gunkel; 2018, 117.

<sup>185</sup> Wallach and Allen, 2009.

philosophy and ethics are concerned with creating social norms. Law is primarily concerned with the discussions of robot rights and liability. Put simply, law is concerned with enforcing social norms. The latter is one that this dissertation project will briefly comment on but will not make the central point of analysis.<sup>186</sup> Instead, I focus on how ethics is primarily concerned with goal alignment (containment). Robot ethics originated from Asimov's 'Three Laws of Robotics' introduced in the 1942 short story, *Runaround*, which provided the first blueprint for how a robot should behave concerning human counterparts/masters.

### *Moral Frameworks*

Western ethics operates from basal understandings of moral frameworks: Kantian and Utilitarian frameworks or deontological and teleological ethical frameworks; blended or separate, each of these philosophical frameworks are products of the Enlightenment. Kantian ethics emerge from the work of German philosopher, Immanuel Kant (1797), who originated deontological ethics or ethics that are concerned with making determinations about what is right or wrong. For Kant, deontological ethics were presented in absolute terms meaning that there was a right and a wrong way to do something without interpretation or gray matter. Morals, according to Kant, are based on rationality or reason and not emotions, and therefore man [and woman] is the only being that can act morally given their capacity for intelligence and by extension, reason. Reason

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<sup>186</sup> I deliberately choose not to take up the legal conversations about robot research as they are primarily (though not entirely) concerned with dimensions of robot rights, personhood, and liability; each of which are not pressing for the purposes of this dissertation project.

thus informs how someone is to perform their duty. Kant illustrates this in one of his most famous passages where he considers what one's obligation is to tell the truth when presented with a murderer at one's door. In this scenario, there is a guest in your house, and you hear a knock at the door, and you answer the door. At the door is a murderer whose intent is to kill the guest in your house. Faced with this murderer, you can either tell the murderer that the guest is in your home or lie and say the guest is not present in your home. Kant says it is morally correct, it is your duty, no matter the consequences to tell the truth to the murder.<sup>187</sup> You therefore must, according to duty, tell the murderer that the truth--that their enemy is inside of your home.<sup>188</sup>

Criticism of Kant's framework often cites that it does not properly consider the nuance or complexity of how humans move through the world--that his philosophy doesn't make room for the grayness of life, not to mention it equates lying with murder which is difficult for many to value as an equal offense. Utilitarianism, on the other hand, does give latitude to life's greyness. Utilitarianism originated from the thinking of English philosopher Jeremy Bentham and was later made popular by English philosopher John Stuart Mill.<sup>189</sup> Under a utilitarian framework, maximizing the greatest possible

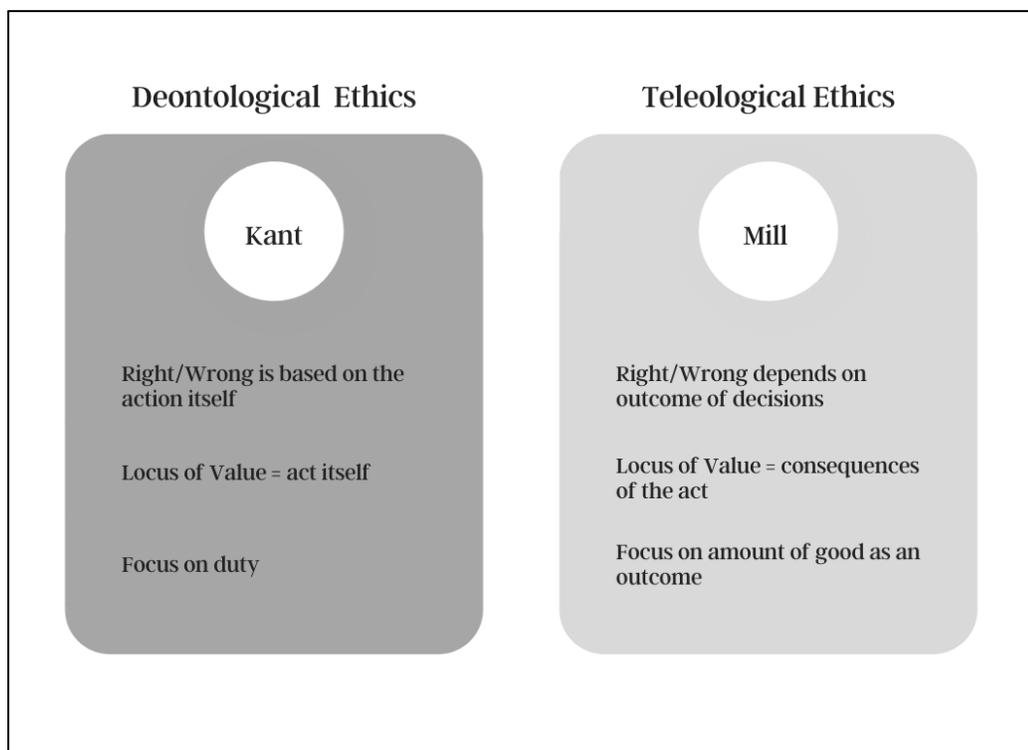
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<sup>187</sup> "Thus, one *who tells a lie*, however well-disposed he may be, must be responsible for its consequences even before a civil court and must pay the penalty for them, however unforeseen they may have been; for truthfulness is a duty that must be regarded as the basis of all duties to be grounded on contract, the law of which is made uncertain and useless if even the least exception to it is admitted. To be *truthful* (honest) in all declarations is therefore a sacred command of reason prescribing unconditionally, one not to be restricted by any inconveniences." (Kant, 8:428)

<sup>188</sup> This illustration from Kant has also been reframed to consider if it is right or wrong to tell a Nazi (the murderer) at the door that you are harboring a Jewish family (their enemy). This interpretation often makes the illustration more complex when, according to Kant, it would still be one's duty to tell the Nazi the truth and betray the whereabouts of the Jewish family in your home.

<sup>189</sup> Utilitarianism emerged as a theory in the late 18th and 19th-centuries.

happiness for the greatest number of people is essential. Utilitarianism is a teleological framework that considers the consequences of actions and how they impact all people. Something is deemed right or wrong for how it impacts people.<sup>190</sup> In other words, utility calculates the amount of good an act produces over the amount of evil to determine the correctness of the act itself. Utilitarianism is, however, often divorced from historical context which makes it as much useful as it is dangerous.



[Figure #5]  
Deontological and Teleological Ontology

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<sup>190</sup> “By utility is meant that property in any object, whereby it tends to produce benefit, advantage, pleasure, good, or happiness, (all this in the present case comes to the same thing) or (what comes again to the same thing) to prevent the happening of mischief, pain, evil, or unhappiness to the party whose interest is considered: if that party be the community in general, then the happiness of the community: if a particular individual, then the happiness of that individual.” (Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation*, 2008: 576)

Robot ethics often consider or blend the two approaches when setting goals or thinking about how to set goals for robots that align with human outcomes.<sup>191</sup>

### **Scholarly Geographies of Containment**

In 2018 philosopher David Gunkel wrote, “Science fiction already--and well in advance of actual engineering practice--has established expectations for what a robot is or can be.”<sup>192</sup> If science fiction and its link to material outputs of science and technology have already been recognized, I argue that there must also be recognition of how the Cartography of Subordination, established in cultural artifacts, has been remade in scholarship. In other words, if the science and scholarship behind robots is first normalized by representations of robots in popular culture, then the stories, myths, and ways we imagine this future space are important sites for interrogation. This is where stories and geography connect; the world imagined can eventually produce real geographies—real space--and vice versa. Geographers such as Katherine McKittrick have astutely noted the connection between how we describe space and the consequences of those descriptions on spatial sites such as the body, land, and place.

Historically, this connection was exploited by white western Europeans who understood the discourse and language used to describe space, place, and bodies directly correlated with their ability to claim ownership or stewardship over spaces beyond their

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<sup>191</sup> Kantianism and Utilitarianism are not the only cited and applied ethical doctrines used in robot ethics but are the two prominent doctrines out of many considered.

<sup>192</sup> Gunkel, 2018.

existing European borders; this connection allowed for the discipline of geography to facilitate whiteness and colonization for hundreds of years.<sup>193</sup> Cartographies of Containment regarding robots in the United States developed in the early twentieth century and have been remade over and over for the past 120 years since the word robot first entered the English language. Now, academic scholarship, aided by these cultural artifacts, continues to remake, and provide academic license and authority to these anti-Black Cartographies.

*Moral Machines, Superintelligence, and Life 3.0*

The opening pages of Wendall Wallach and Collin Allen's 2009 *Moral Machines: Teaching Robots From Right and Wrong* note that what was once the thing of science fiction, that is the creation of robots independent from direct human oversight, is now the reality facing scientists, engineers, and philosophers alike. Citing the Three Laws of Robotics, Wallach and Allen directly link science fiction and the important blueprint it provides to the realities of science and technology outcomes.<sup>194</sup> Though the authors are quick to point out the limitations of Asimov's early blueprint for containing intelligent machines, they nevertheless cite Asimov's stories as the catalyst, the inspiration, for their book's objective: a guide on how to engineer robots that serve humanity

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<sup>193</sup> Sylvia Wynter, 1977,1992, 1995; McKittrick, 2021.

<sup>194</sup> "Isaac Asimov, more than fifty years ago, foresaw the need for ethical rules to guide the behavior of robots. His Three Laws of Robotics are what people think of first when they think of machine morality" (Wallach and Allen, 2009, 3).

peacefully.<sup>195</sup> This work by Wallach and Allen is important from a spatial perspective, I argue, because it is one of the earliest texts in scholarship about robots that rooted its prescription for robot containment in the fear incited in a science fiction story. The importance of *Moral Machines* in relation to a scholarly Cartography of Subordination, I contend, is how it functions to both name and place robots.

These authors begin their book with an acceptance that robots (what their book refers to as artificial moral agents or AMA's), in name attribute, are slaves or tools that are to be used for human purposes.<sup>196</sup> Wallach and Allen situate their "concern" about robots as a timely intervention that is needed as, "systems are approaching a level of complexity that, we argue, requires the systems themselves to make moral decisions--to be programmed with "ethical subroutines."<sup>197</sup> In other words, from their vantage of expertise, there is an ethical intervention concerning robots that are needed as it relates to programming and, without intervention, the consequences towards humans would be too great, if not fatal. Given what they see as the inevitable relationship engineering has the potential to bring forward with intelligent robots, they thus use the book to make their case as to why machines must have some sort of ethical programming. By introducing their intervention as a concern, what Wallach and Allen immediately do is recognize (name) robots as tools and then place robots into a dialectical relationship with humans

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<sup>195</sup> "Asimov, however, was writing stories. He was not confronting the challenges that face today's engineers: to ensure that the systems they build are beneficial to humanity and do not cause harm to people." (Wallach and Allen, 2009, 3-4).

<sup>196</sup> Wallach and Allen, 2009, 16.

<sup>197</sup> Wallach and Allen, 2009, 4.

where the robots are *caste* to the margins. As I argued in chapter three, relegating, or placing something (or someone) at the margins is a deliberate tool to maintain hegemonic hierarchies.

Wallach and Allen justify this dialectic by positioning their project as one primarily concerned with safety -- primarily the safety of humans in the human/robot relationship, and specifically the future relationship they foresee as machines reach levels of intelligence that match if not exceed that of humans. Their book, therefore, attempts to consider issues with what they call “bad design” or the consequences that lead to physical harm to humans when engineers do not properly contain intelligent machines.<sup>198</sup> Just as in science fiction stories, this relationship centers human values (ethical systems), human goals, and human safety above all else. Wallach and Allen establish, with authority, the centering of human perspectives as they relate to robot ethics. In other words, they both name and place robots--and they do it by rationalizing how this future relationship must center the master or the human because it is logical, responsible, and ensures the safety of humans, “The system’s choices should be sensitive to humans and to the things that are important to humans.”<sup>199</sup> AMA should therefore be programmed with two design features: autonomy and sensitivity. Autonomy is to be understood as freedom to operate independently of human output or input and sensibility, or the inclination or attitude

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<sup>198</sup> Wallach and Allen, 2009, 22.

<sup>199</sup> Wallach and Allen, 2009, 25.

towards humans that is favorable on the part of the robot towards humans over their own interest or goals.<sup>200</sup>

Containment, as I established in chapter three, is rooted in paranoia about perceived difference where difference is coded as dangerous. While Wallach and Allen are more even-handed in their approach compared to others, they still place the impetus of this need for containment in a hypothetical assumption of some sort of problem that doesn't yet exist (in most cases). By suggesting that robots must be programmed in a way that solely enhances human welfare and is done in the name of responsibility, Wallach and Allen can use rationality to leverage paranoia and justify containment. Relying on hypothetical situations, as noted by David Gunkel, is an intentional rhetorical strategy:

These hypothetical scenarios are provocative, but they are, like all forms of futurism, open to the criticism that accrue to any kind of prediction about what *might* happen with technologies that *might* be developed and deployed. In fact, one only needs to count the number of times modal verbs like “might” and “may” occur and take the place of more definite copular verbs like “is” and “will...”<sup>201</sup>

Notably, they only cite extreme cases or applications of intelligence in the case of killer robots in the military or military applications such as drones used in war or combat.<sup>202</sup>

These are, by most measures, extreme applications for robots in relationship to humans

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<sup>200</sup> Wallach and Allen use the term AMA as a substitute for robots or AI.

<sup>201</sup> Gunkel; 2018, 95.

<sup>202</sup> “The possibility of a human disaster arising from the use of (ro)bots capable of lethal force is obvious, and humans can all hope that the designers of such systems build in adequate safeguards. However, as (ro)botic systems become increasingly embedded in nearly every facet of society, from finance to communications to public safety, the real potential for harm is most likely to emerge from an unanticipated combination of events.” (Wallach and Allen, 2009, 21).

and yet, by using hypotheticals at the extreme ends of the spectrum, their case for building robots in such conditions of containment provides a logical, sensible, and imperative pretext in the favor of containment. These extreme hypotheticals also mask the actual slow and iterative deployment of robotics over time and therefore the everyday and common ways people might materially feel violent or harmful impacts of these technologies are overlooked. There is no doubt that justifying or providing license for total containment is an essential project in power dynamics such as slavery. As Hartman writes:

The incessant reiteration of the necessity of submission--the slave must be subject to the master's will in all things--upheld submission as the guiding principle of slave relations, if not the central element in the trinity of slavery, sentiment, and submission...<sup>203</sup>

Wallach and Allen set up the dialectic and therefore the problem in this book. They suggest a possible threat and therefore instill a paranoia that necessitates action.

It has been suggested that philosophers like to think in terms of abstractions and engineers think in terms of buildable design; nevertheless, "theory can inform design, and vice versa."<sup>204</sup> Building on the scholarship of Wallach and Allen as well as other discussions in robot ethics, philosopher Nick Bostrom's *Superintelligence: Paths Dangers and Strategies* caught global attention by engineers, scholars, and private industry leaders alike. Hailed by the likes of Bill Gates, Elon Musk, and Nils Nilsson,

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<sup>203</sup> Hartman, 1997, 90.

<sup>204</sup> Patrick Lin et al, *Robot Ethics: The Ethical and Social Implications of Robotics*, (MIT Press; 2012) 59.

Bostrom's work operates as a sort of field guide that both names robots (as his work calls them *superintelligence*) as slave and places them as potential problems that must serve humanity asking, "How can we get a superintelligence to do what we want? What do we want the superintelligence to want...which value should we install...?"<sup>205</sup>

Bostrom's field guide uses rhetoric to position robots as inevitably threatening to humanity if not properly controlled. What he describes as a "menacing prospect", or "treacherous turn" is the potential future where robots/superintelligence place their own goals ahead of humanity.<sup>206</sup> While Bostrom's work relies on speculation – the *potential* problem, the *possible* problem – it is discursively successful in installing the needed paranoia to justify containment.<sup>207</sup> It is in this way that Bostrom's work is successful in both using language to perpetuate a socially acceptable form of containment without regard to the historical connection in which it is situated.

As I noted in chapter three, however, paranoia on its own is not an anti-Black project; to become racialized, it must also be coupled with surveillance and containment. Max Tegmark's *Life 3.0* provides the most contemporary, most crystalized plea for containment, writing:

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<sup>205</sup> Bostrom; 2016, 256.

<sup>206</sup> Bostrom; 2016, 145.

<sup>207</sup> "It is no part of the argument in this book that we are on the threshold of a big breakthrough in artificial intelligence, or that we can predict with any precision when such a development might occur. It seems somewhat likely that it will happen sometime in this century, but we do not know for sure" (Bostrom; 2016, v-vi).

The more intelligent and powerful machines get, the more important it becomes that their goals are aligned with ours. As long as we build only relatively dumb machines, the question isn't whether human goals will prevail in the end, but merely how much trouble these machines can cause humanity before for we figure out to solve the goal-alignment problem.<sup>208</sup>

His work stands on the shoulders of his predecessors to consider the necessity of developing robots that are subservient to human masters to protect humanity. Tegmark, throughout his book, asks how to “guarantee” that robots retain your [human] goals?<sup>209</sup> Put differently, how do you guarantee a robot stays or is contained in place? His primary concern is with goal alignment or ensuring that the robots we build value our values in humanity.<sup>210</sup>

Citing Bostrom, Tegmark equates the emergence of a robot (Tegmark and Bostrom use the term Superintelligence to denote a highly advanced robot/AI) to an “unleashing.” Here, Tegmark embraces a spatial relationship between humans and robots where robots are consigned to a subordinate status. If the worst thing a robot can do is be unleashed, then the spatial imperative of the philosophers, engineers, and scientists is to contain. Tegmark outlines the timely imperative for humans to develop robots responsibly so that their future goals are aligned with humans:

1. Making AI *learn* our goals
2. Making AI *adopt* our goals

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<sup>208</sup> Max Tegmark, *Life 3.0 Being Human in the Age of Artificial Intelligence*, (Knopf; 2019), 259.

<sup>209</sup> Tegmark; 2019, 263.

<sup>210</sup> “But even if you build an AI that will both learn and adopt your goals, you still haven't finished solving the goal-alignment problem: what if your AI's goals evolve as it gets smarter? How are you going to guarantee that it *retains* your goals no matter how much recursive self-improvement it undergoes?” (Tegmark; 2019, 263).

### 3. Making AI *retain* our goals<sup>211</sup>

What Tegmark's work does is solidify the Cartography of Containment by presenting goal alignment in what I argue is a spatial framing that appeals to a sense of paranoia and requests constant surveillance of robots to keep them in alignment with humans--to keep robots in place. Here, Tegmark goes beyond Wallach and Allen who are concerned with development goal number one (learning goals) as well as Bostrom (adopting goals) and appeals for retainment of goals.

What each of these prominent scholarly works achieves is remaking a Cartography of Subordination by building an existing spatial grammar in popular culture that first establishes robots as lower in the social hierarchy compared to humans, then associates robots as *other* who have the potential for violence and destruction--all of this then necessitate complete human control over robots to maintain social order. Therefore, with robots understood as *others* or slaves who threaten violence or disorder and necessarily demand control, we can see how these narrative components have not only taken up the same spatial grammar but provided it legitimacy via the academy. These four authors are not the only thought-leaders focused on the connection between robots and spatial control of robots (quick cite articles) but their scholarship is foundational in the field of robot ethics in academic and public discussions on how humans should responsibly build future robots.

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<sup>211</sup> Tegmark; 2019, 260.

If Wallach, Bostrom, and Tegmark’s influence not only penetrates the academic domain, but a more popular audience because of their style and availability, which includes some of the world’s most influential, wealthy, and powerful players in the technology industry then the influence of their ideas, the narrative in their books, is incredibly effective and persuasive. What this means is that tech moguls like Bill Gates and Elon Musk, the people who are helping to drive these technologies by way of purchasing power and investment, are taking counsel from these scholars and their scholarship. In other words, if each of these texts remakes and uphold Cartographies of Containment then these backers with immense social and monetary capital at their disposal, are essentially bankrolling the development of anti-Black futures.

### **Whiteness Only Produces White Futures**

Ruha Benjamin, in her 2019 book, *Race After Technology*, advises that those interested in exploring the connection between race and technology do not simply look at the connections between race, racism, and technology beneath the so-called “surface” but also importantly on the surfaces themselves.<sup>212</sup> Taking this advice literally, and aided by Katherine McKittrick’s *Dear Science*, I turn to the lack of citations in each of these referenced scholarly works (Wallach and Allen, Bostrom, and Tegmark). Sarah Ahmed contends that the practice of citation in academia is both gendered and racialized.<sup>213</sup> More specifically, she contends that a bibliography that intentionally chooses not to center

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<sup>212</sup> Benjamin, 2019, 45.

<sup>213</sup> Sarah Ahmed, 2014.

white men or that excludes white men ultimately decenters a white, male perspective allowing for a feminist and decolonial intervention to read loud and clear. conversely, citation practices that only center the scholarship of white, western, and male scholars can only serve to preserve hegemonic, patriarchal, and racialized traditions. While white, male scholars can be and often are themselves engaged in feminist and decolonial work, the point is to be intentional in responsible and reflexive scholarship and citation practices. Citations, or the practice of attributing the ideas, words, narratives, ideas, and work of others is an inherently spatialized project as Katherine McKittrick explains:

One important key to think about it, of course, geography: colonial and positivist geographies necessitate authentication, and authentication authenticates belonging on positivist terms. Knowledge systems that value transparency authenticate these geographies. The purveyors of colonial and positivist geographies, those empowered by racial capitalism, authenticate these spaces by valuing and economizing normative reading-citation practices that require racial subordination... We can thus acknowledge that references and citations are concretized, that colonialism and positivism have referential consequences, that referential consequences concretize inequity, and that referencing is a spatial project.<sup>214</sup>

I cannot speak to the intentionality behind the bibliographies of *Moral Machines*, *Superintelligence*, or *Life 3.0* but I can speak to the matter that each of these bibliographies seldom, or plainly do not cite scholarship related to robots written by Black authors.

Citations are the way that the scholarly community approves of one another's work, I have even heard that citations are the equivalent of a sixth love language; to cite someone is to write a strange sort of poetry to them--poetry that declares love. Less

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<sup>214</sup> McKittrick, 2021, 33.

romantically, citations and bibliographies articulate clearly and with precision the body of work that one's own scholarly work relies on and acknowledges. A lack of citations can also demonstrate a variety of meanings. Evaluating these leading scholarly texts related to robots, I argue, reveals an unmistakable racialized, anti-Black spatial project. I surveyed Wendall Wallach and Colin Allen's 2008 work which revealed that they failed to cite any Black scholars and a similar survey of the work of Bostrom and Tegmark revealed little to no direct references to Black scholars...and this is not an inventory problem.

By not citing any or few Black scholars or making the academic contributions of Black scholars who work on science fiction studies, science, and technology, philosophy, ethics, robotics, or even science fiction stories themselves means that the work these scholars themselves produce performs anti-Blackness by centering white perspectives. Plainly, citation practices demonstrate what and who we care about in the scholarly community, and it is evidenced by each bibliography that there is a clear lack of care given towards perspectives on robots that are non-white. The issue of this omission then is that these scholarly works, not only remake Cartographies of Subordination that originally were made in science fiction but that they also produce an anti-Black spatial project by way of their referential process. Where this begins to matter is when these works are taken up, given academic authority or license (when other authors and scholars cite these books as leading or exemplar texts on robots) and when these texts reach the desks of investors who rely on this academic license to invest their money and sponsorship.

White informed narratives forge anti-Black worlds. If the scholarship that is acknowledged in academic and public circles does not center or even feature perspectives, history, and research done by Black researchers then there is no way for whiteness to be decentered in the development and production of these emerging technologies. Ruha Benjamin writes that viewing technology as neutral or race-free means that it just makes space for anti-Blackness to continue unquestioned with the belief that somehow no one is responsible for the consequences of these technologies--that “our hands are clean.”<sup>215</sup> Similarly, a view that these texts should not be critically evaluated for their oversight or exclusion of Black authors only means that there will be room for exemption of blame when these robots (informed by the design outlines in these texts) exhibit clear displays of racism, anti-Blackness, or impact people in material ways. In other words, a failure to include any other perspectives beyond white perspectives can only serve to empower and enable anti-Blackness to continue to go unquestioned in the development of robots. In other words, a failure to include any other perspectives beyond white perspectives only licenses the production of anti-Black futures.

### **When Science Fiction Becomes Reality**

In chapter one of this dissertation, I evoked the work of James Tyner who proposed that stories have the potential to build and forge worlds. As the late Gregory Jerome Hampton speculated regarding robots:

It would appear that technology allows humanity to move toward a promise of the future while simultaneously holding onto the past...The slave community lied to itself about the true intents for the slave. Labor was never its sole function or

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<sup>215</sup> Benjamin, 2019, 69.

intent. Contemporary society continues to tell itself the same lies about the advent of robotics.<sup>216</sup>

At the heart of this exposure is the reckoning that without serious consideration about how science fiction and its embedded anti-Blackness has now been centered in practical and scholarly work, the world, and worlds that each of these scholars envisions is in fact a white world centered in whiteness. The potential of leaving this feedback loop unchallenged and unresolved is that the stories that now guide scholarship have real potential to impact real engineering projects and goals and eventually very real policy and material outputs of scientific engineering that will inevitably impact lives and the world of tomorrow. The final chapter of this dissertation will consider the tangible impacts that this unquestioned feedback loop has made in the daily lives of people; further, it will consider how, beyond simple exposure, the stories can be reclaimed and rewritten in ways that no longer rely on anti-Blackness and white supremacy as design elements.

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<sup>216</sup> Hampton, 2015, 13.

“They are still trapped in a history which they do not understand, and until they understand it, they cannot be released from it.”

-James Baldwin, 1963<sup>217</sup>

“The world is full of painful stories. Sometimes it seems as though there aren't any other kind and yet I found myself thinking how beautiful that glint of water was through the trees.”

-Octavia E. Butler, 1993<sup>218</sup>

## CHAPTER 5

### TOOLS TALKING BACK: TELLING NEW STORIES AND BUILDING ANTI-RACIST FUTURES

I mentioned early on in this dissertation that the project was not about robots—and it isn't, not really. Instead, this project has been a pursuit to give power to the robot story, to uncover the shrouded anti-Blackness embedded in the stories about robots that are told in the United States. I have made space to let the *thing* talk back to garner clarity from the story it has to tell us. I have uncovered the lies in the stories that provide deeper truths. I have connected the way US-American popular culture surrounding robots is rooted in anti-Black design and connected how science fiction stories and cultural artifacts *develop* into narrative which eventually becomes material outputs of science and technology. I have demonstrated the shrouded loop that exists between science fiction

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<sup>217</sup> Baldwin, *The Fire Next Time*, 8.

<sup>218</sup> Octavia E. Butler, *Parable of the Sower*, 1993.

and eventual outputs of science and technology in the United States. Put differently, using the story of the robot, I have examined how the cultural artifacts that we consume and invigorate directly inform the worlds we build and want to build.

I contend that science and technology in the United States can hide anti-Black design so well because of the perception that science as an institution is rational, neutral, and linear in progression. This presumption also supports a linear view of technology that suggests technology always drives progress or that science will almost certainly guarantee better, more developed outcomes. In other words, science (and by extension technology) is not thought of as having alternative objectives or values other than the pursuit of knowledge or discovery which makes it difficult to then unpack the ways that they can be in service of or perpetuate anti-Blackness. However, it is precisely in the spaces where white supremacy goes unchecked or unnoticed where it is preserved and protected. For this reason, I have focused on the US-American robot to demonstrate how this cultural deference towards science and technology coupled with the United States' allegiance to white supremacy created the perfect conditions for anti-Blackness to become a key design feature and narrative in how US-Americans recognize and interact with robots.

The United States has a unique relationship with science and technology that cannot be separated from the country's historical engagement and leadership in Enlightenment-era philosophy and reliance on scientific inquiry. The United States has, from its inception, operated from design choices rooted directly in The Age of Reason and as such cannot be divorced from its intimate attachment to scientific and

technological enterprise.<sup>219</sup> With such a devotion to the Enlightenment also comes a devotion to the ideas, philosophy, inventions, and tools of the era including the invention of the Black race and the absurd belief that whiteness and white skin should be the dominant standard and hegemonic power to which all others in the world should be compared. For this absurdity to be maintained, a new tool or technology, anti-Blackness emerged. It is critical to understand that this belief, this cognitive dissonance of white supremacy, requires constant attention and maintenance. Anti-Blackness offers a particular kind of rationale for white supremacy because anti-Blackness, as I have argued, has five tenets (temporality, dexterity, relationality, mundaneness, and appetite), that make it uniquely durable against erosion be it from time, cultural shifts, or critique.

Robin D.G. Kelly once quipped that they found it bothersome that people truly believed that simply “droppin’ science” on people would lead to new and liberatory social movements—that “droppin’ science” (presenting science as the way to save/solve complex social problems) would lead to better, more informed futures.<sup>220</sup> I find the use and leverage of science and technology to have had quite the opposite effect in many respects. Droppin’ science puts science on a pedestal, makes it a false god, a *Deus ex machina*, or a savior that it can’t be and shouldn’t be questioned. In the same Hegelian vein, the arc of science and technology, so the tale goes, always bends towards progress. Like Kelly I have long been dissatisfied with this technological determinism or

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<sup>219</sup> Dupree; 1957, 1.

<sup>220</sup> Robin D.G. Kelley, *Freedom Dreams: The Black Radical Imagination*, (Random House; 2002), 8.

assumption that technology (because it is a tool) is not responsible for the ways that it performs racial violence or, as my project contends, shrouds anti-Blackness.

The intention behind this analysis is to root out the way white supremacy is maintained in science and technology in the United States. I chose the story of the robot as the site of my examination because it shrouds white supremacy exceptionally well, but the robot is not what captures my attention as a scholar at the close of the day. What I care about, and where this dissertation makes an important intervention is uncovering this anti-Blackness so that we can ask deeper and broader questions about why in the United States we remain culturally connected to white supremacy. Further, I want us to demand that this allegiance to white supremacy stop. But simply pointing out anti-Blackness, as I have noted in chapter two, is not sufficient. Anti-Blackness is dexterous, it is agile and can easily shift or move into another space or institution if rooted out only in one area. In the case of my analysis, while I focus on robots, the broader implications of this dissertation are meant for this model to be used to look more holistically at science and technology in the United States to actively fight against the expansion, reappropriation or the continuation of science and technology shrouding anti-Blackness. In this concluding chapter I will briefly review this dissertation's knowledge contributions, evaluate the limitations of this research project, and then consider the applications of my dissertation's findings.

## **Contributions to Knowledge**

### ***Cartographies of Subordination***

A primary contribution of this dissertation has been to link the way popular culture, specifically stories and cultural artifacts about robots, are used to create Cartographies of Subordination. As a geographical contribution, this dissertation accounts for the complexity of science and technology as both an institution and as emerging or future material outputs. Because Cartographies of Subordination take “place” on physical maps, philosophically and theoretically, as well as in a temporal dimension both past and future they are easy to identify in science and technology which often occupy past, present, and futures. Cartographies of Subordination are not new ideas, but the way that they are accelerated and made more efficient through stories and narratives makes them difficult to combat. These types of cartographies, I argue, are tricky to understand and uncover because of how they deeply penetrate collective consciousness about things that are perceived as dangerous or other (like robots) and therefore become difficult to unravel. I also argue that these Cartographies are not only products of popular culture, but also are provided license through academic texts. If the US-American robot serves to maintain white supremacy through a Cartography of Subordination then the question is begged, what other technologies or scientific spaces similarly serve white supremacy?

### ***Anti-Blackness a Technology***

The United States is a country that has, from its origins, invested in scientific inquiry and technological progress. This investment and belief in science and technology is fundamental to understanding the United States’ cultural commitment to white supremacy. As a nation built with unpaid slave labor, on land stolen through Indigenous

genocide, the United States has always been a place devoted to and economically reliant on, a belief in white supremacy. Anti-Blackness is not proprietary to the United States, but it is a product of the white western world that originated in the Enlightenment. Understanding how anti-Blackness is wielded as a tool provides the needed context to better combat it. I have shown in this dissertation that this analysis of anti-Blackness is essential when looking at science and technology in the United States. It is not sufficient to only look at racism or racial connections in science and technology, but anti-Blackness as a tool because it is more agile, more insidious, and can withstand the test of time. Anti-Blackness has five main tenets, temporality, dexterity, relationality, mundane, and repetitiveness that provide it with a particular kind of callousness that allows it to persist over space and time.

### ***US-American Technology Shrouding Anti-Blackness***

I draw out how anti-Blackness finds refuge in US-American science and technology as a way to cloak or shroud its devotion to white supremacy. Because science and technology are often viewed as deterministic or linear in development it has historically been able to avoid blame for consequences that are both intentional and unintentional. I connect how the built-in assumptions of neutrality--the belief in science for science's sake--and linear progress--that technology can only serve to make things better--makes it the perfect place for the United States' cultural fidelity towards white supremacy to be carried into future spaces with little to or no questioning.

### **Limitations and Directions for Future Research**

While my research questions were driven by the uniquely racialized and anti-Black culture of the United States, this dissertation project is, however, limited in approach. Robots are not proprietary to the United States and many unique geographic considerations have the potential to be explored from both country-specific and global perspectives. Furthermore, I did not attend to the intersections of race with gender and capitalism in this project, but these dimensions are, I believe, critical lenses to further consider the robot story through. I intentionally did not take on these dimensions in my dissertation for two reasons. First, much of this research project was devoted to developing a framework that could not only be used for future work on the critique of other technologies but also other dimensions of analysis. I judged it best to focus on one dimension at this stage to generate a robust framework. Second, it has always been my intention to develop this dissertation as a manuscript for academic publication. In the next phases of my research, I intend to fold in additional dimensions of analysis. Be that as it may, I do believe that the limited scope of my research project is important because it provides a legible framework for not only my future research to use to develop these future focuses of study, but also other scholars interested in this academic labor. I have confidence that this dissertation will provide future scholarly projects with a sound model or infrastructure that can be scaffolded with ease. While I limited my scope to this specific focus, my work is intentionally foundational and meant to be in service of continued and more compounded research on the connection between popular culture and science and technology broadly. In fact, in the next stages of my research, I not only intend to format this project as an academic manuscript but further infuse my existing analysis with Marxist and Feminist critiques of the US-American robot story.

## **Application of Research**

### ***Things Talking Back***

I consider it a great accomplishment of this dissertation project that I have been able to convene a wide diversity of disciplines and fields of study (Black Geography, Science and Technology Studies, Philosophy, Science Fiction Studies, Cultural Studies, Cultural Geography, Black Feminist Science and Technology Studies, Critical Theory, Rhetoric, Black Studies, Sociology, and Internet Studies) including existing and new perspectives on the connection between science and technology, geography, and anti-Blackness. My primary goal in this project is to allow what has always been characterized as the “thing” the “other” the “slave” the opportunity to talk back to the master. What I have learned from listening is first, history is not in the past; the United States is not a country that was *historically* anti-Black and has been absolved of its racial sins because slavery was abolished or because Civil Rights occurred or because many white folks in this country voted for Obama—twice. Instead, listening to *the thing* has only strengthened the idea that our history and our cultural values are as much inscribed into our present consciousness as ever. I also learned that hope is not lost. Just because the United States continues to support and even build its allegiance to white supremacy does not mean that it must continue to do so. In fact, while science and technology are some of the guiltiest players in maintaining white supremacy, they also offer, I believe, the most radical possibility of transforming society into the world we want to see.

### ***Cite Black Women***

My first time presenting at the American Association of Geographers in 2019, I saw a woman in the audience of a paper presentation with a shirt that read “CITE BLACK WOMEN.” Years later, I consider this to be one of the most important ways to combat whiteness in the scholarly world. In chapter four, I presented the problem that arises when BIPOC scholars are excluded from conversations about technology. Further, I explored how BIPOC voices do not get the attention they deserve from the people with money and power who are rapidly influencing (with their money and power) how this world is being future proofed. The response to this problem, as the shirt read, cite Black women, and cite BIPOC scholars from multidisciplinary perspectives. Citations offer advice, they offer tools, and they provide historical and intersectional contexts. Yet the most prominent conversations about the development of robots are missing each of these elements.<sup>221</sup> I echo Katherine McKittrick when she writes that bibliographies and endnotes provide a space for liberation.<sup>222</sup> Further, multidisciplinary citation practices allow for a rich and robust conversation to convene. Multiple perspectives in a scholarly discussion or debate do not deter from the questions or problems at hand but serve to enhance the way complex problems can be solved.

A world that is actively anti-racist and that dismantles the most insidious, abhorrent, disgusting, and wretched thing to have ever come into this world’s existence: the belief that white skin somehow made someone superior. But to be clear, building anti-

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<sup>221</sup> McKittrick; 2021, 19.

<sup>222</sup> McKittrick; 2021, 18.

racist worlds cannot operate in the business-as-usual mode of science and technology. “Droppin’ science” isn’t going to cut it. To build anti-racist futures means telling new stories that no longer shroud anti-Blackness but instead actively co-conspire against it-- stories that can outwit whiteness. But these stories cannot be told in the same white way they have always been told:

To do radical interdisciplinary work, from a black sense of place, that changes the kinds of questions we ask is not just about reading outside of our discipline, researching, and using slices and terms from people we do not normally read; it is about sharing ideas comprehensively and moving these ideas into new contexts and places.<sup>223</sup>

Only citing Kant and Hegel and Mill when discussing robot ethics but omitting the considerations of bell hooks, Frantz Fanon, and Sylvia Wynter is, I argue, inexcusable. To draw from science fiction writers like Isaac Asimov or H.G. Wells but not consider George Schuyler or Octavia Butler can no longer be the status quo.

### ***Epistemic Disobedience and Telling New Stories***

Cartographies of Subordination first require acknowledgment; they must be identified and named to uncouple them from their commonplaceness. Second, they must be rejected and replaced with new grammars—grammars that talk back. If historical space and place create the foundation or the blueprint for the future, then all space and place, I argue, is in constant production and should be understood as constantly being remade. Locations and persons who were once relegated to the margins can be changed.

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<sup>223</sup> McKittrick; 2021, 119.

Policies, laws, and maps that kept people in place can be remade. Stories that shrouded anti-Blackness and reinforced white supremacy can be discarded. Stories can and must be reimagined, retold, and informed by history. Spatial grammars of domination succeed when they are maintained, to dismantle them requires new grammars that tell new stories to produce new spatial meanings; meanings that are not predicated on control but that imagine the world differently.

Katherine McKittrick cautions us those geographic projects of domination that favor social hierarchy are often “normal” and “seductive” in that they often are not recognizable.<sup>224</sup> In other words, we take them for granted and do not see them for what they truly are. Spatial grammars of domination and conquest and Cartographies of Containment thrive, as I have demonstrated, through normalization subtly reinforced in story after story. It is because of this that they can be incredibly challenging to dismantle, let alone recognize. To intervene in the production of future space, I offer “epistemic disobedience” which requires an active, “practice of rethinking and unraveling dominant worldviews...it demands a delinking of oneself from the knowledge systems we take for granted (and can profit from).”<sup>225</sup> At its core, epistemic disobedience is a method of

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<sup>224</sup> “Dominate geographic patterns can often undermine complex interhuman geographies by normalizing spatial hierarchies and enacting strict spatial rules and regulations... “Normal” and seductive geographies contribute to the ways in which geography appears to be fixed and draw us to this fixity though it is natural” (McKittrick 2006, 145).

<sup>225</sup> Walter D. Mignolo, “Sylvia Wynter: What Does it Mean to Be Human?” in *Sylvia Wynter on Being Human as Practice*, (Durham: Duke University Press), 2015.

praxis that provides the tools to interrogate, reject, and emerge delinked from hegemonic projects of conquest.

While science and technology often force us to think primarily about the future--the future we want to build--that same forward-thinking can be blinding and dangerous. Without being able to simultaneously negotiate history in the present (an important methodology from Black studies) alongside the future, there becomes an inability to fully reconcile the past. Epistemic disobedience rejects the antithetical relationship between the past and the future and places history squarely in the present. When we acknowledge and center history, it allows for a more comprehensive understanding of where anti-Blackness might have come from, where it is possible to still exist, and how to then avoid or innovate out of an anti-Black future. I like to think about epistemic disobedience as one might consider the occupation of a barrister. How can one successfully represent a client in a trial if they do not fully understand the law? It's not out of bounds for a lawyer to review the previous precedent, to evaluate the constitutionality of a law, or to review historical cases to be best prepared to represent their case in the present so that they can win their trial. It is the same case in epistemic disobedience. To make anti-racist technology, it is fundamental to understand the history and cultural connections of the past to technology.

The work now is to unpack the ways that whiteness in our culture at large, not just in film or stories about robots, has used US-American science and technology to adapt and skillfully insert itself into conversations about the future, technology, and progress in ways that continue to be abjectly violent and anti-Black. While science fiction offers

imagined or fictional worlds, they do offer important and real visions of how the world might be otherwise. Therefore, if white racialized space is understood as “real space that produces real material effects upon real material bodies” it is important that anti-racist projects find the spaces (real or imagined) and critically examine the ways that they might animate, steer, and produce very “*real material effects*” in service of whiteness.<sup>226</sup>

I have offered a spatial lens in this dissertation to understand stories of the past, and because I believe stories are world-building. Cartographies of Subordination have been historically shrouded, but by bringing them into view we can lay bare their intentions to dismantle them. In some ways fighting stories with stories is the way forward—but only if we utilize stories that are directly informed by history. And that means if stories from the past have been destructive, violent, racist, and anti-Black, it also means that new stories can be a liberatory tool of imagination—a way forward must include the telling of new stories where everyone has a place, and no one is put into place.

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<sup>226</sup> Ore, 2019.

"Popular culture is one of the sites where this struggle for and against a culture of the powerful is engaged: it is the stake to be won or lost in that struggle. That is why 'popular culture' matters. Otherwise, to tell you the truth, I don't give a damn about it."

-Stuart Hall, 1981<sup>227</sup>

## EPILOGUE

I told my committee that I would write the epilogue at the end of the dissertation. Seems logical? Write the beginning at the beginning and the end at the end? To be honest, I put it off and then put it off again...and then again. Everything I wanted to say, the metaphorical bow I was supposed to put on the project, just felt contrived each time I tried to put pen to paper.<sup>228</sup> I could write an anecdote, – perhaps about the time during my Ph.D. studies that I was kicked off health insurance because my employer found out I supported Black Lives Matter on social media? Or the time that a family member accused me of being a covert member of “Antifa” who donated a family gun to the local Antifa Goodwill, tax receipt and all? Perhaps the [insert number of times] I told someone about

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<sup>227</sup> Stuart Hall, *Notes on Deconstructing the Popular*, 1981.

<sup>228</sup> As a Geographer, I think a lot about places. The places I worked on my dissertation were as important, if not essential, to the work I was able to piece together in my four short years of doctoral work. From rainy days in my office at the Graduate Student Center accompanied by Cole Porter and Al Green to the pre-Covid coffee shop jam sessions at Lux or Infusion with colleagues, to the makeshift office I assembled on the many airplane trays on my flights across the country, each of these places will always be remembered as the places that helped me come into my identity as a scholar. This dissertation was, in many ways a place—a destination I was trying desperately to get to and one I often felt I would never arrive at. Every sound, every smell, every memory, friend, book, conversation, argument, tearful writing session all convened at different times and in different ways, for me to finally get here—to arrive at the place I always wanted to be at but anguished would only exist in my most distant dreams, my most aching of aspirations.

my dissertation topic, and they asked me, “why everything had to be about race these days?” Each of these attempts felt contrived, forced, trying too hard to be witty.

So, I am ending this by saying what I know to be true and that there is no metaphorical bow on this project—and perhaps, if I really think about it, there never was going to be. The truth of the matter is that I have been, and am, haunted by the pervasiveness of whiteness in this world. And I am deeply ashamed of the way that I woke up each morning and put my head to my pillow each night for so long without ever thinking about whiteness; without acknowledging *my* whiteness. When you are white you don’t have to think about being white because it’s so pervasive in everything around you. It is both the standard you hold everything against and the standard that feels ubiquitous. You solipsize your experience thereby assuming it is the same experience that everyone else in the world feels in the same way. Why question the standard especially when it always treats you so well? The answer is you typically don’t. I didn’t—and I still often don’t. But learning more and more about whiteness began to torment me—a revenant at all hours of the day and night—and I don’t want it to go away, and I don’t think it can, and I won’t let go of this haunting. So, when I say there is no bow on this project it’s because I can’t accept that this project ends here when it’s honestly just begun.

So let me start (again) with a movie. One of the gifts bestowed on us in 2020 was Regina King’s film adaptation of the Kemp Power’s play by the same name, *One Night in Miami*.<sup>229</sup> The film, like the play, presents a fictional account of when Muhammad Ali

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<sup>229</sup> *One Night in Miami*, 2020.

(still Cassius Clay at this time), Malcolm X, Sam Cooke, and Jim Brown get together to celebrate Ali's title win over Sonny Liston in 1964. The film has a quiet, beautiful build that develops as Malcolm X and Sam Cooke disagree with one another (first in jest and increasingly with more passion and anger) about each other's level of intensity or devotion to the Black struggle in the United States. Cooke simplifies X as a religious zealot who is perhaps too close to the cause for any one person. X ridicules Cooke for his entertainment success claiming that artists like Bob Dylan are producing passionate music about the Black struggle while Cooke on the other hand plays different shows for white folks than Black folks.

I won't give away how the tension finally boils over, but there is one part of their discussion that I think is so raw and so heartbreaking; Malcolm X says to Sam Cooke, "Then, then, then, then strike with the weapon that you have, man: your voice!" Cooke responds defensively to what he perceives as an attack, but it is here that audiences see the pain behind X's voice and in his eyes. At this moment, the audience sees an almost jealous X admit a sort of personal defeat; while he might be a revered orator and activist, he can never have the same audience or reach as an entertainer like Sam Cooke who can transport audiences, deliver poetry, and tell stories with his voice.

I like to imagine that this is a cinematic moment that the late Stuart Hall would have commented on. Specifically, because of the way that this moment so beautifully acknowledges the importance of, and the power behind, popular culture. Hall was a tremendous orator and scholar, but in just two lines of dialogue, *One Night in Miami* demonstrates the weight and influence that popular culture can achieve like no other form

of expression can. Just as popular culture can and has historically been inseparable from or in service of white supremacy, it can also be a means to reject and recover from whiteness. So, if we are to strike with these powerful, powerful weapons like popular culture—like story—then I think it's about time we tell a new damn story.

## REFERENCES

- Abnet, Dustin A. *The American Robot: A Cultural History*. Chicago University Press, 2020.
- Abu-Jamal, Mumia. *Live from Death Row*. Reading, Mass: Addison-Wesley Pub. Co., 1995.
- Ahmed, Sara. *Living a Feminist Life*. Durham: Duke University Press, 2017.
- Ahmed, Sara. "White Men." *Feministkilljoys* (blog), November 4, 2014.
- Adas, Michael. *Machines as the Measure of Man: Science, Technology, and Ideologies of Western Dominance*. Cornell University Press, 2014.
- Anderson, J. *Understanding Cultural Geography: Places and Traces*. London: Routledge, 2010.
- Ashrafian, Hutan. "Artificial Intelligence and Robot Responsibilities: Innovating Beyond Rights." *Science and Engineering Ethics* 21, no. 2 (April 2015): 317–326.
- Asimov, Issa. *I, Robot: The Robot Series*. Bantam Books, 2008.
- Baldwin, James. "On Being "White" and Other Lies," in *Black Writers in What it Means to Be White*, edited by David R. Roediger, 277-180. New York: Schocken Books, 1998.
- Baldwin, James. *James Baldwin: Collected Essays*. New York: Library of America, 1998.
- Benjamin, Ruha. *Race after Technology: Abolitionist Tools for the New Jim Code*. Cambridge, UK: Polity, 2019.
- Bertolini, Andrea. "Robots as Products: The Case for a Realistic Analysis of Robotic Applications and Liability Rules." *Law, Innovation, and Technology* 5, no. 2 (2013): 214–247.
- Bonilla-Silva, Eduardo. *White Supremacy and Racism in the Post-Civil Rights Era*. Lynne Rienner Publishers, 2001.
- Bonilla-Silva, Eduardo. *Racism Without Racists: Color-Blind Racism and the Persistence of Racial Inequality in the United States*. Lanham: Rowman and Littlefield, 2006.

- Bonilla-Silva, Eduardo. "The invisible weight of whiteness: the racial grammar of everyday life in contemporary America." *Ethnic and Racial Studies* 35, no. 2 (2011): 173-194.
- Bostrom, Nick. *Superintelligence: Paths, Dangers, Strategies*. Oxford University Press: 2016.
- Brewer, Daniel. *The Enlightenment Past: Reconstructing Eighteenth-Century French Thought*. Cambridge: Cambridge University Press, 2008.
- Bridges, George and Rosalind Brunt. *Silver Linings Some Strategies for the Eighties: Contributions to the Communist University of London*. London: Lawrence and Wishart, 1981.
- Brock, André, Lynette Kvasny, and Kayla Hales. "CULTURAL APPROPRIATIONS OF TECHNICAL CAPITAL: Black Women, Weblogs, and the Digital Divide." *Information, communication & society* 13, no. 7 (October 1, 2010): 1040–1059.
- Brock, André. "Beyond the Pale: The Blackbird Web Browser's Critical Reception." *New Media & Society* 13, no. 7 (November 2011): 1085–1103.
- Browne, Simone. *Dark Matters: On the Surveillance of Blackness*. Durham: Duke University Press, 2015.
- Buck-Morss, Susan. *Hegel, Haiti, and Universal History*. Pittsburgh: University of Pittsburgh Press, 2009.
- Butler, Judith. *Excitable Speech: A Politics of the Performative*. New York: Routledge, 1997.
- Butler, Octavia E. *Kindred*. New York: Doubleday, 1979.
- Butler, Octavia E. *Parable of the Sower*. A Four Walls Eight Windows 1st ed. New York: Four Walls Eight Windows, 1993.
- Calhoun, Craig. "The Idea of Critical Theory." Lecture presented at Arizona State University, Tempe, Arizona, August 24, 2021.
- Čapek, Karel, and Claudia. Novack. *R.U.R. (Rossum's Universal Robots)*. London: Penguin Books, 2004.
- Césaire, Aimé. *Discourse of Colonialism*. New York: Monthly Review Press, 1972.
- Cellan-Jones, Rory. "Stephen Hawking warns artificial intelligence could end mankind" BBC published December 2, 2014. Accessed February 28, 2022, <https://www.bbc.com/news/technology-30290540>

- Chang, Alisa. “Black Americans And The Racist Architecture Of Homeownership.” Produced by NPR. *Code Switch*. May 8, 2021. Podcast, <https://www.npr.org/sections/codeswitch/2021/05/08/991535564/black-americans-and-the-racist-architecture-of-homeownership>
- Chude-Sokei, Louis. *The Sound of Culture: Diaspora and Black Technopolitics*. Wesleyan University Press, 2016.
- Collins, Patricia Hill. *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*. 1990. Reprint New York: Routledge, 2000.
- Crampton, Jeremy W., and Stuart Elden. *Space, Knowledge and Power Foucault and Geography*. Aldershot: Ashgate, 2007.
- Crenshaw, Kimberle. “Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color.” *Stanford Law Review* 43, no. 6 (1991): 1241-1299.
- Daston, Lorraine, and Peter Galison. *Objectivity*. New York: Zone Books, 2007.
- Daniels, Jessie. “My Brain Database Doesn’t See Skin Color: Color-Blind Racism in the Technology Industry and in Theorizing the Web.” *American Behavioral Scientist* 59, no. 11 (October 2015): 1377–1393.
- Eglash, Ron. “Anti-Racist Technoscience: A GENERATIVE TRADITION.” In *Captivating Technology*, 227-251. Duke University Press, 2019.
- Ellis, Joseph J. *American Creation: Triumphs and Tragedies in the Founding of the Republic*. New York: Random House, 2007.
- Fanon, Frantz. *Black Skin, White Masks*. New York: Grove Press, 2008.
- Flanagan, James. “Deconstructing Mayberry: Utopia and Racial Diversity in the Andy Griffith Show,” *Continuum* 23, no. 3 (2009) 308.
- Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books, 1979.
- Gilmore, Ruth Wilson. “Abolition Geography and the Problem of Innocence.” In *Futures of Black Radicalism*, edited by Alex Lubin and Gaye Theresa Johnson, 225-240. New York: Version, 2017.
- Gilroy, Paul. *The Black Atlantic: Modernity and Double Consciousness*. Cambridge: Harvard University Press, 1993.

- Gunkel, David J. *The Machine Question: Critical Perspectives on AI, Robots, and Ethics*. Cambridge: MIT Press, 2012.
- Gunkel, David J. *Robot Rights*. Cambridge: MIT Press, 2018.
- Inwood, Michael J. *A Hegel Dictionary*. Blackwell Publishers: 2003.
- Hale, Grace Elizabeth. *Making Whiteness: the Culture of Segregation in the South, 1890-1940*. 1st ed. New York: Pantheon Books, 1998.
- Hall, Stuart, David Morley, and Kuan-Hsing. Chen. *Stuart Hall: Critical Dialogues in Cultural Studies*. London: Routledge, 1996.
- Hall, Stuart. "Encoding and Decoding in the Television Discourse," in *Stuart Hall Essential Essays Volume 1*. Durham: Duke University Press, 2019.
- Hall, Stuart. "Notes on Deconstructing "the popular," in *Stuart Hall Essential Essays Volume 1*. Durham: Duke University Press, 2019.
- Hampton, Gregory Jerome. *Imagining Slaves and Robots in Literature, Film, and Popular Culture: Reinventing Yesterday's Slave with Tomorrow's Robot*. Lanham: Lexington Books, 2015.
- Haraway, Donna. "Situated knowledges: The science question in feminism and the privilege of partial perspective," *Feminist Studies* 14:3 (1988): 575-599.
- Haraway, Donna. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge, 1991.
- Harding, Sandra. *Whose Science? Whose Knowledge? Thinking from Women's Lives*. Ithaca: Cornell University Press, 1991.
- Harding, Sandra. *Sciences From Below Sciences from Below: Feminisms, Postcolonialities, and Modernities*. Durham: Duke University Press, 2008.
- Harris, Cheryl. "Whiteness as Property." *Harvard Law Review* 106, no. 8 (1993): 1707-791.
- Hartman, Saidiya. *Scenes of Subjection: Terror, Slavery, and Self-Making in Nineteenth Century America*. Oxford University Press, 1997.
- Hegel, Georg Wilhelm Friedrich, Arnold V. Miller, and J. N. Findlay. *Phenomenology of Spirit*. Oxford England: Clarendon Press, 1977.

- Herzig, Rebecca. "The Matter of Race in Histories of American Technology," in *Technology and the African American Experience*, edited by Bruce Sinclair, 155-171. Cambridge: MIT Press, 2004.
- hooks, bell. *Killing Rage: Ending Racism*. New York: H. Holt and Co., 1995. hooks, bell. *Talking Back: Thinking Feminist, Thinking Black*. New York: Routledge, 2015.
- Johnson,
- Dupree, Hunter. "First attempts to form a policy" in *Science in the Federal Government: A History of Policies and Activities*. Baltimore: Johns Hopkins Press, 1957.
- Gaye Theresa, and Alex Lubin. *Futures of Black Radicalism*. London: Verso, 2017.
- Goldberg, Brett. "Home Work: Survivors of Sexual Violence on Doing Community and Re/orienting Justice Through Experience of Trauma and Times of Crisis." (doctoral dissertation, Arizona State University, 2022.
- Johnson, Gaye Theresa, and Alex Lubin. *Futures of Black Radicalism*. London: Verso, 2017.
- Kant, Immanuel, and Mary J. Gregor. *The Metaphysics of Morals*. Cambridge: Cambridge University Press, 1996.
- Kelley, Robin D.G. *Freedom Dreams: The Black Radical Imagination*. Boston: Beacon Press, 2002.
- Kendi, Ibram X. *Stamped from the Beginning: The Definitive History of Racist Ideas in America*. New York: Hachette Book Group, 2016.
- Kennedy, Tammie M, Joyce Irene Middleton, Krista Ratcliffe, et. al. *Rhetorics of Whiteness: Postracial Hauntings in Popular Culture, Social Media, and Education*. Carbondale: Southern Illinois University Press, 2016.
- Lacey Michael G. and Kent A. Ono, *Critical Rhetorics of Race*. New York: New York University Press, 2011.
- Latour, Bruno "Where are the missing masses? The sociology of a few mundane artifacts," in *Shaping Technology/Building Society: Studies in Sociotechnical Change*, edited by W. E. Bijker, and J. Law, 225-258. Cambridge: MIT Press, 1992.
- Lavender III, Isiah. *Race in American Science Fiction*. Bloomington: Indiana University Press, 2011.
- Lethabo King, Tiffany. *The Black Shoals: Offshore Formations of Black and Native Studies*. Durham: Duke University Press, 2019.

- Lin, Patrick et al. *Robot Ethics: The Ethical and Social Implications of Robotics*. MIT Press, 2012.
- Lipsitz, George. "The Racialization of Space and the Spatialization of Race: Theorizing the Hidden Architecture of Landscape." *Landscape journal* 26, no. 1 (2007): 10–23.
- Lipsitz, George. *How Racism Takes Place*. Temple University Press, 2011.
- Locke, John, and Ian Shapiro. *Two Treatises of Government and A Letter Concerning Toleration*. New Haven: Yale University Press, 2003.
- Lott, Eric. *Love and Theft Blackface Minstrelsy and the American Working Class*. 20th-anniversary ed. New York: Oxford University Press, 2013.
- Marable, Manning. *How Capitalism Underdeveloped Black America*. Cambridge: South End Press, 2000.
- Machiavelli, Niccolò, Jeremy Bentham, Edmund Burke, Thomas Paine, David Hume, John Locke, John Stuart Mill, et al. *Political philosophy: Machiavelli to Mill*. Pittsboro, NC: IntelLex Corporation, 1990.
- Marcuse, Herbert. *Reason and Revolution; Hegel and the Rise of Social Theory*. [2d ed.]. Boston: Beacon Press, 1960.
- Marriot, David. *On Black Men*. New York: Columbia University Press, 2000.
- Marx, Karl, and Friedrich Engels. *Capital; a Critique of Political Economy*. New York: International Publishers, 1967.
- Marx, Karl. *The Grundrisse*. [1st U.S. ed.]. New York: Harper & Row, 1971.
- Marx, Leo and Merritt Roe Smith. *Does Technology Drive History? The Dilemma of Technological Determinism*. MIT Press; 1994
- Mbembe, Achille. "Necropolitics." *Public culture* 15, no. 1 (2003): 11–40.
- Mbembe, Achille. *Critique of Black Reason*. Duke University Press, 2017.
- McKittrick, Katherine. *Demonic Grounds: Black Women and the Cartographies of Struggle*. University of Minnesota Press, 2006.
- McKittrick, Katherine and Clyde Adrian. Woods. *Black Geographies and the Politics of Place*. Toronto: Between the Lines, 2007.

- McKittrick, Katherine. *Sylvia Wynter: on Being Human as Praxis*. Durham: Duke University Press, 2015.
- Katherine McKittrick. *Dear Science and Other Stories*. Durham: Duke University Press, 2020.
- McNally, Phil, and Sohail Inayatullah. "The Rights of Robots: Technology, Culture and Law in the 21st Century." *Futures: the journal of policy, planning and futures studies* 20, no. 2 (1988): 119–136.
- Mignolo, Walter D. "Sylvia Wynter: What Does it Mean to Be Human?" in *Sylvia Wynter on Being Human as Practice*. Duke University Press, 2015.
- Mintz, Steven. "Historical Context: The Survival of the US Constitution." The Gilder Lehrman Institute of American History. Accessed August 2, 2021. <https://www.gilderlehrman.org/history-resources/teaching-resource/historical-context-survival-us-constitution>
- Moten, Fred. *In the Break: The Aesthetics of the Black Radical Tradition*. Minneapolis: University of Minnesota Press, 2003.
- Morrison, Toni. *Playing in the Dark: Whiteness and the Literary Imagination*. Harvard University Press, 1992.
- Nama, Adilfu. *Black Space: Imagining Race in Science Fiction Film*. University of Texas Press, 2008.
- Nelson, Richard R. "Physics Envy: Get Over It." *Issues in Science and Technology* 31, no. 3 (2015): 71–78.
- Noble, Safiya Umoja. *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York: New York University Press, 2018.
- Patterson, Orlando. *Slavery and Social Death: A Comparative Study*. Cambridge: Harvard University Press, 1982.
- Peck, Raul, dir. *I Am Not Your Negro*. 2017; Amazon Studios Magnolia Pictures. Netflix.
- Perry, Andre M., Jonathan Rothwell, and David Harshbarger. "The devaluation of assets in Black neighborhoods." Brookings Institute published November 27, 2018. Accessed August 8, 2021, <https://www.brookings.edu/research/devaluation-of-assets-in-black-neighborhoods/>

- Perry, Andre M. and David Harshbarger. "America's formerly redlined neighborhoods have changed, and so must solutions to rectify them." Brookings Institute, Published October 14, 2019. Accessed August 25, 2021.  
<https://www.brookings.edu/research/americas-formerly-redlines-areas-changed-so-must-solutions/>
- Polanyi, Michael. "Objectivity" in *Personal Knowledge*. Chicago: University of Chicago Press, 1962.
- Ore, Ersula J. *Lynching: Violence, Rhetoric, and American Identity*. Jackson: University Press of Mississippi, 2019.
- Ore, Ersula and Matthew Houdek. "Lynching in Times of Suffocation: Toward a Spatiotemporal Politics of Breathing," *Women's Studies in Communication* 43, no. 4 (2020): 443-458.
- Robinson, Cedric J, and Robin D. G Kelley. *Black Marxism: The Making of the Black Radical Tradition*. Chapel Hill: The University of North Carolina Press, 2000.
- Rollefson, J. Griffith. "The 'Robot Voodoo Power' Thesis: Afrofuturism and Anti-Anti Essentialism from Sun Ra to Kool Keith." *Black music research journal* 28, no. 1 (April 1, 2008): 83–109.
- Rothstein, Richard. *The Color of Law: A Forgotten History of How Our Government Segregated America*. New York: Liveright, 2017.
- Scott, James C. *Seeing Like a State How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press, 1998.
- Sinclair, Bruce. *Technology and the African American Experience: Needs and Opportunities for Study*. Cambridge: MIT Press, 2004.
- Shabazz, Rashad. *Spatializing Blackness: Architectures of Confinement and Black Masculinity in Chicago*. University of Illinois Press, 2015.
- Sharpe, Christina. *In the Wake: On Blackness and Being*. Duke University Press, 2016.
- Sheridan, Jill. "A Black Woman Says She Had To Hide Her Race To Get A Fair Home Appraisal." NPR, published May 21, 2021. Accessed August 8, 2021,  
<https://www.npr.org/2021/05/21/998536881/a-black-woman-says-she-had-to-hide-her-race-to-get-a-fair-home-appraisal>
- Smith, Clint and Terry Gross. "Reckoning with the History of Slavery." Produced by WGBH Boston. *Fresh Air*. June 1, 2021. Podcast,  
<https://www.npr.org/transcripts/1001243385>.

- Smith, Neil. *Uneven Development Nature, Capital, and the Production of Space*. Third ed. Athens: University of Georgia Press, 2008.
- Soja, Edward W. *Seeking Spatial Justice*. Minneapolis: University of Minnesota Press, 2010.
- Tegmark, Max. *Life 3.0: Being Human in the Age of Artificial Intelligence*. New York: Alfred A. Knopf, 2017.
- Tocqueville, Alexis de, and Henry Reeve. *Democracy in America*. New York: D. Appleton and Company, 1899.
- Thompson Summers, Brandi. *Black In Place: The Spatial Aesthetics of Race in a Post-Chocolate City*. Chapel Hill: University of North Carolina Press, 2019.
- Tuan, Yi-Fu. *Space and Place the Perspective of Experience*. Minneapolis: University of Minnesota Press, 2001.
- Tyner, James. *The Geography of Malcolm X: Black Radicalism and the Remaking of American Space*. Routledge: 2006.
- Wallach, Wendell, and Colin. Allen. *Moral Machines Teaching Robots Right from Wrong*. Oxford: Oxford University Press, 2009.
- Warren, Calvin L. *Ontological Terror: Blackness, Nihilism, and Emancipation*. Duke University Press: 2018.
- Weheliye, Alexander G. *Habeas Viscus Racializing Assemblages, Biopolitics, and Black Feminist Theories of the Human*. Durham: Duke University Press, 2014.
- Wilderson, Frank B. *Red, White & Black: Cinema and the Structure of U.S. Antagonisms*. Durham: Duke University Press, 2010.
- Wilderson, Frank B. *Afroprossimism*. New York: Liveright Publishing, 2020.
- Wilkerson, Isabel. *Caste: the Origins of Our Discontents*. First edition. New York: Random House, 2020.
- Wilkins, Craig L. *The Aesthetics of Equity: Notes on Race, Space, Architecture, and Music*. Minneapolis: University of Minnesota Press, 2007.
- Wynter, Sylvia. "Novel and History, Plot and Plantation." *Savacou* 5 (1971): 95– 102.
- Wynter, Sylvia. "The Eye of the Other." In *Blacks in Hispanic Literature: Critical Essays*, edited by Miriam DeCosta, 8– 19. New York: Kennikat, 1977.

- Wynter, Sylvia. "The Ceremony Must Be Found: After Humanism." *boundary 2* 12, no. 3 (1984): 19– 70.
- Wynter, Sylvia. "Beyond the Word of Man: Glissant and the New Discourse of the Antilles." *World Literature Today* 63, no. 4 (1989): 637– 647.
- Wynter, Sylvia. "On Disenchanted Discourse: 'Minority' Literary Criticism and Beyond." In *The Nature and Context of Minority Discourse*, edited by Abdul R. JanMohamed and David Lloyd, 432– 469. New York: Oxford University Press, 1990.
- Wynter, Sylvia. "1492: A New World View." In *Race, Discourse, and the Origin of the Americas: A New World View*, edited by Rex Nettleford and Vera Lawrence Hyatt, 5-57. Washington, DC: Smithsonian Institution Press, 1995.
- Wynter, Sylvia. "Is Development a Purely Empirical Concept or Also Teleological? A Perspective from 'We' the Underdeveloped." In *Prospects for Recovery and Sustainable Development in Africa*, edited by Aguibou Y. Yansané, 299– 316. Westport, CT: Greenwood, 1996.
- Wynter, Sylvia. "On How We Mistook the Map for the Territory, and Re- imprisoned Ourselves in Our Unbearable Wrongness of Being, of Désêtr." In *Not Only the Master's Tools: African American Studies in Theory and Practice*, edited by Lewis R. Gordon and Jane Anna Gordon, 107– 169. London: Paradigm, 2006.
- X, Malcom. *Speech at the Founding Rally of the Organization of Afro-American Unity*, 1964.
- Yusoff, Kathryn. *A Billion Black Anthropocenes or None*. Minneapolis, MN: The University of Minnesota Press, 2018.

## BIOGRAPHICAL SKETCH

At the time of authoring this dissertation, Nicole K. Mayberry (she/they) is a Ph.D. Candidate in the Human and Social Dimensions of Science and Technology Ph.D. Program in the School for the Future of Innovation in Society at Arizona State University. She identifies as a white, US-American, cis, first-generation scholar. Her academic research is primarily transdisciplinary in both her approach to methods as well as the disciplines or fields of study she relies on. Nicole's work often draws from Human Geography, Critical Race Studies, Black Feminist Science and Technology Studies, and Political Philosophy, but she primarily describes herself as a Cultural Geographer. Nicole's broader research portfolio is concerned with exposing white supremacy and whiteness where it goes otherwise unnoticed or questioned over space, place, and time. Before her doctoral studies, Nicole received her master's in political science with an emphasis on political theory and political philosophy. Her master's work focused primarily on the philosophical foundations of robotics research emphasizing the Hegelian, Kantian, and Stoic schools of thought embedded in contemporary fields such as robot ethics and responsible innovation in technology. Her bachelor's degree is also in political science. Nicole is a philomath and considers her academic life just as much a part of her hobbies or interests as the next diversion. Knowledge, for Nicole, is the perpetual state of being humbled by what you do not know—be it learning a new language, new cultures, or encountering perspectives different from one's own—she is resolved to always learn more about the world around her. Nicole is obsessed with learning and considers the pursuit of knowledge, or what Mill described as being, “Socrates dissatisfied” as the most enthralling of personal pursuits. Further, she is compelled to use knowledge for the sake of making this planet we call ‘home’ better than found.