

VISUAL ACTIVISM AND THE TWENTY-FIRST CENTURY PROSTHETIC LIMB

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## **DEDICATION**

I dedicate this thesis to my friend, and former classmate at Davidson College

**J.P Craven**

who was one of over two hundred people harmed in the explosions as he waited  
for his father at the finish line of the 2013 Boston Marathon.

He is running in 2014.

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## ABSTRACT

The introduction of this thesis provides a brief history of prosthetic limb technology, introduces a Deleuzian and Groszian critical framework, and coins a new critical term— the “phantom-phantom limb,” defined as the phantom one creates when projecting his or her *own insecurities* towards his or her personal ‘temporary able-body’ onto an amputee’s site of amputation. Viewing prosthetic limbs from a Deleuzian critical framework highlights an amputee’s ability to actively and publically engage with the “phantom-phantom limb” in two specific ways— by wearing an “industrial prosthetic limb” and/or an “aesthetic prosthetic limb.” The former, discussed in “Chapter One: The Industrial Prosthetic Limb,” is a tool with which the amputee engages with his or her material surroundings based on a Deleuzian “desire,” thus inspiring a gazing public to think creatively about how they may do the same. The latter, discussed in “Chapter Two: The Aesthetic Prosthetic Limb,” is a tool with which the amputee intentionally expresses his or her individuality or “self” to the onlooking world. In both circumstances, the public figures discussed in the chapters to follow can be seen as visual activists who engage with the inquisitive stares of others, whether able-bodied or not, through prosthetic limb use. The amputees highlighted show society the body’s capacity for extreme personal evolution through visual activism.

# INTRODUCTION

## History of Prosthesis Technology—

Prostheses that seek to aid and enhance the human body have a deep seeded history, one profoundly rooted in humanity's evolutionary drive for physiological improvement. The art of prosthesis technology dates back to the construction of the ancient pyramids, where a team of archeologists found a wooden prosthetic toe buried with a mummy over 3,000 years old (Norton). In the years following, advances in technology would contribute to both the improved mobility and aesthetic appeal of prostheses. A prosthetic leg made of bronze and iron was unearthed in 1858 in Capua, Italy. Thought to date back to 300 BC, the artifact showed researchers the materials used during that time period. Relatively speaking, the medieval period did not contribute much to prosthesis technology, although the infamous peg leg and hook that would later define characters in *Peter Pan* and *Great Expectations* came from this time period. The Renaissance saw a “rebirth in the history of prosthetics,” where the resurgence of Roman and Greek prosthesis technology led to an increase in medical research about amputation (Norton). However, the most influential and accelerated time period for prosthesis research and construction coincided with the Industrial Revolution of the Victorian period. Invented and patented in 1858, Doctor Bly's anatomical leg was referred to as “the most complete and successful invention ever attained in artificial limbs” (Norton). Though Doctor Bly's success was an important stepping-stone in the medical community, the prosthetic limbs

being produced today seem to deserve an entirely different approach in addressing their form and function.

The illustration (Figure 1) shows the path man has taken in enhancing the amputated human body. Prosthetic limbs have transitioned from being an entirely separate entity from the organic body, to being unidentifiable as artificial. The unknown artist depicts this process in a similar manner to the 1965 illustration entitled “The March of Progress” by Rudolph Zallinger, the artwork

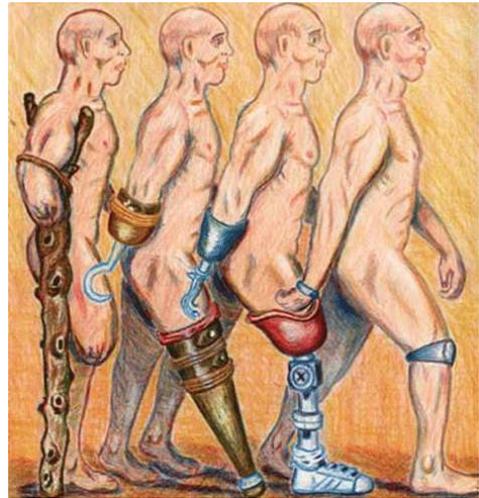


Figure 1: Artist unknown, published by Kim M. Norton in her article, “A Brief History of Prosthetics” through the Amputee Coalition

used for the cover of Charles Darwin's *The Origin of Species* (DeCosta). Without focusing on the ancient amputee as analogous to animal, which is certainly a problematic aspect to this portrayal, there is great merit in depicting humans as the catalyst for their own evolution. With such an extensive history in prosthetic limb design, it is no wonder twenty-first century scientists and engineers like Hugh Herr at the Massachusetts Institute of Technology pride themselves on the recent advancements in prosthetic technology. He describes his use of artificial limbs as “a collaborative, seamless dance between flesh and machine.” This thesis will contend with the wide variety of prostheses that exist for amputees today<sup>1</sup> by focusing on two apparent aims of current prostheses— aesthetic and industrial

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<sup>1</sup> I am aware of the financial restrictions placed on amputees that limit access to many, if not all, of the prosthetic limbs I discuss; however, the chapters to follow will not address this class stratification. I mean to treat prosthetic limbs as a text in society, operating in a theoretical, somewhat utopian space rather than a practical, socially regulated space. I will, however, return to financial affordability in my conclusion.

purposes. I will position both the “aesthetic” and the “industrial” prosthetic limbs within critical conversations about the disabled body.

Exploring the etymology of the word “prosthesis” becomes important when trying to understand the way that I will be looking at the prosthetic limb’s function as literature. In 1550, to describe a grammatical choice, “prosthesis” meant “The addition of a letter or syllable to the beginning of a word” (OED Online). By taking this definition and extending it into a more metaphorical context, the word “prosthesis” lays the groundwork for understanding the amputee’s identity instability post-amputation. It is not that the amputee has *lost* a limb, and the prosthetic will aid in somehow regaining the body’s perceived authentic form; rather, the body, in whatever form it may exist, is already complete. The prosthetic limb serves to add to the body’s already assumed fullness.

The sixteenth century word “prosthesis” does not require an agent to do the adding, which signals a more organic *event* taking place. Without an active agent involved in the actual *process* of prosthesis, judgment about the body’s state of completeness cannot exist. Grammatically speaking, the word is fully understandable prior to prosthesis taking place. The original word is not reliant on the added letter or syllable to make sense in the English language. Only in the early eighteenth century does the “prosthesis” begin to take on a new meaning. In 1706, the sixth edition of *Phillips New World of Words* altered the definition, stating “In Surgery *Prosthesis* is taken for that which fills up what is wanting, as is to be seen in fistulous and hollow ulcers, filled up with flesh by that art: Also the making of artificial legs and arms, when the natural ones are lost” (OED Online). In the process of the word’s transference from the grammatical to the

medical, “prosthesis” began to have problematic repercussions for the body it described. The scientific revolution of the eighteenth century introduced the concept of *artificiality* in tandem with the process of prosthesis, and in turn, associated the use of prosthetics with inauthenticity.

As opposed to the prosthetic technology that came from Victorian scientists, the twenty-first century production of prosthetic limbs seems to not rely on making the body appear “whole” or solely attempt to reclaim a part of the person that has been “lost”; rather, prostheses today go through, in their production, the process of what Elizabeth Grosz might describe as a “mode of becoming” — “individuations, processes of the production of things, processes that transform states of matter, processes that enable and complicate life” (*Becoming Undone* 2). Where the Victorians feared the union of human and machine, this theoretical approach seeks to embrace it.

In her book, Grosz “develop[s] a concept of life that does not privilege the human as the aim or end of evolution, but sees the human as one among many species” (2). This is a vital component to the formulation of this thesis. The chapters that follow will ask a reader to keep their mind open to an evolving concept of what qualifies as “humanity.” One of the word’s common and accepted definitions is, “The condition, quality, or fact of being human; human faculties, attributes, or characteristics collectively; human nature” (OED Online). Within this definition lies the potential for the exclusion of those amputees utilizing the heightened technology that encompasses twenty-first century prostheses. Current prostheses make establishing a strict definition of who qualifies as “human” impossible. They allow the “disabled,” as defined by society, to blur the line

between organic body and machine, forcing us to contend with what it means to be hyper-able.

The concept of hyper-able is unstable in its implicit establishment and reinforcement of a hierarchy of ability. On a spectrum of ability, is the “hyper-able” more or less human? Does the adoption of certain animal abilities make for an analogous rendering of the “disabled” as less-than-human? Elizabeth Grosz wraps up her introduction by suggesting our “capacity for self-overcoming is the condition for the emergence of art, for the eruption of collective life, and for the creation of new forms of politics, new modes of living” (8). The “aesthetic” and “industrial” prosthetic limbs are fashioned through such a capacity for “self-overcoming.”

### **Twenty-First Century Prosthetic Limbs and the “Double Meaning of Prosthesis”—**

Prosthetic limbs of the twenty-first century have become cultural artifacts that, I argue, can be read as “texts” in a similar way to literature. Previous prostheses relied on specific historical moments, where the prosthetic limbs of a time period were generally uniform in their appearance and function. Their aim was to restore the amputee to a “normal” physical state, or get as close as possible. Within the past thirty years, more than the medical sciences have become interested in the production of prosthetic limbs. Artists and engineers have exposed the need for a more cross-disciplined approach to prosthetic limb innovation.

It is only in recent years that prosthetic limbs have begun to be seen as a site for potential self-expression. In London, live artist Mat Fraser was commissioned to make a performance piece where he would “respond to representations of disability at various museum exhibitions” (*Can Prosthetics Be Art?*). The first museum exhibition he responded to was a part of the “Wellcome Collection”, entitled “SUPERHUMAN: Exploring Human Enhancement From 600 BCE-2050.” The exhibition ran from July 19 to October 16, 2012. Displayed were various cultural artifacts that seemingly “enhanced” the person who used them. In an attempt to describe the history of humans’ “desire to push our bodies beyond their limits,” the exhibition’s website recalls the story of Icarus and his father in Greek mythology where the master craftsman fashioned wings from feathers and wax in order to escape from exile through flight (*Wellcome Collection*). While the plan was brilliant in its intention, Icarus did not follow his father’s instructions to “keep the middle way” by not flying too close to the sun or dipping too low into the sea. As the story goes, Icarus did not heed his father’s warnings, rather he flew higher and higher until the sun melted the glue holding his wings together. The exhibition seeks to address the history of human enhancement, for good and for bad. “Although we have long imagined what it might mean to have additional powers and capabilities, it seems impossible to imagine these opportunities without considering the potential accompanying pitfalls. It is an enduring aspect of the debate surrounding human enhancement: the question of not just what is possible but at what point we should stop” (*Wellcome Collection*).

According to Tim Armstrong's book *Modernism, Technology and the Body*, there is a "double meaning of prosthesis"— one positive and one negative. The negative meaning involves "replacing of a body part, covering a lack," while the positive involves "a more utopian version of technology in which human capacities are extrapolated" (78). The negative meaning of prosthesis, as detailed by Armstrong, seems to reflect the rhetoric Mat Fraser uses to describe his performative use of prosthetic hands. He says "One of my most celebrated pieces that I did was a strip tease that obviously involved me taking my clothes off, but it also involved me taking off these," at which time he shimmies and wiggles his way out of his jacket, revealing prosthetic arms of seemingly no function other than to fill his jacket by dangling life-like hands out of his jacket's sleeves. He removes the clothing and then the prosthetic arms. "The concept was that I was stripping out of my perceived normality to celebrate my beautiful freakishness." The title of this performance was "From Freak to Clique," where he gave the audience a somewhat raunchy strip tease, performed in the burlesque tradition (*Can Prosthetics Be Art?*).

Considering Fraser first began performing these burlesque shows over fifteen years ago, it is understandable that the show's reception was either of incredible intrigue or overt disgust due to its visually nuanced and confrontational nature. As he reflects on the purpose of his strip tease, Fraser attaches similar if not identical meaning to the shedding of clothes and the detachment of the prosthetic limbs. In this sense, the function of his prosthetic arms, to make those looking onto his body more comfortable, is analogous to the function of clothing: to hide, mask, or cover a perceived shameful physicality.

This thesis adopts the positive meaning of prosthesis because in the negative, “normality” is addressed as a fixed state within a binary system. One is *either* normal *or* abnormal. Breaking out of this binary structure allows for transformative and interesting conversation about the body’s mutable state. The prosthetic limb can be seen as a tangible response to the body’s constant state of flux. In a Deleuzian space of “becoming” that Grosz pushes forward, the prosthetic limb artist/engineer becomes the fashioner of the amputee’s desired potential with their mutable form.

### **The Phantom-Phantom Limb—**

“What else is love but recognition?”

Tony Kusher’s *Homebody/Kabul* p. 28

Originally defined by Silas Weir Mitchell, the man considered to be the Father of American Neurology, “phantom limb syndrome” occurs post-amputation when the amputee experiences feelings in a limb that is no longer present (Subedi and Grossberg). Though the feelings can be simultaneously both painful and enjoyable, their notable presence can leave amputees without the capacity to fully incorporate their changed body’s form into their conceptualization of “self.” For the purposes of this thesis, an expansive definition of the “phantom” is required; broadening its meaning further into a more metaphorical and versatile working definition, this thesis will extend

“phantom” to mean any part of the body which feels as if it is lacking substantive properties either personally or politically.

Why does an onlooker feel the need to “fill in” the site of another’s amputated limb? These feelings towards another person do not necessarily constitute an act of pity. Rather, one projects his or her *own insecurities* towards his or her personal “temporary able-body” onto the amputee’s site of amputation. In these interactions between “able-bodied” and amputee, the feelings of a “phantom-phantom limb” arise.

The phantom-phantom limb has little to no relation to the amputee’s actual potential interactions with the material world. Instead, the able-bodied looking onto the amputated body produces a *phantom of a phantom limb* by internalizing insecurities about his or her body’s physicality and then projecting those insecurities onto the site of amputation. We project our own insecurities towards our anticipated ability to *do* or to *appear* post-amputation onto the amputee’s site of amputation— the “industrial prosthetic limb” and the “aesthetic prosthetic limb” address these insecurities towards temporary and malleable materiality.

It may seem potentially degrading or disempowering for the amputee when positioning the aesthetic and the industrial prosthetic limb as sites for actively addressing and appeasing such seemingly universal insecurities about the body’s temporary form; however, the chapters that follow will emphasize the opposite. When the amputee uses a prosthetic limb in a manner that suggests the absence of any phantom with the use of the “aesthetic prosthetic” or the “industrial prosthetic,” the prosthetic limb, as a text, extends the “self” through

incorporated embodiment. When their embodied “self” includes their prosthetic limb, taking the form of both the aesthetic prosthetic and the industrial prosthetic, they participate in what Rosemarie Garland-Thomson terms “visual activism,” and I designate as a source of extreme power.

Visual activists include, among others, *Dancing With the Stars* contestant and double amputee, Amy Purdy, bionics engineer and double amputee, Hugh Herr, and the double amputee model who walked the runway for Alexander McQueen, Aimee Mullins. These amputees do not appear to mourn the loss of their organic limb. In fact, they suggest to an onlooker the opposite. The site of amputation provides potential for subjective engagement with an amputee’s environment, or his or her audience. Visual activism may also incorporate the “hyper-able” or “superhuman” amputee— the amputee that actively engages with their environment through the use of an “industrial prosthetic” in a process of self-affirmation or Deleuzian “becoming.” Pushing Rosemarie Garland-Thomson’s concept further, I will reference this as an alternate form of visual activism. An athlete using a “cheetah leg” industrializes his or her body by using a prosthetic limb in imaginative and innovative ways through actively engaging with the material world. Oscar Pistorius, Olympic athlete and double amputee, becomes a “super human,” as Mat Fraser discusses (*Can Prosthetics Be Art?*). The phantom-phantom limb, by reflecting the insecurities of the able-bodied’s fear of a temporary state, becomes obsolete when amputees assert their capacity for individuation through visual activism.

The inspiration for the formation of such theory comes from Tony Kushner’s play *Homebody/Kabul* where characters project their own self-

consciousness about lacking socially valued characteristics and perceived insufficiencies onto other characters. Paranoia from such a sense of “unwholeness” incites characters’ imaginations to psychologically manifest “phantom-phantom limbs” (with ‘limbs,’ in this context, meaning any and all of the body’s physicality); thus, characters psychologically “fill in” sites of the body’s perceived “lack” with narrative. The body of the “other” becomes a site for personal reflection and evaluation.

The Homebody, the play’s initial, unreliable narrator, comments on the ways in which your personal lens filters the way you see the world. As she shops for hats she says, “The hats are beautiful; relatively inexpensive; sinister if you’ve a mind to see them that way; and sad. As dislocations are. And marvelous, as dislocations are. Always bloody” (18). The hats are a form of dislocation in their capacity to be worn by multiple people in multiple locations; the Homebody projects the feelings about such dislocation onto the hats as she contends with the dislocations of war refugees. She then redirects her own “sinister” lens from the hats onto the shopkeeper’s “ruined hand” as she admittedly claims, “I know nothing of this hand, its history, of course, nothing” (21). The Homebody, somewhat fantastically, creates a story behind the shopkeeper’s amputated fingers. She says, “While I am signing the credit card receipt I realize all of a sudden I am able to speak perfect Pushtu, and I ask the man [...] to tell me what happened to his hand” (23). At this point, she narrates the shopkeeper’s supposed history, followed by a fantastical journey they take together. Her sudden comprehension of a foreign language, and the journey through time and space signals to an audience the unreliability of the Homebody’s account. The

story she creates preceded her interactions with the shopkeeper's amputated state. Her own phantoms were narratively projected onto the site of amputation creating a phantom-phantom.

The origins of such feelings rely on a dialectic relationship between the scientific rendering of the body— namely medical— and the socio-political portrayal of the body. *Homebody/Kabul* pays close attention to the medicinal *and* social rhetoric surrounding the body, most noticeably by Doctor Qari Shah; however, the unreliability of language and narration across the entire play leaves an audience noticeably confused, creating instability among pronounced “truths” throughout. Navigating such instability illuminates a truth of non-truth with unreliable identity categories throughout. As each character begins to participate in instances of Hegelian recognition, moments where love is present according to the Homebody, their “body is exposed to socially and politically articulated forces as well as to claims of sociality— including language, work and desire— that make possible the body's persisting and flourishing” (Butler 3).

In her work on the precarity of life, Judith Butler breaks down Hegel's work on “recognition” by adding a new theoretical term to the conversation, “apprehension”— which “can imply marking, registering, acknowledging without full cognition. It is a form of knowing, it is bound up with sensing and perceiving, but in ways that are not always— or not yet— conceptual forms of knowledge.” Social “norms,” mimicked by language in the play, become the barriers of recognition, a conflict of interest stemming from “recognizability.” If within a social structure foreign to one's own, “recognizability precedes recognition” (5). In order to participate in Hegelian recognition, both parties must first be

recognize-able. The ability to be recognized constitutes its counterpart— a disability in recognition. By applying disability theory to Butler’s expansion of Hegel’s work, the possibility exists that social disablement within the play precedes the character’s presence altogether; therefore, knowledge of the “rules of engagement” or “framing” becomes a life sustaining necessity, much like food and water.

Such misrecognition stems from the existence of a normative, socially created prototypical person— a “normate”, defined by disability studies scholar Rosemarie Garland-Thomson as “the constructed identity of those who, by way of the bodily configurations and cultural capital they assume, can step into a position of authority and wield the power it grants them” (*Extraordinary Bodies* 8). “Human rights” in the play, then, extend to those who can move about in a functional manner thus enabling them to gain access to varying levels of power. An inability to do so comes from others’ projections of personal insufficiencies onto another character’s body— a phantom-“phantom,” with the latter phantom defined by Elizabeth Grosz in *Volatile Bodies* as “an expression of nostalgia for the unity and wholeness of the body, its completion. It is a memorial to the missing limb, a psychical delegate that stands in its place” (73). This “memorial” exists for the amputee’s perceived “phantom limb,” even though the onlooker does not have an amputated body. It is a memorial for the loss of the organic limb, though the loss occurs in a hypothetical future. The phantom-phantom is the elegiac potential for loss.

As the Homebody’s asserts, “the private is *gone*,” she suggests a person’s body is no longer entirely their own (Kushner 11). Instead, those who interact

with another's body inevitably create a story for it, whether consciously or not— a phantom-phantom. The narrative projections onto a site of amputation are filtered through the onlooker's subjective engagement with the material world. Milton's character, fraught with phantoms, escapes instances of potential recognition through invisibility, hiding away from the world, and drugs, hiding from his own consciousness.

Kushner's note about the syntax of the play, specifically the "...” and the “—”, asks the reader to participate in much the same process by “filling in” the blanks to an extent. If the “speaker has trailed off,” listeners question the origin of the divergence of thought. Kushner essentially asks a listener to “fill in” where the speaker left off, much like the Homebody fills in the story for the store merchant's “maimed” hand, the doctor fills in the space where the Homebody's body used to be with medical jargon, or Khwaja fills in Priscilla's family history (50). As there are no subtitles during live productions of the play, audience members must either guess what the characters are saying or must rely solely on body language, again emphasizing the unreliability of all dialogue and a reliance of an audience member's own personal projections into the given spaces. Kushner uses unfamiliar syntax, which effectively alerts readers to the fact that they fail to recognize the role of regular syntax. It seems the same for a prosthetic limb. It can be “Real” and go unnoticed, or it can fall into the “Surreal” or “Unreal” categories and call attention to the absence of something often unacknowledged or simply assumed. So, eccentric or unfamiliar literature/syntax and alternative prosthetic limbs function as more than just a spectacle that invites the stare of others; they also force the starrer to acknowledge the presence

of the “organic” or “familiar” literature/language/syntax/limbs/body/physicality. The body and literature can be manipulated to alternatively recall what it is not and to establish what it could be.

Also, there is something to be said for the relationship that is established by these noticeable changes to the “organic” structure. When Kushner breaks language down (with dashes, ellipses), he asks the audience to respond to the text, so we essentially build it back up in a new, dialectic form. In *Homebody/Kabul*, Kushner and the audience together make and manipulate the text; the relationship between the amputee/starer can similarly alter the definition of the body and its capacity as the starer recognizes their own limbs/potential lack of limbs. This connection can be extended to the “situational disabilities” that I will describe in reference to the “industrial prosthetic.” Amputees broaden the spectrum of physicality to include lack, so by alerting others to a universal potential for lack, like when able-bodied people see an amputee, they acknowledge their own limbs and thus the potential to lose them. As in Kushner’s play, disjointed or unconventional language may do the same by it incorporating lack into its message. By alerting readers/starers to it and its transience, it gives them agency over it, thus broadening the spectrum of language and, in the case of amputees, physicality.

So, like amputation, the deconstruction of language, is or can be, an attempt at evolution. Rather than simplifying language or casting off syntactical arrangements that help us to understand, unconventional language allows us to situationally develop language. We can, as a reader, build it up and break it down to fit our needs. It becomes more malleable than initially thought, and so, it

becomes more capable of expression. It seems this is the same with some amputees, like Hugh Herr and Amy Purdy who consider themselves more able with their prosthetic limbs than with their organic legs. The “industrial prosthetic” and the “aesthetic prosthetic” function as a means for confronting the phantom-phantom limb, as the chapters that follow will elucidate.

## CHAPTER ONE: The Industrial Prosthetic Limb

“Life brings the virtual, the past memory (but also the future, the new, intentionality) to bear on the actual, the present, the material... providing new modes of actualization”

Elizabeth Grosz, *Becoming Undone*, 35

“Disabled people who pass for able-bodied are neither cowards, cheats, nor con artists but skillful interpreters of the world from whom we all might learn”

Tobin Siebers, “Disability and the Theory of Complex Embodiment,” 327

“Cognition is embodied when it is deeply dependent upon features of the physical body of an agent, that is, when aspects of the agent’s body beyond the brain play a significant causal or physically constitutive role in cognitive processing”

Robert A. Wilson and Lucia Foglia, *Stanford Encyclopedia of Philosophy*

Hugh Herr, in his Ted talk, described a future where the world would be “rid of disability” by merging the biological with the technological (TEDMED). He quotes Archimedes’ famous line “Give me a place to stand and a long enough lever, and I will move the world.” Herr’s forward thinking about his amputated body provides the groundwork for this chapter. As disability theorists tend to point out, we are all disabled in one way or another (Davis 4). This chapter will contend with “situational disabilities,” and what happens after one recognizes the disabled state in another individual at a particular moment. I will refer to disability in terms of moments because at any given time, a situation may change and the organic body may be “able” again. The limitations of the body are constantly in flux based on the situational limitations placed upon it. As a result, the body cannot be labeled with a stable identity such as “disabled.” We are constantly orienting and reorienting ourselves to our environment through

embodied cognition; therefore, contending with the status of our abilities requires the same fluidity.

The “industrial prosthetic” makes manifest the amputee’s desired orientation to the material world in a given situation. It requires an understanding of the body as the vehicle for connectivity with one’s environment, a connection that is rooted in desire. The actualized potential for connection with the environment provides a “mode of becoming,” where one’s identity is constantly being shaped and reoriented depending on the industrial prosthetic’s desired utility. This chapter will contend with both fictional and non-fictional accounts of *becoming*, where the body’s constant state of non-state incites new and innovative ways of actively engaging with all of materiality.

### **The Utility of Disability and the Industrial Prosthetic—**

The word “industry” made its first appearance in the fifteenth century, meaning “An application of skill, cleverness, or craft; a device, contrivance; a crafty expedient” (OED Online). The Industrial Revolution of the late eighteenth and early nineteenth century transformed the term to incorporate repeated, high productivity levels. The latter definition relates inextricably to labor and the abuse of manpower of the Victorian Age. It is not my intention to adopt the Victorian connotations of the term, but to remain true to its original definition by addressing the imagination and creativity involved in applying one’s skill or cleverness. The “industrial prosthetic” is born from the innovative mind that realizes the potentiality of the amputated body’s changed form. The amputee’s

engagement with his or her environment relies on a desired connection with the material world.

The “Gadget Arm” fashioned by Sophie de Oliveira Barata of the Alternative Limb Project, provides an amputee with desired “tools” with which he or she may engage with the material world (Figure 2). “Desire” in the Deleuzian sense of the word, “does not begin from lack— desiring what we do not have. Desire begins from connection; life strives to preserve and



Figure 2: The “Gadget Arm” created by *Alternative Limb Project* artist, Sophie de Oliveira Barata

enhance itself and does so by connecting with other desires” (Colebrook 91). The amputee’s desire relies on the potential connections the body can imagine making with the material world. The “industrial prosthetic” is born from the interaction an amputee desires with the environment. The prosthetic limb, in this context, no longer seeks to mimic normative ways of moving or being in the world; it possesses a potentiality for self-evolution. The industrial prosthetic gives an amputee the materiality through which their consciousness may interact with the tangible world forming a site of potentiality and actualization, or a mode of “becoming.”

### **Breaking Down the Binaries—**

The fixed category of “disabled” positions the body within the binary structure of able/disabled. By utilizing the Deleuzian sense of a constant state of

non-state, of *becoming* rather than *being*, the site of amputation provides enormous potential for constant and fluid identity formation relative to one's situatedness. Elizabeth Grosz's book *Becoming Undone: Darwinian Reflections on Life, Politics, and Art* considers Deleuze's project within the context of Darwin's theories about evolution. She begins with the argument that "every thing, every process, every event or encounter is itself a mode of becoming that has its own time, its own movements, its own force" (2). The body's relationship to its environment has "its own time" as well. A body's situatedness within its surroundings provides new and innovative opportunities for embodied cognition. She grounds her argument within Charles Darwin's work on evolution as he "considers life as an emergence from earlier forms," concluding that life is "the ever more complex elaboration of difference" (Grosz 3). It is in embodied cognition that life emerges. It is in these "modes of becoming," she claims, that life emerges.

Prosthetic devices have primarily been discussed in terms of *ability*. What abilities can a prosthetic limb *give* to a human? Grosz's use of "becoming" becomes important when applied to the relationship between amputee and prosthetic limb designer. Rather than addressing the relationship as a means to an end— the prosthetic limb fashioned in order to "enhance" the user— Grosz's implementation of a Deleuzian sense of "becoming" shows the constant evolutionary potential in creating "life" in the interactions between self and environment. By not privileging the amputee in his or her interactions with the prosthetic limb, the moment becomes in itself a mode of becoming. Life, in the Darwinian sense, emerges from both the materiality and consciousness of the

amputee and the materiality of the prosthetic limb. It is in their unity that life emerges.

Grosz's book "explores the conditions under which both inanimate and living things overcome themselves and become something other than what they were. It elaborates the *difference* that constitutes things, including subjects, and that structures the relations between things" (1). She engages with Charles Darwin's work on evolution, where he decenters the human in order to elaborate on all forms of difference in the natural world. The "differences between man and other animal species are differences of degree, not differences in kind, and the differences between the races and cultures of mankind are likewise differences of degree and not kind" (16-17). By directing a reader to this portion of Darwin's argument, she shows how all of "life" is unified by its materiality. The indeterminacy of the material world unites all living things in a common struggle. The struggle with our own materiality and our active engagement with our environment "provides a space for new life to emerge" (34). The power we all possess, she claims, is in "the conversion of the smallest fragment of the indeterminacy of matter into the contingency, or freedom, of life" (34). The "industrial prosthetic" limb facilitates this form of conversion. It is a tool with which the amputee can engage with their environment on terms of their choosing.

### **Imagination as "tools for breaking through borders"—**

Public figure and double amputee Amy Purdy seeks to show how the body can exceed limitations placed onto it by its materiality. She currently stands in

the spotlight of the 2014 season of ABC's hit series *Dancing With the Stars* (*DWTS*). The show is her current form of fulfilling what she describes as living a life "beyond limits" (TEDxOrangeCoast). Prior to the show, Purdy made headlines for her performance at the Sochi Paralympics where she took bronze (Pinelli). Immediately following her Olympic awards ceremony, she got on a plane to Los Angeles to begin filming *DWTS*. The show, she says will give her the opportunity to showcase to the on-looking world the extreme capabilities of the body. She says, "We all have different levels of abilities, whether you're missing a leg or not missing a leg. It's nice to be able to represent people who deal with obstacles or physical challenges who maybe question what they were capable of" (Pinelli). In this quote, she does not address her disability as a situation, which she needs to overcome. Indeed, Purdy's history illuminates how she is extremely able. Her emphasis on the "different levels of abilities" showcases the fluidity of the body's form. Her "difference" was not of kind, but of degree.

Purdy attributes her success to the relationship she has with her prosthetic legs. When she contracted bacterial meningitis 11 years ago, she "thought the worst was over, until



Figure 3: Shown during Amy Purdy's Ted Talk

[she] saw [her] new legs for the first time" (TEDxOrangeCoast). Her first pair of prosthetic legs was clunky, uncomfortable, and impractical. She says, "The calves were bulky blocks of metal with pipes bolted together for the ankles and a yellow rubber foot with a raised rubber line from the toe to the ankle to look like a vein."

As she strapped them on and stood up for the first time post amputation, she and her mother cried, wondering how she could ever travel the world with those legs. “How was I ever going to live the life full of adventure and stories that I always wanted?” For this reason, the way she lived her life reflected the way she related to her prosthetic legs. Her legs were “confining,” and so she stayed in bed (Figure 3) for weeks after she got them.

Where her initial pair of legs stifled her engagement with the material world, truly disabling her, she had a revelation about the potential that a different, more freeing pair might give her. Purdy says, “I knew that in order to move forward, I had to let go of the old



**Figure 4:** Shown during her Ted Talk, Amy Purdy poses with her variety of prosthetic limbs.

Amy and learn to embrace the new Amy. And that’s when it dawned on me, that I didn’t have to be 5’5 anymore. I could be as tall as I wanted! Or as short as I wanted, depending on who I was dating” (TedxOrangeCoast). At this point in her talk, the image of Purdy sitting with her dog and the variety of prosthetic limbs flashes on the screen (Figure 4). This is the turning point in her discussion. Her desire to do facilitated the actualization of her desires. She goes on to describe her prosthetic limbs as sites for creativity, as enabling “tools.”

Four months after her epiphany, Purdy was back on a snowboard. Her driving question in the TED talk is, “If my life were a book and I were the author, how would I want this story to go?” With this question, she posits her

imagination as the driving force in her engagement with the material world. She says that our “borders,” meaning physical borders, created by our body’s ability to adapt to its environment, can do two things— stop us in our tracks or force us to get creative. She “knew that if [she] found the right pair of feet, that [she] would be able to [snowboard] again” (TEDxOrangeCoast). The “industrial prosthetic” is born out of the creative mind imagining ways of pushing the boundaries of the body’s ability to navigate its environment. Each pair of prosthetic legs Purdy has allows her to actualize her desired engagement with her surroundings. It is not just the functionality of the prosthetic limb; it is about engaging in a Deleuzian existence.

### **Representing Complex Embodiment: The Dangers of Privileging the Organic—**

The television network ABC makes visible the amputee’s journey with changed embodiment in their hit series *Grey’s Anatomy*. The show addresses a major ethical debate in medicine about the body. While problematic at times, it is worthwhile to commend a hyper visible engagement with complex embodiment. In Tobin Siebers’ essay “Disability and the Theory of Complex Embodiment,” he contends with embodiment as “caught between competing models of disability,” where the medical model “defines disability as a property of the individual body that requires medical intervention,” and the social model argues that “disabling environments produce disability in bodies and require interventions at the level of social justice” (328). His project is to “develop a theory of complex embodiment that values disability as a form of human variation.” It is in this

project that he contends with variations or differences that define life in the Darwinian sense. Complex embodiment neither privileges the biological body as the medical model does, nor concerns itself only with social representations of the disabled body as the social model does. It seeks to incorporate all experiences of the body, including chronic pain.

Arizona Robbins, the head pediatric surgeon on *Grey's Anatomy*, survived the plane crash that killed two of her close friends and colleagues, though she suffered significant injuries to one of her legs. Calliope Torres, head orthopedic surgeon and wife to Robbins, worked tirelessly to save the leg. Robbins' insistence on keeping her organic limb pushed Torres to explore a variety of alternatives to amputation, causing her incredible pain. When the infection threatened Robbins' life, Callie infamously gave the instruction to "cut it off," a decision that made her wife resent her long after. The portrayal of Arizona's journey towards accepting her changed form relies on the portrayal of the way in which her prosthetic legs alleviate her pain and helps her to, as she describes, "get her life back."

Though the show has run for ten seasons so far, the current season's episode "Throwing It All Away" provides a useful insight into the relationship between embodiment and environment. The structure of *Grey's Anatomy* allows for each episode to be read as a contained text. Episodes begin and end with the narrator's insight as if to supply a viewer with a critical lens with which to view the events to follow. "Throwing It All Away" begins with Meredith Grey, the title character, discussing what humans have "thrown away." She says,

“You know your tailbone? It used to be a tail. That pink part in the corner of your eye? It used to be a third eyelid. The appendix used to help us digest tough foods. Now, it does nothing. The story of our evolution is the story of what we leave behind, what we’ve discarded.” (Season 10 Episode 15).

At which time, the narration overlaps a conversation where Callie asks Arizona where to put her old wheelie shoes that defined her movements as a pediatric surgeon prior to amputation. A flustered Arizona tells her to put it into “the trash” as she desperately tries to dry the fruit juice spilled on her prosthetic leg by their daughter. Callie seems upset by this request, but Arizona assures her “it’s fine.” Meredith continues narrating saying “Our bodies only hang onto the things we absolutely need,” suggesting that Arizona cannot live without the prosthetic limb because as a tool, it enables her “to pick up her daughter and be a doctor;” the way she moved prior to amputation no longer concerns her.

The episode continues with multiple storylines depicting people “throwing away” something in order to evolve: a man who gives one of his kidneys to save a friend’s life, a little boy whose liver is shutting down gets “a hole in [his] stomach” in an effort to avoid transplantation, a woman publically left by her boyfriend lets him know she is cutting him out of her life in order to move on. Each of these instances depicts a means for personal evolution. Damaging a healthy part of the little boy’s body will eventually be what gives him a future. Arizona’s colleague groans, “After all he’s been through we have to cut up his perfectly healthy intestines to put a hole in his belly,” to which she responds that it is the only option or he will live with chronic pain and the imminent threat of death. In these instances, it is a matter of living free of pain or living with

constant pain and the threat of death. The episode does not seem to suggest that “living” means biological life; “life” means actively engaging with the world outside the hospital.

One of the other story lines follows Arizona and Callie as they disagree over the prognosis for a girl named Alyssa who suffers from arthrogryposis, “a term used to describe a number of rare conditions characterized by stiff joints and abnormally developed muscles” (“KidsMD Health Topics). Alyssa shouts, “It hurts like a bitch Dad!” and pleads with him to not treat her “like a baby.” Against her father’s wishes, Alyssa exclaims to the doctors, “I have had braces and castings and surgeries and none of it worked! So I want to know, if you can just cut them off.” Alyssa longs for prosthetic limbs as opposed to her organic limbs saying, “Then I can do all the stuff that I want to do,” citing girls who are running marathons with prosthetic legs, while she “lives in a bed.” Callie and Alyssa’s father share in their opposition to the girl’s expressed desires. “This is the time you have to be brave,” Callie says to her, “Push through it, and have faith! Even if it’s not working yet, it’s going to work.” Callie looks to Arizona for support and finds none.

The divergent opinions of the two doctors reflect current conflicting attitudes towards amputation. Callie does not entertain the idea of amputation even though, as Arizona points out, it is “the right thing to do” because it would alleviate the pain Alyssa has lived with her entire life. Arizona feels that Callie’s aversion to amputation is a result of the blame that Arizona placed on her for making the decision to “cut [her own leg] off” when infection threatened her life. She says to Callie, “Before that year, I think you would have seen [amputation as

the best option]” She continues, “I think that you’re afraid to do this amputation and I’m afraid that might be my fault.” Just like the father privileges the organic limb initially over a life lived without pain, Callie injects her personal insecurities towards amputation into a prognosis. She saw how difficult it was for her wife to accept and move forward with her changed form, which led her to suggest an incorrect, and arguably cruel, course of treatment as a result.

Prior to the technological innovation necessary to form industrial prosthetic limbs, amputation meant stasis. Indeed, it meant stasis for Arizona Robbins because she could not initially move forward in engaging with the material world in a new way. Gilles Deleuze’s argument is “We create and select not on the basis of who we *are* (for this would install a value or end within life) but how we might become (extending life to its fullest potential) (Colebrook 96). In the episode, Alyssa does not want a future filled with chronic pain. Instead, she imagines a future for herself free of the pain her organic limbs have and would continue to cause her. She desires a future facilitated by amputation and enhanced by the use of “industrial prosthetic” limbs.

### **Artificial limbs as a “Blank palette for which to create”—**

In Hugh Herr’s TEDMED talk, he discusses his experience with and through disability. In 1982, he lost his legs in a climbing accident; though hardship certainly followed his surgery, Herr has found the amputation to be a source of extreme positivity in his life. When asked if he would want his legs back, he emphatically replies “no.” He says, “I was able to climb at a more advanced level after my accident with artificial limbs than I was ever going to achieve

before my accident with biological limbs”  
(TEDMED). Because of a *desire*, the potential  
existed for him to actualize that desire and climb.  
But, he claims—

“To achieve this level of success, I had to  
view my own body in a distinct way from  
how society was viewing my body. I no  
longer viewed my biological body as broken.  
I viewed those things [pointing to his  
prosthetic limbs] as broken. I viewed  
technology as broken. I reasoned that there’s

no such thing as a disabled person; there are only disabled technologies.  
There’s only poor design. Since technology is modifiable and can be  
improved upon, human limitation can be overcome through technological  
innovation. I viewed my artificial limbs not as a curse but as an  
opportunity— a blank palette for which to create.”

And so he created. Rather than seeing his amputated body as a source of anguish  
or lack, Herr saw it as an opportunity for potential engagement with his  
environment. He created artificial limbs that functioned according to his desire—  
not his desire to *regain* the functionality of his prior form, but desire to produce  
functionality. His prosthetic limbs did not need to mimic normative ways of  
climbing. Instead, they pushed the limits of human capability.

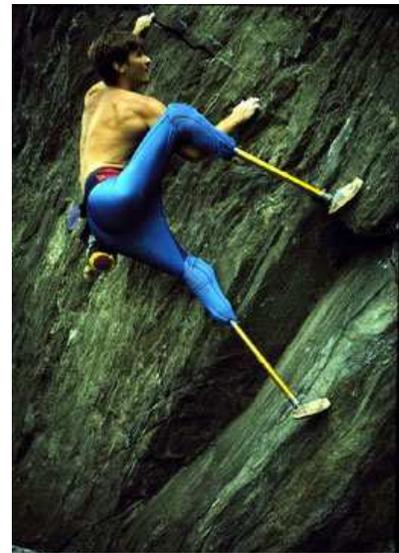


Figure 5: Hugh Herr climbing with  
his “industrial prosthetic” limbs.  
Image displayed during his  
TEDMED talk.

### **The Industrial Prosthetic, the Phantom-Phantom, and Visual Activism—**

The amputee’s capacity to move in and engage with the material world,  
creating “life” in the Groszian sense, is only then limited by the perceived limits of

the imagination. In response to Amy Purdy's TedTalk, Blogger "Mr. Chris Johnson" comments: "Adaptive" I love this word. I no longer have disabilities. I am not a disabled American. I will be polite but insistent, in conversations and when asked to "check the box": I am Adaptive." Purdy's activism continues to inspire others to acknowledge and embrace the agency inherent in self-evolution. "Adaptation," when faced with situational disabilities, inspires new and interesting ways of creating and using "industrial prosthetic" limbs.

Visual activists exhibit the amputee's extreme capacity for self-evolution, for "becoming." As a result, such visual activism has the potential to appease and banish the phantom-phantom from social interactions. Amputee activists like Hugh Herr and Amy Purdy display infectious strength and tenacity by publically fulfilling their desired ways of engaging with their environments. The imagination and innovation that goes into creating the "tools" for Deleuzian "becoming"— the "industrial prosthetic" limb— effectively replace the phantom-phantom born from the imagined terror of potential violence towards the starrer's body.

## CHAPTER TWO: The Aesthetic Prosthetic Limb

Seeking someone to fashion a prosthetic limb can be one of the more intimate experiences for an amputee. It requires a thoughtful and empathic exchange between artist and subject. The exchange that must occur between the prosthetic limb artist and the amputee must be authentic to both the amputee's physiology and psychology in order to make the prosthetic a "good fit." Amputee and blogger Emily Rapp writes, "Before I found intimacy with a boyfriend, I learned to be seen by the guys who built my artificial limb" ("Men Who Made My Legs"). The sentiment expressed by Rapp suggests an important relationship worthy of interrogation between prosthetic limb fashioner and amputee. In this chapter, I will treat the product of such an exchange, what I term "aesthetic prosthetic," as a site of cultural narrative. The prosthetic limb artists that I highlight seek to provide a story to onlookers/"readers" in a similar way to how a biographer illuminates a subject's life. Both require research about and an understanding of a person's life in order to showcase that life to the world. The "aesthetic prosthetic," when understood as a form of body art, allows an amputee to transcend fixed identity categories, making the prosthetic limb both an abling object and a site for autobiographic life narration.

Prosthetic limbs, seen as a site of life narrative, are the tangible reminder of a person's previous orientation to the world. In many ways, a prosthetic limb is the most intimate reminder of a life lived, where the movements and daily events of that life have been inscribed on the body. The phrase "written on the body",

borrowed from Jeannette Winterson, can be employed in this context to further emphasize the importance of utilizing literary techniques to access the intrinsic and extrinsic value of aesthetic prosthetic limbs. If, as a society, we only place value on the organic body's relationship to "humanity," we risk taking a significant step back in the work done by disability studies' scholars in the past 30 years. Indeed, the amputee's relationship with his or her prosthetic limb(s) provides an interesting and useful cultural insight into what bodies we privilege over others. Prostheses are at once inorganic in their physiological makeup and organic in their psychological value. They unite an amputee with the organic world of motion and touch while simultaneously excluding their attachment to the body from being considered wholly "organic."

### **Beholding and Visual Activism—**

Prior to an artist visually recreating an organic prosthetic limb, there was an inevitability of the exchange between those who disability studies' scholar Rosemarie Garland-Thomson defines as "starrer" and "staree" due to the visibility of the prosthetic limb. Active in the exchange are those who stare and those who are the object of the stare. She positions every person as a potential starrer, as "staring is a communicative gesture" ("Beholding" 199). Her essay highlights the importance of such exchanges as they are "response[s] to someone's distinctiveness" (199). The prosthetic limb is a site for an amputee to *choose* distinction. As prostheses have begun taking on new, alternative forms in recent years, they have since functioned as an expression of the individual's unique qualities in an artistic medium rather than a clinical medium. By incorporating

amputees, the modeling industry has become one of many sites of such transformative embodiment.

In 1988, model, actress and Olympic athlete Aimee Mullins became the high fashion designer Alexander McQueen's muse. Born without fibula bones in her shins and legs, Mullins' legs were amputated as a baby— “[McQueen] spotted her unique difference and proposed an innovative way of celebrating it”

(O'Brien). Audiences were intrigued with the new face of McQueen's couture, until they realized her couture prosthetic legs were being put on display as well. In an interview with Mullins, Catherine O'Brien notes,

“McQueen was accused of turning his fashion show into a freak show, and Aimee was hailed as ‘the new disabled supermodel’ – a label she loathed.” The media began defining her career based on her *lack* of legs rather than the expressive and artistic prostheses McQueen fashioned

to highlight both his couture and his model's beauty. As a staree, like all models, Mullin's high fashion, wooden prosthetic legs provided a means of distinction. Garland-Thomson claims, “The question for starees is not whether we *will* be stared at, but rather *how* we will be stared at” (199).

Choosing *how* to be a staree provides an amputee power over his or her body as spectacle. Amputees can choose to actively engage with the beholder, rather than passively being beheld. This subtle difference is powerful in that it ensures the amputee's social agency over his or her body. McQueen's art capitalizes on the innate and unique beauty of each of his models in order to



**Figure 6: Aimee Mullins posing as she walks the runway in Alexander McQueen's couture. Photo by Rex Features, used by Catherine O'Brien.**

enhance the clothing he creates. Instead of providing a long dress for Aimee Mullins, which would have hidden Aimee's prosthetic legs, he fashioned new prostheses for her, making them another beautiful component to his fashion show.

Art is in many ways representational particularly in this case with the aesthetic prosthetic but, artistic representation, as a mode of personal expression, does not necessarily need an audience to be art. It can be seen as a mode of "becoming" in the sense that it simply expresses oneself artistically. There is agency in that mode, though it is agency over one's self and the self's materiality, not necessarily to assert power over another. Viewing desire as potentiality pushes against the framework of Hegelian recognition because desire places the artistic expression in a vacuum; rather than having both participants involved in recognition, it is a potential space for recognition rather than an exchange. Hegelian recognition does not account for novelty through self-generated, creative expression nor does it account for staring as a result of unfamiliarity or strangeness. In Hegelian recognition, you recognize the other in an immediate power struggle to define master/slave consciousness. Garland-Thomson acknowledges staring as a means to gather information rather than assert a contestatory stare. As the stare permits information *gathering*, the "aesthetic prosthetic" allows for information *giving*.

Instead of viewing the interaction between a staree and a starrer with the power dynamics at play in Hegel's master/slave dialectic, "mutual recognition" occurs when the staree actively engages with the starrer, and thus possesses sole agency, and therefore power, over the body in the staring exchange. The

“aesthetic prosthetic” commands the aesthetic field, inviting information gathering stares and insuring the amputee has the *choice* to be, or not be, the object of the stare.

Aimee Mullins engaged in what Garland-Thomson defines as “visual activism”— actively engaging with the stares of an onlooking fashion world rather than passively being the object of those stares. Most importantly, “if [the] visual politics of deliberately structured self-disclosure succeeds, it can create a sense of obligation that primes people to act in new ways” (“Beholding” 204). Mullins claims, “it takes some women till their 30s or even 40s to realise that what makes them beautiful is not what makes them the same as everyone else, but what sets them apart” (O’Brien). For this reason, aesthetic prosthetics, as artistic extensions of the “self,” provide an amputee with the power of distinction.

However, the ability to distinguish oneself from the onlooking world can only truly be a powerful ability if one can also choose not to do so. Sophie de Oliveira Barata, primary artist in “The Alternative Limb Project” provides amputees with both the distinction necessary to engage in non-contestatory instances of mutual recognition and the means to avoid the stare altogether by offering three options for her creations— “Real,” “Surreal,” and “Unreal.” The “Real” visually represents the organic limb that was amputated. The “Surreal” uses the organic limb as a base for adding interesting and unique qualities. The “Unreal” does not seek to represent the organic limb at all. In this way, her work goes against the grain of common prostheses whose sole purpose has been to either visually replace a limb, like Mat Fraser’s prosthetic arms, or to regain the limb’s function. Instead, she says, she seeks to “capture that whole childlike

imagination — it's like being a superhero with super powers" (*Alternative Limb Project*). Because she works intimately with the amputee, each prosthetic is unique to the individual. The image an individual visualizes when thinking of their body can become their embodiment. The choice to avoid stares can be equally as empowering as distinction.

Sophie's work provides the option for amputees to wear a prosthetic limb that regains the particularities of their organic limb prior to amputation. Sophie pays close attention to the details of the person's body in order to essentially

"bring back to life" their organic body. With these type of prostheses, the body's status as hybrid is not made known to an onlooking public. Sophie's "Real" prostheses allow an amputee the privacy otherwise inaccessible to them, the chance to avoid the staring

encounter altogether. Because Sophie's goal is to build a prosthetic that mirrors the

amputee's vision of his or her body, the difference between organic and inorganic cannot be detected. Pictured is prosthetic foot falling under the category of the "Real" (Figure 7). As opposed to a foot whose only purpose is to regain the function lost by amputation, Sophie incorporated the minute details unique to the amputee's other foot. She made the toenails the length worn by the amputee. The shape of the prosthetic toes mirrors the shape of the right foot's organic toes. The materials used to create the prosthetic are malleable and soft in appropriate places, allowing for a more organic appearance. Sophie also made sure to include



**Figure 7: "Partial Foot with Gel Pad and Build Up" by Sophie de Oliveira Barata, *The Alternative Limb Project***

veins on the top of the foot and creases around the toes, making the prosthetic even more “Real” to an onlooker, and perhaps the amputee.

In many of the same ways that the prosthetic left foot (Figure 7) complements the organic left foot, this prosthetic arm (Figure 8) incorporates unique qualities (one can assume) about the right arm. It highlights the small



Figure 8: “Top Side of Arm Cover” by Sophie de Oliveira Barata, *The Alternative Limb Project*

details that make up this amputee’s arm— skin, wrinkles, fingers, fingernails, knuckles, and veins. The prosthetic skin shows sun damage with the little flecks of brown meant to visually represent freckles. The wrinkles and worn appearance of the knuckles suggests hard work and age. The

veins, as in the case of the foot above, show the arm’s connectedness to the amputee. The veins may not physically connect to the organic body, but the prosthetic arm’s psychological connection cannot be denied.

Giving an amputee the opportunity to regain their previous form seems a fundamentally important aspect to Sophie’s work. She creates *both* realistic *and* alternative limbs. One cannot assume that all amputees want to be distinguished as an amputee by embracing an alternative physical appearance. It is liberating to have the option of giving the outward appearance of an organic limb while possessing the power to alter that appearance at will. In order for her body of work to encompass and account for all amputees’ possible mental body images, the “Real” must exist so that the “Surreal” and the “Unreal” can provide the option for distinction.

## **The Body as a Vehicle for Subjectivity through “Situational Prosthetic Use”—**

Philosopher Maurice Merleau-Ponty’s work in the *Phenomenology of Perception* seeks to ground a human’s experience of the world as the rational and habitual interpretations of the tools with which we come to know our environment through our embodiment. By focusing on the phantom limb, he makes claims about the body that exclude both a strictly physiological interpretation and a purely psychological approach to understanding the presence of a phantom limb, or the “sensation of the presence of a limb after it has been amputated” (OED Online). In order to navigate between the two explanations of the phenomenon, the physiological and the psychological, Merleau-Ponty puts forth the concept of the body image, or habitual body, defined as “an organic thought through which the relation of the ‘psychic’ to the ‘physiological’ becomes conceivable” (77). However, he operates in the realm of the abstract by only considering the “conceivability” of merging the two—“It could be a mixture of the two only if we could find a means of linking the ‘psychic’ and the ‘physiological’ [...] to each other to form an articulate whole, and to contrive a meeting-point for them” (77). “Situational prosthetic use,” choosing to wear a prosthetic limb that specifically meets one’s needs in a given situation, provides the means for joining the two. In this sense, the body becomes the vehicle for one’s subjectivity through the constant negotiation of one’s body image with prosthetic limb use. Both the organic physiological make-up of the

amputee and the psychological vision of the amputee's body image must factor into the creation of an "aesthetic prosthetic" to accomplish this.

When the amputee is an active agent in the staring exchange described by Rosemarie Garland-Thomson, "instead of being an object in the world, the body, by constituting not only the subject's point of view, but subjectivity itself, forms the foundation of all human experience" (Maude 4). The amputee has the choice to either actively engage with or actively avoid the stare by masking or highlighting his or her use of a prosthetic limb. For this reason, he or she becomes a subjective agent in the process of the organic body defining the human experience by partaking in "situational prosthetic use" according to a desired appearance at the time of dressing. Sophie de Oliveira Barata provides amputees with aesthetically pleasing prosthetic limbs that aim to reflect the amputee's imagined body image. To do this, she gathers direct input from the client in order to "interpret [their] ideas and create a unique design that will reflect [their] interests and personality" (*Alternative Limb Project*). In this engagement between amputee and prosthetic limb artist, the prosthetic limb forms out of the amputee's subjective body image. Quoted in the beginning lines of this chapter, Emily Rapp describes how she "learned to be seen" by the men who fashioned her prosthetic limbs; Sophie first asks an amputee how they would like to be seen, and then makes such a sight a tangible reality.

Kiera Roche, amputee and chairperson for the charity "LimbPower," writes about her experience working with Sophie— "I love wearing the leg that Sophie designed for me, although at first the same fear of being different does enter your head, but it's being different in a positive way. It's personal, it's a

fashion statement not a political statement and I love that” (*Alternative Limb Project*). By differentiating what she considers a “fashion statement” versus a “political statement,” Roche effectively reorients the gaze of the staree from the “phantom” of the absent organic leg to the “presence” of her beautiful, and fashionable, prosthetic leg. Instead of viewing her prosthetic limb as solely a site for political interrogation, we can also view it as a more expansive site of artistic expression.

It is in this space that the physiological meets the psychological described by Merleau-Ponty. Roche becomes an active agent in the expression of her body image when wearing her “Floral Leg” (Figure 9). Roche expresses that she has had a very positive response from both amputees and able-bodied persons, though she wishes she had more opportunities to wear the leg exclaiming, “I need to go to more parties!” It is her own desired orientation to social situations that positions her “aesthetic prosthetic” leg as somewhat of a party specific accessory. It is in the party atmosphere that she feels her floral limb would best suit her; she therefore longs to go to more parties.

Artistically rendered prosthetic limbs seem to have a profound effect on the way amputees see themselves. Indeed, Kiera Roche cites her growing comfort as an amputee coincided with her embracing “having different legs for different activities and different occasions” (*The Alternative Limb Project*). The fashion



**Figure 9: “Floral Leg” by Sophie de Oliveira Barata, *The Alternative Limb Project*. Worn by Kiera Roche. Photographed by Rosemary Williams.**

industry gives women the tools with which to carve out an image, a self-image. In this sense, an amputee's sartorial consciousness, where a person's relationship to the onlooking world is filtered by the body's relationship to its clothing, encompasses his or her "aesthetic prosthetic." Rather than understanding a sartorial consciousness in the realm of the abstract, as in literary representations, the fashion industry provides tangible art that has an analogous effect on its wearer through the distinction of the "self", of chosen identity. This has been the case with prosthetic limbs. The fashion industry has been at the forefront of conversations about the disabled body. In the case of the amputee, the site of amputation is no longer a site of negative "lack," rather the amputated limb is a space of potential self-transformation.

### **Prostheses' Interchangability and Identity Formation:**

The ability to use a prosthetic limb interchangeably becomes of paramount importance when interrogating such an ability's relationship to an amputee's identity formation. To understand this necessary emphasis on interchangeability, I turn to philosophers Gilles Deleuze and Felix Guattari. In their important work *A Thousand Plateaus: Capitalism and Schizophrenia*, they push back against the Western view of identity formation. They suggest that all of Western thought is best depicted by the image of a tree's growth. A tree sets root in one central location and then branches outward from that location. Described as an "arborescent system," the tree's growth pattern analogizes the authors' understanding of the formulation of all Western ideas— "The Tree is the knot of arborescence or principle of dichotomy" (212). With this, they propose an anti-

ontology, with no static state of being, no center from which one's identity can form. Without the ability to choose a prosthetic limb as one would a piece of clothing, the amputee's engagement with the world stemmed from their body and its extension through the use of the single prosthetic limb. The singularity of the amputee's relationship with one prosthetic limb required forming an identity around it, as it constituted a relatively fixed state of the amputee's body; therefore, the amputee operated within an arborescent system. An amputee either wore *the* leg or not.

As an alternative to viewing identity in terms of binaries that grow from an arborescent system, the philosophers put forth their most important image of the rhizome. The rhizome has no centralized place from which it grows; instead, its growth relies on the multiplicity of place. Instead of the vertical growth pattern of a tree, the rhizomatic bamboo plant chutes new growths horizontally. The concept of forming identities rhizomatically relies on humans living according to pre-existing segments, as we are "segmentary animals" and "life is spatially and socially segmented" (208). Instead of viewing identity categories as fixed, they are segments capable of breaking off, or "deterritorializing" from a root and "reterritorializing" in other spaces. The rhizome's main principles are that of "connection and heterogeneity: any point of a rhizome can be connected to anything other, and must be" (380).

Utilizing this Deleuze and Guattarian approach to contend with the amputee's ability to use prosthetic limbs interchangeably, therefore differentiating the body from others and its past form, becomes useful because the choice of prosthetic limb relies on the space in which it will be used.

Possessing a variety of prosthetic limbs allows an amputee the flexibility of a rhizomatic existence. The United States has made huge strides in making buildings accessible in the twenty years since the Americans with Disabilities Act, though there are certainly still buildings whose architectural flaws discriminate against people with disabilities. An amputee, in a growing number of circumstances, can use a wheelchair rather than go through the process of rehabilitation that is necessary in order to use a prosthetic limb. Their body is “complete” regardless of the way they choose to move in the world, so when they choose to add a prosthetic onto their already healthy, and therefore complete, body, the prosthetic becomes an object of the situation for which it has been chosen.

An amputee no longer needs to be subject to the stigmas associated with the Westernized, fixed identity of “disability.” Rosemarie Garland-Thomson’s concept of “visual activism” paired with the ability to interchangeably use prosthetic limbs allows for subjective, intimate relationships with rhizomatic identity formation related to social and physical spaces. If an amputee plans to climb a mountain during the day, the appropriate “tools” can be made readily available for them. The amputee who would like to visually appeal to a beholder in a certain way may choose a prosthetic limb that highlights his or her individual attributes. In either scenario, the amputee has the tools to rhizomatically engage with the surroundings each time he or she chooses a prosthetic to wear.

The prosthetic limb then functions as a means to express the amputee's individuality in the situation in which he or she would like to express it.



**Figure 20: "Snake Arm" by Sophie de Oliveira Barata, *The Alternative Limb Project*. Worn by Jo-Jo Cranfield.**

Amputee, swimming instructor and motivational speaker Jo-Jo Cranfield prides herself on being a "very confident person" who has "never seen the interest in having a prosthetic arm." She finds them "heavy, uncomfortable and not at all practical," and beyond that, "having one arm makes [her] effortlessly different to the majority of people" (*Alternative Limb Project*). Cranfield actively opposed using a prosthetic limb until approached by Sophie. In fact, Cranfield jumped at the opportunity to wear an

alternative limb claiming, "[Sophie] did not have to ask twice." Where a traditional prosthetic limb did not interest her, an alternative limb provided a new and interesting opportunity for her to continue to "embrace the weird and wonderful" as she had always done. Her motivation for wearing the alternative prosthetic limb fashioned for her by Sophie comes from the situations in which she thinks it will make her "stand out." Cranfield says,

I've never felt uncomfortable about my limb (or should I say lack of). I am known by many to be a confident person and I give public speeches regarding my swimming, but this experience [with Sophie's art] has given me a different sort of positive outlook on myself. It is every girl's dream to be a model and I loved being the centre of attention [...] I can't wait to

wear the arm to nightclubs and to training where I will leave it hanging out of my bag whilst I'm in the pool or gym— the reactions on people's faces will be priceless! I can see myself wearing the limb on nights out, it makes me feel sexy and I think it will make the perfect accessory to make me stand out! (*Alternative Limb Project*)

Cranfield began with a confidence in her organic body; the prosthetic limb fashioned by Sophie functions as an extended expression of that confidence. Rather than filling in a perceived lack, it enhances the present form of her body. Her excitement about wearing it relies on the places she envisions it making her “the center of attention.”

Deleuze and Guattari claim, “The opposition between arborified and rhizomatic segmentarity is not just meant to indicate two states of a single process, but also to isolate two different processes” (212). It is from the fixed form of the body that interchangeable prosthetic limbs negotiate spaces rhizomatically. Prostheses, as an embodied form of “becoming,” function as a text— at times in a Deleuzian way of rhizomatic identity formation and at other times forming a fixed, arborescent site of meaning-making of the “self.” In either circumstance, it is a site for both cultural interrogation and self-reflection. The merging of human and machine functions in an arborescent manner with the inorganic providing the context for identity formation. The amputee uses his or her prosthetic in a rhizomatic manner, where whatever the occasion calls for, the amputee responds with wearing the appropriate prosthetic limb.

## **Aesthetic Prosthetic, Framing, and the Phantom-Phantom:**

The option for distinction provided by the presence of the “Real” has impacted “self confessed fashionista” Viktoria Modesta Moskalova by providing her an opportunity for artistic expression. Pictured, Viktoria wears what is called the “Stereo Leg” (Figure 11). She notes her natural desire to change her

appearance all of the time through her clothing choices. Of the alternative limb, she says, “The first time I wore a limb that was so obviously BIONIC, it gave me a total sense of uniqueness and feeling of mutant human in the best way possible”

(*Alternative Limb Project*). The body in all of its mutability encompasses more than just functionality. It allows for a person to express their unique sense of self, individuality and confidence to the

onlooking world. Though Viktoria points to the limb’s “power that is beyond something

that can be described,” she also notes her “Stereo Leg” can only be “fully appreciated” under certain circumstances— “on stage, on film or as part of an art installation.” Her sentiments about her view of the prosthetic limb’s situational value does not necessarily reflect her personal feelings towards the limb, but the anticipated feelings of those beholding her appearance when she wears the limb.



**Figure 11: “Stereo Leg” by Sophie de Oliveira Barata, *The Alternative Limb Project*. Worn by Viktoria Modesta.**

Framing the limb in a manner that appeases the staree's own self consciousness towards an amputated materiality extends the concept of the "phantom-phantom limb." Without any resemblance to an organic limb, the "Unreal" alternative limb perhaps functions in a similar way to the absence of a prosthetic limb altogether. Viktoria claims, "It was really fascinating watching people's reactions because most of them were speechless. Some had never stood next to a person with a prosthetic limb and the ideas they might have of what an amputee might look or act like is, in most cases, negative. So when they do clock my appearance and see the leg, it is very challenging for them." The amputee's use of the alternative limb destabilizes a normalized aesthetic field. While the amputee controls the aesthetic field, his or her discretion in doing so may placate those starers who cannot necessarily accept their own physical mutability. It is not my intention to suggest it is the role of the amputee to appease the phantom-phantom within the starrer, but to point out the possibility, and perhaps inevitability, of such reactions to the "Unreal" prosthetic limb. Viktoria's cautionary attitude towards framing her own "aesthetic prosthetic" positions recognition between starrer and staree as an event framed by a predetermined set of aesthetic expectations. In this case, "visual activism" may have a negative desired response.

The appeasement of the phantom-phantom does not account for an amputee's possible phantom limb in the traditional sense. Having a phantom-phantom says nothing about the staree; it's a matter of actively addressing the starrer. The aesthetic prosthetic is a tool for confronting and obliterating the

phantom-phantom. Visual activism is not the amputee's duty, rather it's a choice to present the "self" in a specific way, to give information about one's "self." The phantom-phantom limb potentially creates, in someone viewing the amputee, an experience of horror because it forces the individual to confront trauma of the body. It represents the threat of violence to one's own materiality. "If this person can lose a limb, so can I." That potentially traumatic experience may come with an accompanying horror, precluding amputees from representations of being beautiful. They have not only overcome their own physical disability, but the social disability stemming from the phantom-phantom that is imposed on them. No, this is not their job to do so. It is not their role in society to appease the starrer of a phantom-phantom. But it is a form of visual activism. It is not to say the amputee is compensating for something lost; but they can address the insecurities founded in the potential for an amputated organic body. Visual activism through the use of the "aesthetic prosthetic" expresses to a staree, "The amputated body is beautiful, and you are not as fragile as you may think you are."

## CONCLUSION

The “industrial prosthetic” and the “aesthetic prosthetic” both require the incorporation of innovation and imagination into their fashioning. It is not my intention to suggest the two are mutually exclusive entities. Instead, the desires of the amputee direct the imagination of the prosthetic limb fashioner. A phantom-phantom is not a stable or universally definable entity because it depends on a subjective, highly individualized moment of interaction. The phantom-phantom is itself a mode of becoming because experiencing it may alter the way in which a person relates to his or her own body. An amputee’s use of such prosthetic limbs possesses the power to alleviate the self-consciousness and fear of mutable materiality generated by the phantom-phantom.

The amputated body is a site for activism in the sense that not only is an amputee able to influence how he or she is perceived by others through visual and active activism, he or she is also able to change and effect how others relate to their own mutable materiality. By confronting the phantom-phantom directly through the use of an industrial or aesthetic prosthetic limb, the amputee is an activist for material bodies in all forms. The phantom-phantom, then, has two components— phantoms generated by the fear of the loss of physical engagement with the material world, and the fear of the loss of aesthetic engagement with the social world. From these fears, there exists a double horror.

In the instances of either, or both, horrors, the industrial and aesthetic prosthetic limb possess the power to diffuse the terror people may feel towards

potential violence done to their own body. In this sense, it is a mutually beneficial exchange between starrer and staree. The 21<sup>st</sup> century prosthetic limbs not only allow for an amputee's active engagement with his or her environment by the fulfillment of desire in a Deleuzian sense, but simply their use is a form of activism in that it posits the starrer's materiality as temporary through positive prosthesis rather than negative. In this way, positive prosthesis says to a starrer, "I am me not because of my body's current form allows me to move and be in the world, but because of the way I *desire* to move and be in the world." Visual and active activism assure those who feel the terror of the phantom-phantom limb that their desires may be fulfilled as long as desire is present— should they become an amputee, should violence be done to the staree's body, his or her desires still mean, for the person, potentiality.

The amputee has an extreme power to showcase to the world that "monstrosity" as historically related to the disabled body need not relate to the amputated body. You can choose a organic looking prosthetic limb or make a statement to onlookers with an alternative limb. The active activists currently showcasing industrial prosthetic limbs say to an audience, "If Hugh Herr is climbing mountains, Amy Purdy is snowboarding, and Oscar Pistorius is a contender in the Olympics, maybe there is no such thing as limits, only self regulated limitations."

The theoretical framework in the previous chapters has operated on the premise that these prosthetic limbs are universally accessible to amputees. Unfortunately, this is far from the case. Those amputee activists mentioned speak from a position of privilege; however, as prosthetic limb technology advances,

prosthetic limbs become cheaper. With the advent of 3D printing, prosthetic limbs are becoming much easier and cheaper to create. In an interview with Dan Carsen of WBHM, Jessica Berkholtz describes what 3D printing means to her family:

[3D printing] is huge for our family and for other families because it's not a commitment. It's not, you know, fighting with an insurance company or spending thousands of dollars on a prosthesis that your kid might not want or use. She loses one and it's not that big a deal. It's \$5, and so I can call over to Jason and he can print us a new one for five bucks. (Carsen).

Parents are even decorating their children's prosthetic limbs with more simplistic tools found in an arts and crafts box in elementary schools. As a society, we still have a long way to go before prosthetic limb technology is available to all amputees who need it, but saying that it is impossible is not the case.

The visual activists discussed in this thesis are inspiring such creativity by showing the potential for self-expression. Whether being confronted by the "aesthetic" or "industrial" prosthetic limb, the phantom-phantom inspires creativity as much as it is produced by creativity. When the starrer overcomes his or her own insecurities caused by the phantom-phantom, the aesthetic prosthetic may inspire the starrer to start imagining the kind of limb they would fashion. The same goes for the industrial prosthetic, although the industrial prosthetic is a bit more reliant on the past engagement with the material world. Either way, the prosthetic limb incites creative imaginings about the starrer's own capacity for self-expression, rather than terror about potential loss.

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