PAIN IN PARALLEL PLACES: INTERVENTIONS IN DISABILITY STUDIES AND SCIENCE FICTION

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DISSERTATION ABSTRACT

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Pain is a physical experience that is often imbued with metaphorical significance. Understanding better how pain operates as a cultural signifier can reveal assumptions about the status of different bodies and subjects. Even though pain is a nearly universal phenomenon, there is currently a dearth of sustained inquiry into pain as a literary, physical, and social phenomenon. What critical analysis there is about pain often metaphorizes the experience and forgets the lived, material realities of pain. At the same time, pain is a factor in virtually all cultural and social interactions, influencing everything from medical care to community acceptance. Thus, uncovering the functions of pain is a necessity. This dissertation reads for the ways pain forges intercorporeal relationships between bodies through the process of co-suffering, offering a new way of looking at the grotesque body. Using examples from a broad range of science fiction texts, from popular non-fiction science writing to superhero comics to novels to television, this dissertation explores the various ways that normative and non-normative pain response is witnessed and perceived. Putting forth a theory of co-suffering as a form of attention to and embodied translation of pain language, this dissertation examines the various ways in which listening to the voice of pain creates intercorporeal kinship between bodies. Through this kinship, bodies become subjects and gain access to

community. Ultimately, this dissertation shows that, while pain can foster such kinship, predictable and standard pain responses are necessary for creating co-suffering. Thus co-suffering can be emancipatory, as it helps marginalized bodies gain subjectivity, but it can also be a way for cultures to enforce rigid behaviors on subjects, as it requires that bodies conform to those standard pain responses.

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DEDICATION

For Greg and Desi, who remind me always of the great value of love, play, and kinship.

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CHAPTER I

INTRODUCTION: IT PAINS ME TO SAY

> **"**My point is that illness is *not* a metaphor, and that the most truthful way of regarding illness – and the healthiest way of being ill – is one most purified of, most resistant to, metaphoric thinking" (Sontag 3).

What Pain? Why Pain?

Pain is a physical state and a linguistic object, a way of being and a way of speaking about the world. But these are two distinct realities: when a body is experiencing pain, pain is no longer a metaphor but is instead a throbbing, excruciating bodily reality. The metaphoric and the physical are distinct, thus the language of pain is divorced, perhaps inherently, from the bodily experience of pain. We say we "feel" pain, but could bodily suffering be experienced through another sense? Can we hear or taste or touch pain? We say also that we "are in" pain. Pain is, in that phrasing, a location, a place we can enter and hopefully exit. Sometimes, we say we "have" pain. In this expression, pain is an object, something we can pick up or put down. In other turns of phrase, pain is a penalty. We "take great pains" to perform a certain way. We act "under pain" of some punishment. These are comforting things to say, because if pain is locational or objective, then not only can we leave it beside, but we also are somehow separate from it – we are "in" pain or we "have" pain, but we "are" not pain; as Sara Ahmed says, pain "is not a part of me, even though it is in my body that I feel it" (27). But why? In what way is pain not us? As such common idioms show, though pain is a distinctly subjective experience exquisitely unique for each sufferer, we nevertheless struggle to speak about the ways it instantiates itself within our bodies.

This perception of a dissonance between the experience of pain and the experience of self is perhaps inherent to what pain is and how it operates within and upon the body and the subject. Ahmed categorizes pain as "a private, even lonely experience, as a feeling that I have that others cannot have, or as a feeling that others have that I myself cannot feel" (20). In this conception, pain changes the framework of the body through isolation, removing the individual from a community of kin. In her exploration of the body in pain, Elaine Scarry agrees, arguing that pain causes a spatial reorganization of the relationship of one's body to the world: "either the contraction of the universe down to the immediate vicinity of the body or … the body swelling to fill the entire universe" (Scarry 35). Pain thus grotesquely changes the shape of the body in the world: "Pain involves the violation or transgression of the border between inside and outside" (Ahmed 27). So pain, destroying worlds and violating bodies, is deeply imbricated with our sense of self and our sense of our body in relation to the world.

Yet at every turn, it is hard to talk about the thing itself, about pain. To begin with, it is hard to even categorize or understand what we're talking about when we're talking about pain. As Joanna Bourke says, "'Pain' is a label that adheres to scraped knees, headaches, phantom limbs, and kidney stones… The adjective 'painful' is so broad that it can be applied to a toothache as easily as to a boil, a burst appendix, and a birth" (1). So broad are the potential applications of pain, this experience indeed resists any useful, coherent definition: it merely gestures towards an unnamed "host of incommensurable phenomena" (Bourke 1). In the way of all unnamed things, then, pain is fundamentally *frightening*. It demands classification and delineation, because without such things – without etiologies and obvious causal relationships – pain is indeed

monstrous. When we can't answer the what or the why of the thing, pain is often described "as if it were an independent entity within [the] body ('I have a pain in my tooth') or an entity that attacks from the outside (as in: pain is a weapon that stabs, a fire that burns, an animal who bites)" (Bourke 4).

Thus we want both to push away the presence of pain and yet must also find shared language to describe the thing that is within us and yet not of us. For Bourke, this explains why pain is subsumed into language and becomes such an essential cultural experience. As she notes, infants learn "what constitutes a pain-event" and then how it is "communicated through language, facial expressions, and gestures" that are "normative [and] contain veiled instructions on how people *should* act" (17, italics in original). So what I will call "pain language" is acquired much as any language is, and in the learning of this form of speech also comes a policing of the normative bodily experience and expression of pain. By removing the monstrous unknowability from pain, we thus also discipline bodily responses to pain and dehumanize whatever bodies do not experience or express pain normatively. A cursory glance at the popular depictions[1] of the condition Congenital Insensitivity to Pain – from Stieg Larsson's novels in his popular *Millennium* trilogy, to television portrayals in *House*, *NCIS*, *Grimm*, and *Grey's Anatomy* – reveal our obsession with the humanity of those people born unable to experience pain. Whether they are depicted as medical curiosities, as in the hospital dramas, potential psychopaths, as in Larsson's novels, or as secretly monstrous, as in *Grimm*, such characters are used to interrogate our shared humanity and the relationship of pain to a subject's world: if you do not have pain, these narratives say, you do not belong here, you are not like us. The

[1] Discussed at greater length in Chapter III.

same can be said for the depictions of extreme sadism (serial killers who revel in and play with the pain they inflict upon other) and masochism (aberrant freaks who transform pain into pleasure). Thus when suffering is not (or cannot be) shared, and when the other has no pain language or cannot speak ours, we struggle to accept that body as kin. In contrast, if the other is shown in pain, we are able to see it as kin.

Pain, then, is also a process that forges intercorporeal connections between bodies. Indeed, as Ahmed shows, "the pain of others becomes 'ours'" through a process called "co-suffering" (21) – the body of the other and the body of the self merging and blending. Co-suffering unites discrete corporeities as one. Witnessing the other in pain, even through the mediated frame of a book or a film, "can plunge … witnesses into the depths of wretchedness" (Bourke 29). It unites bodies in grotesque connection, and thereby causes an intercorporeal relationship to build between witness and sufferer. This is both supportive and challenging to community: it can help expand the community to accept an outsider, or it can shatter a community by demanding identification with an outsider. Bringing sufferers in and acknowledging them as kin can radically transform the boundaries of a community, which not all communities can withstand. Sometimes, in order to reaffirm and protect the status quo, the suffering of the other must be forcibly elided. Co-suffering is therefore a powerful force for both the individual and for communities. It is by witnessing the pain of others that we come to know those bodies in their world. There are, however, as many ways that bodies experience pain as there are bodies; likewise, there are as many ways to express that pain as there are bodies in pain. Pain is not just an interior experience; it is an experience that resonates throughout social bodies and social spaces. Therefore, by exploring depictions of how bodies react (or

don't) to pain, we can perhaps know more about what it means to be a body and belong to the world.

So pain is a complex physical, personal, and social problem. It has been called "the oldest medical problem and the universal physical affliction of mankind" (Meldrum 2470), yet it is also "bound to local contexts and different cultures" (Honkasalo 35), making it both a near-universal experience and also one that is temporally and spatially specific. Indeed, multiple layers of interpretation have historically been mapped onto pain; pain even serves as "the central metaphor of Judeo-Christian thought," thus generating "philosophical, political, and religious meanings" that exist in uncountable forms around the world (Meldrum 2470). Even the field of medicine has struggled to understand how pain functions and what it means, mapping philosophical meaning onto physical phenomena. For example, in the early days of the technology, anesthesia was treated with suspicion not just because it posed physical dangers, but also because doctors worried that "pain could be valuable" (Pernick 6). This is but one way that the philosophical weight of pain has colored the way medicine and culture treats the experience.

Here, then, we run into a form of dissonance inherent to science itself: though much of scientific thought calls itself by the names Truth and Fact, no such claim to objectivity is possible. Science is a form of rhetoric and is therefore subject to the same biases and assumptions as any other structure of knowledge. Scientific facts, as Bruno Latour and Steve Woolgar show, are no less constructed than any other cultural object or belief. As Latour and Woolgar have argued, scientific facts often attempt to dodge even the suspicion of subjectivity and thus "a fact takes on a quality which appears to place it

beyond the scope of some kinds of sociological and historical explanation" (105). The core of scientific rhetoric is thus a disavowal of itself as rhetorical. Thus scientific bias is again and again elided in medical discourse, which demands that its axioms be treated as universal. This results in bodies being treated as amalgamations of averages, statistics, and narrow research findings.

The implications of these biases are enormous. Such universalized thinking prevents individual variations from being understood or even acknowledged, with devastating material consequences. For example, research has demonstrated that, when presenting with heart attack symptoms, "women were more likely than men to be discharged home and less likely than men to undergo [treatment] in the year following their index visit" (Kaul et. al 1198). Indeed, it seems that "women have a higher risk of dying from a heart attack than men do" (Fernandez). While the causes of such findings are hotly debated, it is surmised that two factors contribute to such discrepancies in treatment. The first potential cause of this discrepancy is that women present with different symptoms than men: "Fatigue and shortness of breath were the most common symptoms" in women, while "chest pain or pressure often radiating to the shoulders, arms, neck or jaw and shortness of breath" is more common in men (Fernandez). Women's symptoms are referred to as "atypical symptoms of a heart attack" (Fernandez), despite being, it seems, wholly typical for women. Since so much medical research has focused disproportionately on male bodies, doctors themselves may not know that such presentation is common for women. This shows how medical data and perceptions (perhaps even influenced by popular culture) bias medical practitioners, leading to the discrepancy in treatment of men and women.

The second potential factor for this discrepancy: women experiencing "unexplained feelings of anxiety, fatigue or weakness," which Fernandez reports are among the most common presentations of heart attack in women, often find that their symptoms are attributed to mental illness or malingering and are dismissed. This form of bias not only changes doctors' perceptions of women's bodies, but also leads to self-policing. According to research from the Yale School of Public Health, "even when women suspected that they were having a heart attack, many said they were hesitant to bring it up because they didn't want to look like hypochondriacs" (Singh). Expectations about women as frail, hysterical, and untrustworthy are seemingly confirmed by such symptoms, with potentially fatal results. From Charlotte Perkins Gilman's seminal short story "The Yellow Wallpaper" to Elaine Showalter's *Hystories*, examples of medical mistreatment of women abound, putting medicine's gender bias on display.

Furthermore, it's increasingly easy to see how scientific truth not only relies upon biased perspectives but is also a useful tool for supporting, even creating, such perspectives. Take, for example, the disease "drapetomania." Described for the first time in 1851 by American physician Samuel Cartwright, drapetomania was a "mental disorder of slaves [that] had one defining characteristic: the sufferer had an unconscionable desire to abscond from his or her owner" (Bynum 1615). Such a condition was, in its cultural moment, logically consistent with the scientific understanding of race predominant at the time; as Bill Bynum explains, Cartwright and his contemporaries believed that "The psychology and physiology of Blacks left them fit only for servitude. They were like children, who worshipped authority and were happy only when a benevolent master looked after them and gave them regular tasks to perform" (1615). This cultural belief

made it logical to believe that any black person seeking to reject enslavement was acting against their instincts, and thus drapetomania easily pathologized this response. Racialized science was of course not unique to the antebellum South; eugenics as a whole relies upon racist explanations of racial differences, racial hierarchies, and racial others. The gendered and racialized biases I've briefly previewed here are far from the only examples of scientific biases, which cohere around virtually every marginalized body. It wasn't until 1973 that the *Diagnostic and Statistical Manual of Mental Disorders* in the United States removed homosexuality from its list of deviant behavior, declassifying homosexuality as a mental illness ("The History of Psychiatry & Homosexuality"). To this day, biased "illnesses" exist on the books and in the practices of doctors worldwide, and therefore the subjective filters through which a doctor sees their patients will almost certainly determine a patient's medical treatment.

Throughout history, then, medical and scientific epistemologies have been designed and deployed strategically for the purposes of dominance and control. Though it would be comfortable to believe that science is always (or ever) unbiased, it is clear that scientific ideologies are just as contingent upon social ideologies as anything else. As Robert Young says, "a racist society will give you a racist science" ("Racist Society, Racist Science"). The corollary of a biased society must also then hold: our society creates ableist science, misogynistic science, heteronormative science, cisnormative science, and so on. Pain is thus, like all experiences that fall under the medical and scientific purview, a phenomenon that is governed by a myriad of internal and external forces. It is experienced within the individual body, witnessed by external bodies, interpreted through cultural forces, and subsumed into co-suffering flesh. Only by

exploring the variety of lenses used to see and understand such a complex experience can we come to truly explain pain's functions and workings. Understanding historical treatments and theories of pain reveals its makeup in the present; reorienting contemporary perspectives on pain can lead, perhaps, to a more just future.

Pain in History

In his study of anesthesia's history, Martin Pernick describes what he calls the "calculus of risks and benefits" presented by anesthesia (6). Pain could, it was thought, perhaps be a necessary stage of healing or even an essential component of healthy growth. Assumptions about the willpower required to withstand pain were applied to a patient's ability to heal in general; as one cancer surgeon argued in 1850, "unless [a patient] had fortitude enough to bear to have their arm chopped off, inch by inch, on a block … they need not expect to have their cancer cured" (qtd. in Bourke 278). Relieving or removing pain was believed to be unnatural and risked causing the patient to ignore "Nature's benevolent warning system" (Bourke 279). Taking away pain may have even threatened a person's eternal soul: many religious practices espoused the belief that "suffering was intended by God to be a reminder of sin, an instrument of instruction, and a promoter of personal rebirth," so removing pain was an affront to God (Bourke 283).

Taking away pain was a dangerous both physically and morally, but the ability to practice medicine without inflicting pain allowed for heroic advances in the science and therefore could not be ignored forever. As Pernick shows, "anesthesia increased the power of surgeons over their patients; promoted the entry of women into surgery; fostered the bureaucratization of military and urban hospitals; and contributed to the 'medicalization' of human suffering" (7). Taking away the universal presence of pain in

the medical patient allowed the medical establishment to approach patients' bodies as problems to be solved, not just conglomerations of incomprehensible symptoms. Indeed, once anesthesia became better understood and its application structured, medical science shifted to embrace its technology. Thereafter, "the days before anaesthetics were portrayed as 'the period of darkness preceding the light' [and] anaesthetics were nothing short of a 'gift from heaven'" (Bourke 272). Removing pain, when it allowed for greater control over the body, became a revolution.

According to Marcia Meldrum, soon "the relief of bodily pain was a positive good" (2470), leading to a craze for analgesics of all kinds. By the mid-1800s, "Opium and alcohol-based compounds, in the form of liquids, pills, and 'headache powders,' were unregulated and available over the counter in local pharmacies" (Meldrum 2471). Liberal, even excessive, use of painkillers was the norm until the 1960s, despite knowledge of their addicting capacity, and this reliance on killing pain allowed doctors to get away with a dangerous lack of knowledge about what pain actually is. Indeed, for many years, different kinds of bodies were assumed to have different abilities to experience pain. Soldiers were deemed too emotionally and physically tough to experience pain and the physical clues that infants were in pain were thought of as "merely reflexes" (Bourke 275).

So despite a lack of deep knowledge about how pain works and what its treatment should entail, medical science nevertheless claimed authority over treatment, definition, and explanation of pain. Finally, in the 1960's, "interest in the [newly described] gate model [of pain]… drew attention to pain as a problem" (Meldrum 2473) that could not just be solved with drugs. In 1975, the International Association for the Study of Pain

was founded to address the many scientific, medical, and social questions posed by pain (Meldrum 2473). Thus over a hundred years of treating pain with analgesics passed before pain even became a distinct field of medicine.

The current medical methods for describing pain demonstrate the difficulty of expressing a physical experience through disembodied speech. According to the International Association for the Study of Pain, the fundamental definition of pain is: "an unpleasant sensory or emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (Morris 121). Such a definition necessarily falls short of articulating the experiences of pain: levels of pain, relationships to pain, the affective role of pain, and so on. Indeed, this definition acknowledges that pain is not always about cause and effect, wound and response: pain can arise "with *potential* tissue damage and with experience described *in terms of* tissue damage" (Morris 121, emphasis in original). The experience of pain is, according to the IASP, "always subjective" (Morris 121) and thus "the subjectivity of pain and cognition and the difficulty of devising a placebo control make the rigorous evaluation of … methods [for treating and managing pain] difficult" (Meldrum 2474). Pain is simply hard to pin down.

The medical model relies, therefore, on the body for definition. Pain researcher H. Merskey describes the way medicine calculates pain through viewing "pain behavior," or normative human reactions to painful stimuli such as grimacing, guarded movement, and limping, etc. (Merskey S70-S71). The body, then, has to speak when the voice fails. This is an insight found not only in medical discourse; literary scholar Mark Seltzer argues that in what the calls "wound culture," the wound itself becomes a symbolic expression of the inexpressibility of pain; he argues that the Western cultural fascination with

viewing wounded bodies (as in narratives about serial killers) functions as a way to understand violence and alterity. The wound becomes the "post-facto description for explanation" (258) – the wound itself speaking for what our voices cannot explain[2]. In this way, pain strips off the trappings of cultural and evolutionary sociality and demands a different, more embodied way of communicating. Therefore, as Tobin Siebers says, we must recognize that "the body is alive, [and] as capable of influencing and transforming social language as they are capable of influencing and transforming it" ("Disability Theory" 68).

Considering Impairment: Philosophy, Disability Studies, and Pain

There is much to say about how pain functions within individuals and communities, and there is a dearth of sustained inquiry into this topic. The medical discourse, as I've shown above, remains fixed on normativity: treating bodies as averages of normative features and behaviors instead of as individual formations of physiology and psychology. This is at work in the very definitional structures of language; as Lennard Davis says, "normalcy is constructed to create the 'problem' of the disabled person" (3), creating a Hegelian dialectic of normal and disabled. As Davis explains, changing industrial systems of the Eighteenth Century led to statistical analysis of bodies, seeking "l'homme moyen," the average man who "becomes paradoxically a kind of ideal" (5). This ideal average could be put to work by industry, generating an "average worker" (Davis 6) around whom the regimented, machinated factory of modernity could be

[2] This text, though interesting, repeats the common problem I have with many of these trauma and cultural studies texts: it discusses the effects of violence and wounding without attending to the actual material reality of its subjects. It never explicitly mentions pain, focusing on the wounded body as an object of study instead of as the experiential apparatus of the subject.

designed. Marxist critiques of capitalist systems have often focused on the ways such regimented systems discipline bodies by forcing them to conform to that rigid ideal.

Power, capital, and normalcy, then, are interwoven concepts. The bell curve enclosing the average body may shift with time, place, and necessity, but it always serves to capture under its dome the aspirational body of the normate. And those bodies that do not conform to these statistical averages? Those bodies are grotesqueries and spectacles. Medicine, then, becomes the venue for fixing and changing unique bodies so that they can disappear into the mass of the normate. Approaching all bodies that fall outside the narrow bell curve of the normate as disabled bodies, to be gawked at and in need of a cure, imprisons non-normative subjects and their communities in a restrictive bodily narrative. While cultural critics have expounded on the preceding dynamics of power and bodily control for many years, they have not attended specifically to pain within these systems. L'homme moyen experiences pain, so considering how that experience interacts with this sort of bodily control is a necessity to fully understanding the status of the body.

When philosophers and theorists do consider pain, teasing out the difference between pain and emotion has been of particular importance. While medicine has explored the neural pathways responsible for pain (called "nociception"), philosophy has done its own interrogation of the brain, differentiating (or not) between "mental" and "physical" pain, between the sensation of pain and pain itself (Trigg 4). What is the difference, we might ask, between pain and displeasure, between pain and anger, between pain caused by injury to the body and pain caused by emotional distress? Roger Trigg argues that the difference is in the wounding: "When we feel physical pain … we do not have to be aware of anything besides the sensation. [In contrast, with mental pain] if we

forget what is distressing us, our distress will go away" (19). Yet Trigg's emphasis on the body's knowledge of itself – of the body's focus on sensation – has been countered by numerous other theorists who, as Trigg shows, "equat[e] pain with displeasure" (4). Such a view de-fleshes pain, making it into a mere quality of believing instead of a quality of feeling. Where is the body, in such a view? Where is the discussion of impairment, agony, and the disabling weight of pain? Where the medical discourse essentializes the body, much of philosophical discourse ignores the body entirely.

Yet even theorists attuned to criticisms of such disembodied thinking struggle to resist metaphorizing the body. Elaine Scarry's notion of the body in pain is one of the most cited texts concerned with pain. In it, Scarry argues that "intense pain ... destroys a person's self and world," including language (35). She focuses on the political implications of painful experiences, such as torture, presenting pain as an impossible experience that each body experiences alone and isolated. These are useful insights into the experience of acute pain, but Tobin Siebers and others working within embodiment theory and disability studies have critiqued Scarry's perspective for being too narrow. Indeed, much of Scarry's project is about the specific experience of pain caused by war and torture, a particular and unique experience of pain that is not necessarily relevant for discussing the lived reality of a body in pain. Thus, in her text, the experience of pain is only relevant insofar as it speaks to state power and the particular horrors of warfare. Separating her insights from their native environment misses much and overgeneralizes more. Indeed, Scarry often falls into medical thinking, offering up treatment of pain as the means of creation.

Disability studies offers a revolutionary and rehabilitative corrective to these narratives. Disability studies defines two different models for understanding disability: the medical and the social construction models. According to Tobin Siebers, the medical model of disability operates on the notion that disabilities are medical problems that require "fixing" through medical technology. The medical model, he shows, "strives to cure [disabled subjects] by particular treatment, isolating the patient as diseased or defective" (*Disability Theory* 54). In contrast, the social construction model of disability posits that disability arises from environmental structures: "disability as the effect of an environment hostile to some bodies and not to others, requiring advances in social justice rather than medicine" (Siebers "Body" 54). In a world built for l'homme moyen, the social constructionist model points out, any bodies that cannot access all spaces are considered disabled. Disability rights advocates have largely embraced this latter model because it helps point out that disability is the result of cultural norms disabling non-normative bodies, instead of being an inherent physical state.

Given the dominance of the medical model in cultural thinking, disability rights advocacy has been faced with overcoming not just systemic inequalities but also narratives about the very quality of life possible for people with disabilities. Advocating for accessible spaces, demanding that disabled bodies be considered worthy, and proclaiming the value of disabled people's lives has undoubtedly created positive change worldwide. Seeking out and demanding acknowledgement of the pleasures, purposes, and power of disabled bodies has been a fundamentally important task. And it has been a political act: disability rights have only been won by groups of bodies uniting together in

shared purpose and declaring the validity and sanctity of their lives, their bodily realities, and their needs.

Yet though the social construction model of disability aptly refocuses the "disabling" of subjects onto power systems, it often elides the ways in which bodies can disable themselves. Many disabled subjects *do* struggle and hurt. As Kevin Paterson and Bill Hughes have argued, "While disability studies' separation of impairment and disability has been of great value in establishing a radical politics of disability, the Cartesianised subject it produces does not provide for an emancipatory politics of identity" (598). Somewhere in between the social constructionist and medical models of disability, we must begin a discourse about the embodied experience of pain. Pain isolates, impairs, and reduces quality of life, making it hard to argue that disability only exists when there is unequal legal or social treatment. No matter how much access and support a disabled body is given, if a subject hurts, they may feel profoundly un-able. Thus admitting to pain can be challenging to the disability rights movement.

Because much of contemporary body theory is the product of this strict constructionist perspective, elements of such theory can be restrictive in their own ways. As Siebers says, "There are only a few images of pain acceptable to current body theory, and none of the is realistic from the standpoint of people who suffer pain daily. The dominant model defines pain as either regulatory or resistant" ("Body Theory" 61). What does this say about the experience of living in a pain-filled body, of feeling the impairment of pain? For pain to be a form of resistance, Sieber attests, it must "be viewed exclusively as awakening new and magical opportunities for ability" ("Body Theory" 63); this is little more than a retelling of the Supercrip narrative (discussed at length in

Chapter IV), this time from the disability perspective but still mythologizing disability. Moreover, even when pain is discussed, it "is rarely physical. It is more likely to be based on the pain of guilt or social repression" (Siebers "Body Theory" 62). So even amongst those communities most invested in interrogating enfleshed realities, pain is an unspoken, unconsidered phenomenon.

Twenty-five years after the ADA, disability studies is now a discipline with theoretical pedigree and academic clout. Pain is a function of nearly all bodies, disabled or not, and plays a significant role in determining ability. Body theory's lack of attention to pain constitutes a gap in our understanding of the body. This is of no small import: narratives about pain and subjecthood inhere within arguments about reproductive choice, animal rights, disability rights, and more. Every doctor's office visit is imbued with the language of pain, humanity, and normativity. There must be a space for considering pain: the experience of it and the intercorporeal power it wields. This dissertation therefore frames a new direction in disability theory by recovering pain and reconsidering what rights we have to a discourse of disability that includes pain; this dissertation argues for renewed attention to the social, emotional, and embodied legacies of pain as an aspect of disability. Leaving connections between pain and personhood unexplored means ignoring a critical cultural conversation and failing to address a crucial site of discipline over the body.

In this text, I will specifically discuss bodily pain, not psychic pain. This does not mean that I do not believe in the power of the mind. I contend that the differentiation between psyche and body is an artificial construct, fallout from a century of domination by Cartesian dualism. The mind is in and of the body, just as the body is in and of the

mind. Moreover, psychological pain is no less real for its inciting wounds being metaphorical instead of literal, and its effects are embodied just as a fleshy injury might be. However, in this text I am interested primarily in how bodies interact with one another upon witnessing embodied pain, and therefore physical wounding and physical pain are of greater use. The theories of co-suffering and pain language that I advance in this text may be just as applicable to psychological pain as to physical pain, but a focus on physical instead of metaphorical pain allows for a deeper interrogation of the body itself.

Reexamining pain requires exploring not only how pain works upon the body, a project that scholars in the humanities and the medical sciences have already begun. Instead, reexamining pain from a disability studies perspective requires interrogation of the social function of pain: how it moves through individual and communal bodies, uniting and dividing into subject and object, kin and other. This dissertation explores a variety of ways that pain interacts with bodies to produce narratives about subjectivity, alterity, and normativity. In this text, I argue that pain serves as a marker of belonging to the community that witnesses it; witnessing the other in pain causes a grotesque recombination of bodily boundaries, bringing the other into the self and extending the self outward to enclose that other. For many people, the experience of pain is so imbricated with the experience of living that pain becomes another limb or extension of the body, and therefore a reorganization of what it means to *be* a body and live in space. Mikhail Bakhtin defines this as the grotesque, a way of reimagining the boundaries between bodies. The grotesque body cannot have limits because it "is a body in the act of becoming … [a] body [that] swallows the world and is itself swallowed by the world"

(317). This reading, of the body not as a fixed object but as a processual entity that continually transforms and is transformed by its surroundings, disrupts singular narratives of the world, the body, and the subject. Thus, pain offers a productive site for connection and policing: normative pain response becomes the marker of subjectivity, increasing the power of the normate and classing non-normative pain response as definitive of freakery. Throughout this dissertation, I will show how pain becomes wrapped up in personhood, determining and defining the way bodies earn their subjectivity.

What Science Fiction? Why Science Fiction?

> "Within the metaphors and fictions of postmodern discourse ... electronic technology seems to rise, unbidden, to pose a set of crucial ontological questions regarding the status *and power* of the human" (Bukatman 2, italics in original).

This text explores speculative fictions for their depictions of pain and their use of pain as marker of subjectivity. Interrogating the functions of pain in contemporary speculative fiction opens up new avenues of viewing the models of relationality and kinship that such narratives posit. Speculative fiction is a way of exploring the "what if?" of the future. Speculative fiction is a form of cultural and social rehearsal and exploration. Through science fiction, fantasy, magical realism, and other forms of the speculative imagination, authors and subjects can try out and try on new ways of living, relating, and responding to the changing world we inhabit. Through the speculative imagination, new worlds can be tested out, their successes and failures turned into lessons for living towards a better future.

Because of this function, speculative literatures are also incredibly useful sites of resistance again hegemonic power, providing narrative space in which to write the self into a new subject position. There is not much difference between imagining a futuristic

new world and imagining a new way of living within our own world. The world-building project of speculative literature therefore mirrors the self-fashioning that subjugated peoples are required to engage in in order to create spaces for themselves in a society that does not recognize them as bodies that matter. Demonstrating the way pain articulates selfhood, kinship, and belonging in contemporary speculative literature reveals ways that bodies in pain are disciplined in order to maintain oppressive structures of power. Moreover, it reveals the ways that signifying pain may allow subjects at the margins to achieve belonging within the center.

Speculative fiction has often been considered low art, a genre not worthy of academic consideration. Yet the questions raised by speculative fiction are no less than questions about the effects of science on culture. Indeed, Gerald Miller has argued that "Science fiction … represents the postmodern genre *par excellence* because its modus operandi closely resembles that of postmodern literature and theory: both question and undermine our most solid beliefs about humanity, society, and the universe" (2). So rather than remaining relegated to the bottom rung of the academic ladder, science fiction deserves critical interrogation and assessment for its insights on contemporary life. While "literature in general creates virtual spaces that foster critical thought in ways that purely theoretical writings cannot" (G. Miller 4), the particular spaces created in speculative fiction "vary so radically from our everyday life that they force us to experience radical difference and compel us to engage in singular productions of meaning" (G. Miller 8). Sussing out the meanings in these spaces, finding connections between the radically or uncannily different worlds depicted in the pages of speculative fictions and the familiar

world we live in, offers insight into the "impulses that underlie any attempt to conceptualize the human" (G. Miller 5).

In speculative fiction, readers see a world that is simultaneously the future and the present, a world that articulates a vision of the contemporary through its imagination of the forthcoming. Science fiction is therefore a rich site for analysis, a wealth of resources for contextualizing the way humans think about themselves and their place in the world. One particularly interesting theme that science fiction can help illuminate is the notion of the "natural." By their placement in such ostensibly unnatural settings, science fiction texts set the notion of the natural into stark relief; the unfamiliar backdrop acts as a blank screen, revealing the definitional boundaries that so often blend into the familiar gradations of realistic texts. In science fiction, everything is seemingly unfamiliar and thus part of the pleasure of consuming such texts lies in discovering the differences between that world and our own. In doing so, in mastering and mapping those other worlds, we readers find the edge – razor thin and just as sharp – that separates them from us, the unnatural from the natural. But what precisely *is* a natural setting? What is nature, and what isn't? These are questions that may, in realistic fiction, go unasked, whereas in science fiction, the cognitive dissonance between what we read as natural in our own world and read as unnatural in the fictive world requires us to define the natural in a much more conscious way. Therefore, critical analysis of a science fictional text can shed light on those definitional structures and help us reveal the fiction that is the "natural."

Therefore, in this dissertation I explore the way contemporary texts figure pain, with particular focus on the way pain operates as a marker of belonging within social systems. Interactions between subjects often rely upon the signification of pain to define

which bodies matter and are allowed agency or kinship. Exploring representations of bodies in pain reveals the way pain functions as narrative prosthesis and therefore demonstrates that the way subjects express or experience pain may determine a subject's treatment. Narrative prosthesis defines what David Mitchell and Sharon Snyder describe as literature's "perpetual discursive dependency upon disability," a dependency that allows a text to use the figure of disability as marker for a character's "differentiat[ion] from the anonymous background of the 'norm'" (Mitchell and Snyder *Narrative Prosthesis* 47). A character's disability is then not just a physical impairment: it is a signification of the abstract value of that subject. Because disabled characters are first and foremost marked as disabled, texts generate "characters who are indentured to their biological programming in the most essentializing manner. Their disabilities surface to explain everything or nothing with respect to their portraits as embodied beings" (Mitchell and Snyder "Narrative" 225). Thus, disabled characters either only function as embodied symbols of some archetyped construct, or their disability is itself the symbol of some essentialized cultural or literary narrative.

Drawing on such disability studies concepts and applying them to representations of pain in contemporary speculative and science fiction texts, I explore how such texts often lean on pain response as a marker of humanity or generator of kinship. The implications of this narrative slippage stretch far beyond the printed page: the narrative conventions that structure the representation of aliens and freaks mirror the medical conventions used to define and categorize embodied experience. Following the thread of representation from cartoonish zombies to the cartoon faces on the pain scale illuminates the prejudices and assumptions that govern the treatment of pain and pained subjects.

Indeed, the connections between these representative valences of human and inhuman subjects expose the inherent ableism within medical treatment of bodies, making urgent the need for transformative ways of dealing with dis/abled bodies.

Science fiction and speculative texts are ideal spaces for such exploration. Speculative fictions are a great equalizer: in science fictional spaces, there's no reason to assume that the world was built for human bodies, let alone for particular kinds of human bodies. Like an ocean, the sci-fi world disrupts the normate's presumption of belonging – we cannot define the body as belonging to the space. This allows, then, for us to defamiliarize the relationships of all bodies to the space, which gives the lie to normativity and able-bodiedness.

Using a broad definition of what constitutes speculative or science fiction texts, I explore popular fiction from televised medical dramas to apocalyptic novels to dystopian superhero stories. This is a definition of science fiction that opens the genre to all texts that structure the world through scientific or speculative means: apocalyptic texts that imagine the ecology of a world plunged into nuclear winter, melodramatic texts that use medicine as the catalyst for drama, and even those medical texts that teach doctors how to understand their patients. In all such texts, medical or scientific notions of normativity structure the relationship of a body to its world. Much as we could define the genre of postcolonial texts as those texts that structure their world through relationships of subjects to colonial power structures of past, present, and future, my definition of speculative science fiction texts relies upon the ways that scientific understanding shapes and informs cultural views on the body and the subject.

This work constitutes a first for both Disability Studies and Science Fiction studies. Science fiction, as Kathryn Allan says, has "been patiently waiting for disability scholars to notice it" (6). Similarly, pain has been waiting for a fuller theorization in the field of disability studies. As Sarah Ahmed says, "the affectivity of pain is crucial to the forming of the body as both a material and lived entity" (24), so locating pain studies within a genre of literature that articulates bodies all "along the human spectrum [including] both the posthuman and the nonhuman" (Allan 6) presents a rich and useful union of ideas. Speculative and science fiction allows us to eavesdrop on a cultural conversation about bodies, normativity, and kinship that often take place behind the closed doors of our whole social and scientific system.

Star Map: The Journey through Parallel Places

This text takes a broad approach to its subject matter, drawing widely from a variety of pop culture, literary, scientific, and media sources of the twentieth and twenty-first centuries. Each chapter brings together cultural and literary texts, combining disparate examples of similar phenomena that shed new light upon each other and upon the theoretical perspectives underlying this project. Each chapter therefore begins with a case study of a cultural object that provides insight into the literary texts that chapter will consider. My conception of pain theory builds throughout the dissertation in ways that speak to both the insides and outsides of academic discourse. This is a purposeful and political move: this dissertation is designed to speak broadly about these issues, to make connections within and between elite academic discourse, activist communities, and subjects living in bodies in the world. This dissertation values pop culture as much as high literary art, treating superhero stories, literary fiction, and children's movies as equal

contributors to social discourse and shared culture. Because pain is a universal human experience, all subjects are implicated by these theories and affected by the powerful work of pain.

I argue that pain is a primary cue, functioning in literary and cultural texts to indicate which bodies are kin. Witnessing the other in pain causes co-suffering, uniting bodies and therefore generating kinship and intercorporeal relationships. Bodies that respond non-normatively to pain are therefore subject to narrative suspicion, making pain response a site for discipline. However, witnessing non-normative bodies in pain can also confer subjectivity upon those bodies, making pain response a potential site for unification and connection. In short, pain is a complex physical and social process that unites and divides bodies, subjects, and experiences; determining how pain works across bodies, genres, and communities reveals with greater clarity the ways that bodies are narratively described and understood.

My argument progresses through the different ways that pain can function to assert a subject's inclusion or exclusion within a cultural system. Chapter II, "Self And Future: Theories of Pain at the End of the World," considers the position of the self within postapocalyptic narratives, when the relationship of the self to the future is made tenuous by the uncertain nature of the future. As a case study, this chapter examines the narrative of fetal pain used by the anti-choice movement; such language is used discursively to denote fetal personhood and simultaneously reduce *female* personhood. By demanding co-suffering with the fetus instead of the body carrying it, such rhetoric redraws the boundaries of subjectivity, affording to the fetus rights that are not given to the maternal subject. This is a rhetorical act that brings forth a kind of life: the pain

capable unborn child, a subject generated by language and a fiction of pain. Exploring the rhetorical life of this subject shows just how much work pain performs in culture.

Moving from cultural to literary texts, Chapter II examines *Children of Men*, *The Road*, and *Elysium*. *Children of Men* and *Elysium* are contemporary films and *The Road* is a contemporary novel; all three feature dystopic or postapocalyptic settings that redraw the boundaries of the future. In each text, human continuity is at question: the very survival of the human race is uncertain and therefore the bodies of those humans still alive must all actively work to belong to the community of survivors creating a future for humanity. These works define humanity in subjects who experience pain and differentiate such subjects from those who will not belong in the world of the postapocalypse, demonstrating how pain response can determine humanity and survival. In postapocalyptic spaces, those subjects who are shown to experience pain or co-suffer are those who are able to survive into the future, indicating that they are those subjects designed for habitation in the new world. Introducing concepts of co-suffering and pain language, this chapter demonstrates how witnessing pain in others functions to determine the potential subjectivity of that other. The theory of co-suffering shows how pain is a rhetorical tool and social marker that creates subjectivity and personhood. Pain is a language that has to be learned, and when we witness the pain of others, we hear the voice of pain. Humanity then follows those who are able to pain and those who are able to co-suffer. Such acts create the other as kin and subject.

Chapter III, "Which Face Represents Your Pain?: Subjectivity in Non-Normative Pain Response," considers how normative pain response is used to differentiate normative subjects from non-human others. The case study considers the various versions

of the faces pain scales used by the medical profession to define and rank pain. This chapter shows how these scales function to connect patient and care provider, creating identificatory self-representation that both allows the patient to be seen by the doctor and yet also reduces the patient to a medical object, a fixed simulacrum of the subdued, docile patient-self that supports and ultimately serves the medical establishment. Using comics theory to read both the standard medical pain scales and creative pop-culture versions, this chapter shows how the cartoon bodies of the pain scales operate similarly for the medical practitioners as the fictional bodies of literary texts operate for readers. In each case, the two-dimensional bodies of the text allow an intermediary sufferer with whom the subject (doctor, reader) can co-suffer; in the case of the pain scales, this act includes the agency of the sufferers themselves, who co-suffer with the representational image as well. In this way, the pain scales are both agentive and disempowering, offering to sufferers the chance to assert themselves while also dehumanizing them to fit the individual experience of pain into strict, normative bounds of representation.

This critique of medical tools connects the pain scales to representations of pain in dramatic medical television. If Chapter II shows how normative pain response can confer subjectivity upon a character, this chapter questions what *lack* of normative pain response does to subjectivity within the medical and cultural imaginary. This chapter examines two medical television shows for their depiction of the condition Congenital Insensitivity to Pain, an analgesic condition that has received much attention in popular media despite being exceptionally rare as an actual diagnosis. Reading for the treatment of subjects with CIP in the shows *Grey's Anatomy* and *House, MD* demonstrates how lack of normative pain response enfreaks such subjects, playing into the medical model of

disability and using such bodies to define the outer boundary of normalcy, thereby normalizing pain and essentializing the role of doctors. Only when CIP patients are shown in their own families and as full subjects can they escape the enfreakment enforced by the pain scale. The chapter closes with a comparison of a *New York Times* popular science story about a young girl with CIP and the documentary *A Life Without Pain*, which follows three youth with CIP. While the *New York Times* story reinscribes the narrow definition of humanity shown on TV, *A Life Without Pain* shows these children with their families, families who mirror and "feel" pain about which the children themselves are ignorant. In this way, the children gain subjectivity through the co-suffering of their families, who act as intermediary sufferers just as the faces on the pain scale do. Ultimately, this documentary demonstrates the ways that belonging to a community of kin allows even non-normative subjects to learn how to function and thrive within cultures that do not understand their bodily experience of the world.

CIP and other similar conditions are vested with a certain non-fictional aura stemming from their medical pedigree, so the next chapter moves from those examples to explore other, more fantastical representations of bodies that respond in non-normative or aberrant ways to pain. Chapter IV, "Sub, Super, and Everyone Else: Non-Normative Pain Response from Zombies to Superman," defines a pain scale from sub-human through super-human, showing how such ranking is designed to reify the position of the normate and create a stable normative subject. The case study examines how Oscar Pistorius became emblematic of the super-crip narrative and how that narrative serves to both valorize and dehumanize crip bodies. Pistorius, a double-amputee Olympian runner, transcends the pathetic crip narrative by virtue of his athletic talent; his image is thus

coopted as an example of the Supercrip, an inspirational and aspirational narrative subject whose disability serves the subject position of the normate. The chapter closes by comparing Pistorius to other athletes, examining how the super-athlete or Olympian body is "cripped" in narrative by virtue of its abilities. Having abilities that confound or threaten the normate body requires shifting along the spectrum of normalcy, and that work takes place within literary narratives as well as cultural narratives.

Thus, the chapter places fictional bodies along other points of the spectrum: subhuman zombies, the deviant superhuman Batman and the safe superhuman Superman, and the otherworldly inhuman Celestials. The shifting, discordant position of the body along this spectrum shows that the distance between monster and hero, between sub and super, is never as simple as the body itself. In these transformed human bodies, subjectivity and therefore humanity is won or lost in the pain response: zombies lose their human subjectivity through their abjectly pain-free physiology, Superman retains his safe subjectivity because of his willingness to experience pain, and Batman is only saved from subhumanity because of his pain. These examples plot a course from subhuman to superhuman, but they also show how unstable those categories are, offering a spectrum that is more of a continuum than a linear plane. These texts therefore also illuminate the way all human bodies fall along this spectrum, constantly whipsawed back and forth as the normate jockeys for its spot at the center.

Finally, Chapter V, "Good Dog, Good Pig, Good Robot: Nonhuman Kinship, For Better or Worse," considers the case for attaining cross- and trans-species kinship through co-suffering. Diverging from the previous chapters, this chapter's case study is not a cultural artifact but an intellectual one. Maurice Merleau-Ponty's concept of the

Umwelt, or the experiential universe of a body, helps to answer fundamental questions that underlie the whole project: what is the natural? How do bodies know themselves and their world? Merleau-Ponty's theories introduce the concept of intercorporeity, or interconnected corporeal forms: the body not as a unique, hermetic self but as a communal form bounded by and made up of other bodies. This is an essential reorientation of natural order, which has long placed humanity atop a hierarchy of beings, and opens up the possibility of seeing horizontal relationships between human animals, non-human animals, genetically modified beings, and non-animal bodies.

Using the short story "The People of Sand and Slag" by Paolo Bacigalupi, I argue that witnessing the bodies of animals in pain can help cement bonds of cross-species kinship. Moving from normative animals to non-normative animals, I examine Margaret Atwood's *Maddaddam* trilogy of novels for their depictions of the relational connections between humans and bio-engineered beings that challenge our notions of safe and normative animals. Finally, I argue that such co-suffering experiences can create bonds that trouble definitions of animate versus inanimate objects, and challenge anthropocentric definitions of pain. Co-suffering with robots expressing something akin to pain creates human-robot kinship in the film *Wall-E*. These examples show again how pain and co-suffering grotesquely expand the body beyond its corporeal form, allowing for kinship and communion with other bodies. Moreover, they trouble the very distinction between human and animal, between object and subject, between sentient and not. The chapter closes with a reading of the beloved children's picture book *The Velveteen Rabbit*, showing how life or subjectivity can perhaps be attained even by toys.

CHAPTER II

SELF AND FUTURE: THEORIES OF PAIN AT THE END OF THE WORLD

> "I feel I have a duty to speak the truth as I see it and to share not just my triumphs, not just the things that felt good, but the pain, the intense, often unmitigating pain" (Lorde 89).

Case Study: Fetal Pain

In video of her testimony, Jill Stanek sits behind a tall, thin microphone and reads her artfully prepared speech with calm and measured affect. She glances up frequently from her notes, presumably looking directly at the congress-people in attendance, but throughout her testimony she never alters her calm, no-nonsense tone. Though this tone belies the intensity of her belief, her powerful rhetoric is emotionally affective, carefully chosen, and consistent: fetuses are referred to as "preborn babies," "babies," or "children"; doctors who provide abortion are termed as "abortionists who kill babies"; and the network of reproductive healthcare providers are described as an "abortion industry." In her seven-minute testimony, Ms. Stanek relates the sensational and shocking case of Dr. Kermit Gosnell, an unlicensed abortion provider convicted in 2013 of multiple counts of murder for his treatment of the women who came to him for the kind of last-ditch medical treatment attempted only by the very poor and very desperate. This sensational trial is often given as an example of just how dangerous it can be to lack safe, legal, and regulated abortion care, yet it has also been heralded by anti-choice advocates as an example of the depravity of all those who perform (and often those who seek) this medical service.

Ms. Stanek repeatedly describes what she considers the similarities between neonatal infants and fetuses as she relates the horrors of infanticide and the suffering

experienced by "abortion survivors." In her opinion, abortion is no mere medical procedure: it is a torturous assault on babies who simply have the misfortune of having yet to be born. In her even, easy voice, Ms. Stanek argues that fetuses – or babies, as she calls them – "are torn apart during abortions with no pain relief." Gosnell is, in her assessment, emblematic of the kind of person, the kind of *monster*, who could choose to provide such medical services. To justify such monstrous behavior, she attests that

> It must be that some people inexplicably think the uterus provides a firewall against fetal pain, or that babies marked for abortion are somehow numb, while their wanted counterparts aren't. This thinking is better suited for the Middle Ages than for modern medicine. (Stanek)

Her accusation of "Middle Ages" brutality in the modern abortion procedure is an oft-used claim in the anti-choice toolkit, a toolkit that expands to fit any argument that frames the fetus as a subject with full legal, social, and even spiritual rights.

At hearings and protests, on TV and radio, from the pulpit and in the pages of pamphlets, such rhetoric is commonplace. The central premise of this argument is that fetuses, sometime around the twentieth week of gestation (or the sixteenth, or the eighth, depending on whom you're asking), become capable of feeling pain, indicating that aborting them is equivalent to murder. Pain, therefore, is a marker of life: the moment of experiencing pain is also the moment that termination becomes murder. As Focus on the Family's Jim Daly puts it, "thanks to advances in technology… and advanced medical understanding on topics like fetal pain, the medical profession is increasingly seeing a developing baby for what she or he is – a real person, not simply a blob of tissue and cells." This is but one plank in the "fetal personhood" platform: a new direction in anti-

choice, anti-abortion politics that has become increasingly powerful in the 21st century. As Glen Halva-Neubauer and Sara Zeigler explain in their study "Promoting Fetal Personhood: The Rhetorical and Legislative Strategies of the Pro-Life Movement after *Planned Parenthood v. Casey*," since the 1992 Supreme Court Decision *Planned Parenthood v. Casey* that determined that fetuses are not persons, the anti-choice movement has used narratives about fetal pain to counter SCOTUS's definition and to justify what it terms "fetal personhood." The central aim of the movement has thus been to "encourage a public perception of the fetus *as* a baby, rather than as something that will *become* a baby" (Halva-Neubauer and Ziegler 103). And pain response is a cornerstone of the anti-choice argument that fetuses are persons; for the fetal personhood movement, pain, in essence, proves life.

But does a fetus feel pain? According to the 1984 documentary film *The Silent Scream*, the answer is an emphatic yes. As Halva-Neubauer and Ziegler describe it, "The film's most dramatic moment occurs when the fetus opens its mouth, apparently reacting to the fact that the suction pipe has located its body" – the "silent scream" of the film's title (105). On the level of cultural understanding, "the film is largely thought to suggest that the fetus feels pain" (Halva-Neubauer and Ziegler 105). Yet the scientific support presented by the film is inconclusive at best; even Focus on the Family and other anti-choice organizations recognize that they have little scientific evidence to draw from. Daly admits that "there are still doctors and scientists who disagree about the timing of when a preborn baby begins to feel pain." Thus it may be that this film alone led to fetal pain becoming a cornerstone of the new personhood movement. As Daly acknowledges, the "whole issue [of fetal pain's scientific veracity] is irrelevant. It's a human life! But if the

fetal pain strategy is proving effective, as it is, for the sake of advancing pro-life legislation, then we're wise to pursue it." It's not the truth that matters to Daly: it's the argument. Indeed, it is a compelling argument, one that should trouble those on either side of the abortion rights debate; if the fetus feels pain, is abortion just? So powerful is this idea, then-President Ronald Reagan referenced it in a 1984 speech, saying, "doctors confirm that when the lives of the unborn are snuffed out, they often feel pain, pain that is long and agonizing" (qtd. in Halva-Neubauer and Ziegler 105). Just who these doctors are and how they have discovered fetal pain is, again, inconsequential; what mattered to Reagan and what matters now is the social power exerted by the image of a suffering child – a child that, in this case, happens to be a fetus.

In the years that have followed *Roe vs. Wade*, legislation regarding fetal pain has been proposed, debated, rejected, and instituted across the country, providing ample space for this personhood rhetoric to grow. For example, had it passed, the 2004 Unborn Child Pain Awareness Act would have "require[d] that women seeking to abort a 'pain capable unborn child' (defined in the legislation as a 'fetus at twenty or more weeks') be given a brochure prepared by the Department of Health and Human Services outlining the evidence that the fetus feels pain" (Halva-Neubauer and Ziegler 114). Though the Unborn Child Pain Awareness Act had failed by 2006, the rhetoric it relies upon is as strong as ever. Despite scientific arguments that a fetus in the first-trimester of gestation (when most abortions are performed) "has yet to develop a brain or the neural pathways that are necessary for perceiving and responding to pain" (Solinger 95) and despite statements from The American College of Obstetricians and Gynecologists that "no legitimate scientific information … supports the statement that a fetus experiences pain

early in pregnancy" (qtd. in Dubow 157), the myth of silent scream of the "pain capable unborn child" endures in political rhetoric and popular culture.

Here, then, we see the fetal pain argument creating a new class of life altogether; not a fetus, not a child, not even a preborn baby: a *pain capable* unborn child, a being with subjectivity, rights to legal protection, even life, simply because of its ability to feel pain. Yet this is a wholly different perspective on the social and legal status of the fetus. If the fetus is an aspect of the maternal body, a mass of self-replicating cells similar to a tumor or cancerous growth, then life is not conferred upon it; we don't mourn the passing of tumors, benign or malignant, and we don't regard viruses as autonomous life forms requiring legal protection. And for much of human history, this has basically been the treatment of the fetus: it is an element of the mother's body that becomes a person in the process of its birth. Arguments for fetal pain as a justification for outlawing abortion tend to ignore the body of the mother entirely. Unlike other anti-abortion arguments, which tend to make exceptions for extraordinary circumstances such as the life of the mother, fetal pain and fetal personhood proponents focus their concern only on the fetal body, uncaring of the personhood of the women carrying that fetus. Thus in their search for the most effective rhetoric to justify the end of legal abortion, anti-choice activists elevate this bundle of cells to the status of subject, and ignore the other subject in question.

What this so-called "personhood" movement is doing, then, is drawing on the concept of co-suffering: the notion that witnessing the suffering of others transfers some portion of that suffering into the bodies of the watchers, causing a spark of recognition and acceptance. In other words, witnessing the other in pain may be one way that we learn to recognize that the other is a subject just like ourselves. Co-suffering means

calling the other into being as a full subject, and in the case of this anti-choice rhetoric, it seems that it is easier to afford subjectivity to the fetus than it is to even see the maternal subject at all. If co-suffering with the other means bringing that body into being as a subject, how can that subject exist within another subject? It may be easier to elide the maternal body than to rethink bodily integrity and individuality altogether.

The Undiscovered Country: Theorizing Pain as a Language

> "[H]ow astonishing, when the lights of health go down, the undiscovered countries that are then disclosed" (Woolf 3).

What the fetal personhood movement encapsulates is the power of co-suffering. Witnessing the other in pain creates so potent an experience that, in the case of the fetus, it renders invisible the body in which the fetus is located, turning the woman into a pane of clear glass meant only to focus light and attention towards the being within her. The anti-choice movement has used the power of co-suffering to bring fetuses into being as subjects, eliding the mother and eliding the science that shows fetal suffering to be, in essence, a fiction. So it is to fictions and facts of pain that we turn to ask what exactly suffering is and how it can be transformed across bodies through the act of witnessing and the metaphysics of co-suffering. Witnessing the pain of others combines bodies and subjects and blurs the lines of demarcation between beings, inevitably comingling self and other. This causes recognition of the other as kin, makes the other into family, and unites bodies in the shared experience of pain. Pain, then, is no small matter; it is indeed at the heart of what it means to build community and continuity. And recognizing how pain marks and defines humanity means accepting the great, messy variance that is the human species, inevitably demanding that humanity must be accepted in all its many forms.

This chapter will develop a theory of co-suffering and the creation of subjectivity, and then test that theory through exploration of postapocalyptic narratives. Postapocalyptic spaces are ideal narrative environments in which to consider how bodies gain subjectivity. In standard narrative settings (settings meant to reference a living world), subjectivity can be organically conferred upon human characters: the world was designed to serve humans, thus humans are subjects. This is an element of the anthropocentricism that is common to human thinking: because humans are the ones describing the world for an audience of other humans, our presence at the center of the world is a given. Not so in a postapocalyptic space, where human belonging can no longer be taken for granted.

If the apocalypse is the end of the world, then it is the end of the anthropocentric narrative that assumes human primacy within that world. And if the postapocalypse is whatever comes after the end, the worlds imagined in such a place cannot necessarily be anthropocentric. Imagine for a moment the earth as it is in space: a spinning globe orbiting a star. This is our world. Now imagine the apocalypse; while one possible apocalypse narrative might feature this planet shattering into pieces and falling out of orbit, thus destroying its inhabitability, most apocalypse narratives feature instead some kind of radical alteration to the world such that the process of inhabiting it is fundamentally changed. In a nuclear holocaust, for example, radiation and nuclear winter will damage much of earth's atmosphere, rendering it unlivable for most animals; in a zombie apocalypse, to give another example, hoards of undying corpses will threaten the lives and safety of other animals, thus erasing the space between life and death, and rendering the world unlivable for most animals. In both examples, the planet itself

remains intact, and instead the ability the planet to sustain life as it has previously been lived – specifically human life, in most apocalypse stories – is what has ended.

Postapocalyptic worlds are therefore not designed for human habitation nor invested in the continuity of the human species. So any community formed within such settings must be actively sought after and crafted; co-suffering helps us reimagine how subjects fit together in community and in a world that is no longer built for them. Without the teleology of anthropocentricism holding subjects together and binding them in purpose to the earth, it is co-suffering that unites bodies in shared space. The case of fetal pain serves as a compelling example of the way this function of pain occurs daily in courtrooms and atop soap boxes; fetal pain narratives redraw the boundaries of the human, ascribing subjectivity to a fetus that cannot exist independent of an elided maternal body, a body that loses its subjectivity through the rhetorical act of conferring subjectivity on the fetus. Therefore stories set in the postapocalypse offer a vantage point from which we can see the way *all* bodies are constantly shuffled and reshuffled into categories of subject and other, human and nonhuman, kin and outsider, often through the mysteriously combinatory powers of pain.

Pain, while being a universally known and universally compelling experience, is nevertheless a difficult concept to engage with critically. Understanding what it is, how it functions in the body, and where it comes from has been a philosophical, theological, and scientific quest since perhaps the earliest time of humanity. What does it mean to be "in" pain or to "have" pain, and why do we use such language? Why do we not say, "I am pain" and allow pain to overtake our sense of self? Where is the boundary between the self and the pain inside it? This dissonance between the experience of pain and the

experience of self is perhaps inherent to what pain is and how it operates within and upon the body and the subject. Indeed, in her exploration of the body in pain, Elaine Scarry argues that "intense pain" is such a powerfully disruptive experience that it "destroys a person's self and world" (35); this occurs in a Bakhtinian fashion: the boundaries between the self and the other grotesquely blend and merge, convexities and concavities erupting from the body and altering its previous borders, causing spatial reorganization of the relationship of one's body to the world. So pain is deeply imbricated with our sense of self and our sense of our body in relation to the world, even as it reorganizes what it means to be a self, in a body, in the world.

Yet because language speaks from the body, pain resists clear articulation. Virginia Woolf bemoans "the poverty of language" available to speak about the experience of illness and pain, saying, "English, which can express the thoughts of Hamlet and the tragedy of Lear, has no words for the shiver and the headache" (6). In our inability to express "the shiver and the headache," pain breaks down language, transcending or resisting symbolic representation; as Scarry says, pain is either silent or extra-discursive, existing in an unspeakable realm that either "remains inarticulate or else the moment it first becomes articulate it silences all else" (60). So both Woolf and Scarry agree that there is a dearth of language that speaks to the experience of pain; we can name the event ("headache" or "broken skin"), but not describe the experience of it in so many words. But this does not mean that pain is silent; indeed, Scarry's conception of pain, focused as it is in the interplay of discourse and power, perhaps misses some of the ways pain creates a discourse of its own. Pain is an embodied experience and thus speaks an embodied language, one that, as Ahmed says, "operates through signs [that] convey

histories [of] injuries to bodies" (20-21). The language, then, is the body: the words the bones, the sounds the skins. To hear the voice of pain requires a synesthesia of sight, sound, and touch. So while pain is difficult to put into external words, its signs can be read and voiced by focusing on bodies themselves. Pain language is interactive, interpersonal, and made up of the connections between bodies, spaces, and histories. And because pain recombines the relationships between bodies, listening to and talking about pain means tuning into its effect on the bodies of a whole community, not just an individual.

Indeed, approaching pain as a solely individual experience prevents us from seeing the intertwinedness of bodies and the influence of communal cultures upon those bodies. The researcher David Morris argues that a postmodern understanding of pain must incorporate the shared cultural dimension of pain. According to Morris, the treatment of pain is over-reliant, both within and without the medical community, upon "the standard biomedical model [that treats pain as] no more than the result of an electrochemical signal sent along nerve fibers from the site of tissue damage to the brain" (111). This means that the biological model alone does not fully express the ways that such "electrochemical signal[s]" are articulated by the subject in whose brain they exist. Pain could instead be considered holistically, as an interwoven series of electrical, biochemical, psychological, and sociological effects. Sociologists Gillian Bendelow and Simon Williams agree, stating that "scientific medicine reduces the experience of pain to an elaborate broadcasting system of signals, rather than seeing it as moulded [*sic*] and shaped both by the individual and their particular socio-cultural context" (140). This overly simplified "biomedical" understanding of pain misses the "biocultural" (Morris

112) manifestations of pain, which arise from the intersection of biological processes and social response and can differ widely cross-culturally and across categories of subjects within cultures. Morris explains this phenomenon linguistically, examining the unique linguistic differences in descriptions of pain, such as the evocative description of a "jackhammer headache" (123) only found in cultures that also contain jackhammers. Because of these culturally bound norms, pain response and experience "owes as much to [the patients'] culture as to their nervous systems" (Morris 114). Indeed, Morris claims that "[p]ain has historical, psychological, and cultural dimensions" and that "[m]inds and cultures (as makers of meaning) have powerful influence on the experience of pain, for better or worse" (118). So pain is not just in the body: it is in the subject, the culture, the historical moment, the telling.

In this way, though pain can be destructive, as Scarry and Ahmed assert, it is also productive in ways that may bring forth community, subjectivity, and recognition of the other as kin. What is it to witness the other in pain, to stand aside and watch a body suffer? Witnessing pain has a profound influence on the body of the viewer: we wince, shudder, and pull away as if it were our own bodies being pierced, burned, or maimed. But how? Why does sharing the potential for this unwanted experience unite bodies in this way? Neuroscientist and psychologist Marco Iacoboni's pioneering work on the neural pathways associated with empathy illuminates this experience. In *Mirroring People*, Iacoboni explores the physiological reasons why and mechanisms for "humans' ability to understand one another" (4). As his research shows, "our brains are capable of mirroring the deepest aspects of the minds of others … at the fine-grained level of a *single brain cell*" (Iacoboni 7). These so-called "mirror cells" light up when we act

*and*when we witness the actions of someone else: our brains react to both the action of picking up a teacup, as the example from one of Iacoboni's famous experiments goes, and also to the sight of someone else picking up that same cup. Indeed, "motor cells [can] fire merely at the *perception* of somebody else's actions" (Iacoboni 11), so even the fiction that someone else might pick up a teacup (as one may experience when reading, say, *Alice in Wonderland*) will cause these mirrors cells to light up. And despite the fact that pain is not necessarily an action, witnessing pain causes similar responses in the brain: research from the University of Toronto shows that brain cells not only respond "to painful stimulation applied to the patients – to pinpricks, in one instance" but also "to the *sight* of pinpricks applied to somebody else" (Iacoboni 122).

In this way, mirror cells point to the interconnected physiology of pain. When we witness the other in pain, "our brain produces a *full simulation*" (Iacoboni 124) of that experience – mirroring, essentially, the brain of another within our own brain. As Iacoboni says, "[a]lthough we commonly think of pain as a fundamentally private experience, our brain actually treats it as an experience shared with others" (124). This shared experience is, I argue, more than just an affective state; it is an embodied space, an interconnected physiological restructuring of the body and a challenge to notions of discrete, inviolable selfhood. Simply put, when my brain fires in response to the pain of another body, I am experiencing a connection between my body and the other body, bringing that body into my own and redrawing our separate-yet-united bodily boundaries.

This is not an easy process, rewriting the body's barriers and reassessing the self. Pain requires both the witness and the subject to reconfigure their knowledge of the body. Much as a pregnant woman must labor to bring forth her progeny, the pained subject

labors to bring forth a new identity with which to manage pain. In her study of chronic pain, Leigh Gilmore demonstrates this function of pain as she tries to square theories that pain demolishes language (such as Scarry's) with the reality of life writing by those who experience chronic pain. She argues that "[l]anguage about pain is material in that it has the capacity to shape knowledge about pain, about how it is suffered and endured" (85). Thus, in Gilmore's opinion, while pain may be outside of language, we nevertheless use language to build a clearer picture of pain, thus demonstrating its effects upon the body. The act of producing language about pain creates a material trace, an object that can then interact with the subject. This other self, this avatar of pain, is like another person, but a person who shares the same physical space as the subject, requiring "people to reframe 'who I am' when pain is a fellow co-embodied presence that may persist as long as the human does" (Gilmore 92). Gillian Bendelow and Simon Williams echo this claim, arguing that pain makes "the painful body [emerge] as 'thing-like'; it 'betrays' us and we may feel alienated and estranged from it" (149). If pain can cause this kind of schism in the self, creating a "thing-like" "fellow co-embodied presence" that exists distinct but within the self, then it challenges the continuity of the self and disrupts the borders between self and other.

Ahmed echoes this claim, pointing out that pain is often experienced as an intrusion of the outside into the body or as a betrayal of internal bodily stasis. It often occurs suddenly, stabbing or throbbing or aching and drawing attention to a place within the body that had, until that moment, perhaps not been part of conscious thought. By demanding attention, pain creates spaces and surfaces: that sudden awareness of the foot on the ground, the back against the bed, or the gut inside the torso brings the mind to

those spaces and differentiates them from all that surrounds them. It is through potentially painful collisions of the body and the world we come to know where the surfaces of our bodies are because "it is through this transgression that [we] feel the border [of our bodies] in the first place" (Ahmed 27). Pain, then, "is crucial to the forming of the body as both a material and lived entity" (Ahmed 24) – crucial to the sense of the self as an embodied and discrete subject. Yet at the same time pain causes feelings that connect subjects together by "open[ing] bodies to others" (Ahmed 15). Ahmed describes this process of opening to others as an experience of literacy: when "others are in pain" we "*read* [their] bod[ies] as [signs] of pain" (30). When we learn to hear the language of pain, when we interpret the signs that exist in bodies, we are opened to those bodies, to "being affected by that which one cannot know or feel" (Ahmed 30). And through this process of embodied translation, Ahmed claims that we can eventually "feel that which [we] cannot know" (30).

So pain, then, brings the other into the self and both opens and redefines the self as a member of that community of others. In this way, the isolation and silence of pain is transformed through embodied translation into the voice of the body, speaking in and through the bodies of those who witness. Every sympathetic wince or flinch, every neural flash and fire, is an enfleshed whisper of this voice. Texts that represent pain through image, sound, or sign are merely translating this voice into the bodies of viewers, readers, listeners, giving "flesh to feelings that cannot be felt by others" (Ahmed 39) such that others may inhabit those feelings and reorient towards those bodies. Perhaps the most radical potential of literature, then, is its ability to translate the body of the other into the body of the reader, and allow that reader momentary access to the humanity and

subjectivity of that literary other. In this way, literary examples of the body in pain not only represent fictive bodies, but also create new persons within the very bodies of readers. In a sense, literature is alive within the reader, each literary world gestated in the core of its audience.

New World: Pain in the Blank Slate of the Postapocalypse

> "[A]lthough its antiquity would seem to make pain the preeminent symbol of a timeless and universal affliction, we need to recognize in what ways its changing social and medical history transforms pain into an emblem of the new world of postmodern illness" (Morris 109).

So let us turn, then, to the new worlds of the postapocalypse, to these spaces in the making, spaces that exist only in narrative contexts. Because it is in those postapocalyptic spaces, those worlds unbound by the metaphysics or mores of our world, that the subject-creating function of pain is most starkly visible. Rendered in prose, celluloid, and color, literary texts serve as a testing ground for representation of pain and the interrelations between bodies that co-suffering produces. Science fiction texts, which often feature humanity approaching (and even transgressing) the limits of what has heretofore been considered the normative human life or form, can be a particularly useful site for determining which characters count as subjects and which bodies matter. I am not the first scholar to begin thinking through representations of pain in science fiction. Barbara Korte, for example, explicates the role pain plays in defining the human when that human form is juxtaposed with the other in science fiction texts. According to Korte, in science fiction texts, pain becomes "a kind of anthropological index, or … signifier of humanity" (296). Pain is a marker of humanity because it is an element of human frailty. As Korte puts it, science fiction "tend[s] to explore pain with positive connotations in a more philosophical vein when it proposes that humanity is defined by a capacity to

experience, and make sense of, suffering" (302). This is an incisive and illuminating reading of the function of pain in science fiction texts, but Korte doesn't account for the relational aspects of pain that Morris points towards, which may cause subjects to not necessarily become *human*, but instead become *kin*. While Korte's work begins to discern how pain functions to delineate the human from the other (be it monster, alien, or cyborg), her analysis does not yet explore what social position those bodies will earn.

So though pain is a useful tool for literary analysis, it is not always easy to see how it is used narratively to determine subjectivity and kinship. For that reason, reading for pain specifically in postapocalyptic settings can be a helpful way to see the function of pain set against a starker and therefore more revealing backdrop. In a postapocalyptic setting, relationships of the subject to space cannot be assumed. The anthropocentric narratives of belonging are stripped away and therefore all relationships – between subjects, between spaces, and between bodies – must be reexamined and justified. Pain, then, may be used as a narrative signpost, cuing to readers which bodies belong to which communities and which spaces.

One of the many things that sets the genre of postapocalyptic narrative apart is its emphasis on the relationship of the human species to the world we inhabit. If an apocalypse ends the world as we know it, then what do we *do* in a postapocalypse? Do we survive and create a new utopia, the world finally rid of all the negative elements previously holding us back, and return to the Lockean state of nature? Do we descend into savagery, the social contract broken and our primal, animal nature revealed to be red in its tooth and claw? Or is there another route, separate from the utopian or dystopian narratives that abound? Some of the most compelling stories about the postapocalypse are

those that truly question the human relationship to the world in its most fundamental state: was the world built for us, or not? Such narratives question the anthropocentric worldview that features humanity as the teleological purpose of the universe: the world's existence contingent upon our survival within it. And thus in such texts, we are truly able to explore the story humanity tells about itself, interrogate what it would look like if *humanity* were to end and the world – that space itself – were to remain, indifferent to our absence.

Postapocalyptic settings can therefore function as a blank slate upon which to lay human subjects, bare and exposed, ready for clear-headed examination. In this way, postapocalyptic settings are similar to Virginia Woolf's conception of illness, which she argues is the remedy to the great, showy constructs of culture: "There is, let's confess it (and illness is the great confessional), a childish outspokenness in illness; things are said, truths blurted out, which the cautious respectability of health conceals" (11). In the postapocalypse, the make-believe of culture stops; in the postapocalypse, when human subjects can no longer rely on the make-believe of anthropocentricism, it is plain to see how pain function as markers for belonging, a signal of kinship, and potentially therefore a sign of continuity. Using examples from *Children of Men*, *The Road*, and *Elysium*, this chapter will show how pain can serve as a narrative marker of kinship and how witnessing such pain can signal to readers which characters are subjects and kin, and therefore signal the potential for a human future.

Children of Men is a painfully bleak representation of life after the end. In the film, the survival of the human species is truly at issue and it is not only the apocalyptic cataclysm, but also the behavior of human survivors in general, that threatens humanity's

survival. Violent and unflinching in its willingness to display savagery, cruelty, and pain, the movie forces viewers to witness and physically engage with grotesque apocalyptic fears played out in the bodies of its characters. As a genre, postapocalyptic cinema tends to presuppose the centrality of its human protagonists. Such films are about survival and renewal, about human subjects who are finding a way to live in a world that is not so much *over* as it is reformed. In these films, characters remake themselves as heroes of a world that, while altered and unfamiliar, nonetheless retains the possibility of their continued generacy and survival. The world of such cinematic representations is still fundamentally built for and around its human inhabitants. Instead of exploring a transformed vision of humanity, the genre depicts its human protagonists as still belonging to an anthropocentric world – as the folklore scholar Daniel Wojcik says in his study of apocalyptic belief in America, these are "postwar Adams and Eves who will remake the world" (112). This is certainly no surprise – the technology of cinema practically demands human centrality and, moreover, any text coming out of our human imaginary will, by necessity, have a symbolic human center.

Therefore, what makes *Children of Men* unique in its genre is the way it subverts such generic expectations of anthropocentricism through its vision of the end. Following in the footsteps of such apocalyptic masterpieces as *Dr. Strangelove*, the apocalypse depicted in *Children of Men* is a secular postapocalypse, not a religious revelation. In the study of religious lore, the apocalypse is, literally, the unveiling or revelation of God's true plan. And in that moment of revelation, of course, the world as it has been is fundamentally ended, ushering forth a new world to come. For every religion, there is a myth of the apocalypse, and in every apocalypse story, an explanation of what that new

world after the end might consist of. For some, the postapocalyptic world is just the beginning of a new cycle of life; for others, it is the beginning of a millennial golden age ruled over by God or the Gods, perfect and finally redeemed. Regardless of what the new world looks like, a religious apocalypse sets up a divine power that is in charge of the cataclysm and responsible for what happens. This is, in its own way, comforting: it creates a narrative cohesion, giving what Frank Kermode has called "a sense of an ending" to apocalyptic fears. Kermode explains this as a human psychological need: "there is still a need to speak humanly of life's importance in relation to it – a need in the moment of existence … to be related to a beginning and an end" (4). Apocalypse, he says, "ends, transforms, and is concordant" (5), creating the perspective we need to locate ourselves in unique relation to history.

Yet since the nuclear era, when apocalyptic power was wrenched from the hands of the Gods and placed into the domain of the scientist, many apocalyptic fears have been divorced of that unmoved mover and therefore of their comforting nature. A secular apocalypse creates a bleaker vision of the world after the end because what is revealed in such an apocalypse lacks the order and fate that the religion mythos espouses. Without a plan waiting to be revealed, the nature of the apocalypse fundamentally changes: instead of playing out the script of a new world, survivors of a secular apocalypse must create themselves whole, bespoke for their world instead of being spoken into being by an all-powerful deity. And in this way, secular postapocalypse questions the fundamental nature of the human relationship to space. While religious myths situate humanity as the beneficiaries of the golden world to come (the teleology of anthropocentricism), secular postapocalypse lore has no such requirement. It has therefore been increasingly a genre

that decenters humanity, no longer insisting that the world exists for the benefit of the human species and imaging a non-human world after the end. In such films, human bodies are therefore reduced from their position of exegetical preeminence and become sites of apocalyptic denigration, subject to physical depredation and extremities of pain. *Children of Men* does just this, forcing viewers to confront questions about human belonging to the world as it depicts a postapocalypse enacted through and within the bodies of its characters. Yet as bleak and painful as *Children of Men* is, it features a small kernel of hope despite the pervasive infertility and brutality that has shuttered the film's world. In *Children of Men*, the relationship of the characters to one another's embodied experiences in their postapocalyptic world demonstrates that there is a possibility of redemption, the possibility of a human future in a changed world.

The apocalypse of *Children of Men* is, first and foremost, grounded in the bodies of human subjects; the film explores the world of 2027, where eighteen years of infertility have caused an apocalypse in slow motion. As the character Miriam, a former midwife, remarks, "As the sound of the playgrounds faded, the despair set in. Very odd, what happens in a world without children's voices." It is despair, then, as much as it is the infertility that drives the end of time: as the human species slowly goes extinct, its death throes get ever more violent. The film's visuals play with the contrast between the familiar and the shockingly defamiliarized, thereby demonstrating to viewers the slippery slope progression from our world to world on screen. Filmed with shaky documentary-style camera that jarringly positions the viewer inside the action, the film's imagery draws upon scenes eerily familiar to contemporary viewers. In representing a totalitarian police state's repressive regime, Cuarón visually references atrocities that a contemporary

viewing audience would be familiar with: concentration camp prisoners from the Nazi Holocaust, prisoner abuse from Abu Ghraib, the urban warfare of Somalia, Iraq, Afghanistan, and more. The film's uncanny familiarity forces us to ask how it is that the world ended – is this apocalypse the result of the infertility, or is the infertility just a symptom of an irredeemable world? As the protagonist Theo says, "Even if they discovered the cure for infertility, doesn't matter! Too late. World went to shit. Know what? It was too late before the infertility thing happened, for fuck's sake." So in *The Children of Men*, systems of power within and without the body are to blame for this seemingly unredemptive end. Yet though the film makes clear that the world as we know it is fundamentally over, the experience of the body in pain represents the possibility of creating and entering a new world that can at least recognize and honor human life.

The particular pained body that catalyzes the story is Kee, a refuge, or "'fugee," whose undocumented status in this future England complicates what is already her dangerous political, physical, social, and psychological situation: she is the first pregnant woman in eighteen years. Our hero, Theo, is enlisted by his ex-wife, Julian, and her revolutionary party, The Fishes, to take Kee to the coast, not just to keep her safe and healthy, but also to keep her out of the hands of a government that will, as the midwife Miriam says, "take her baby and parade a posh Black English lady as the mother." Though the world has descended into brutality, The Fishes believe that they have made contact with the secret (and potentially mythical) group The Human Project, who supposedly have a boat called *The Tomorrow* on which they – the world's greatest scientists, etc. – are attempting to solve the apocalyptic infertility; communicating through blinds and relays, The Human Project has (we are told) arranged to take on Kee

and her child. Yet after Julian is murdered on the orders of the mutinous Fish Luke, the communication link is severed and Theo, Miriam, and Kee must attempt to reach the boat through an alternate route. This takes them into Bexhill Detention Center, a 'fugee camp that embodies all the worst cruelties and savagery that humanity inflicts upon itself. Yet it is in Bexhill – amid an uprising of the imprisoned 'fugees, a military invasion to put down the rebels, and the power-hungry machinations of Luke – that the film, lavishing attention on images of bodies in pain, depicts its hopeful core.

In the climactic scene – a more than 6-minute long extended take, shot in shaky handheld camera – Kee and Theo are in Bexhill amid the guerilla war between 'fugees and soldiers. Our protagonists have each already experienced unbelievable emotional trauma and physical pain. Kee has only just given birth, Theo is barefoot, and the infant's tiny, steaming body seems remarkably fragile in the deplorable conditions of the center. Trapped in a besieged building, Theo and Kee's egress from the fighting happening inside and out seems nearly impossible. Bullets fly from all sides, a tank has just been rolled up to the door, and soldiers are doing battle with rebels on every floor. Yet as Theo and Kee attempt to find a way through this maelstrom, they are supported by an unlikely source: the newborn. The baby, in response to the stresses of new life and the battle, lets out peal after peal of a sharp, keening cry of pain.

The scene of the infant's cry marks the end of Cuarón's complicated, balletic extended take shot. For nearly six minutes, the camera's eye has tracked, unblinking, the chaos and devastation of Bexhill's uprising. Moreover, the soundtrack takes on a ringing, cacophonous tone, much like the ringing in the ears following bomb blasts. Through this scene, Theo has been separated from Kee and her child, whom traitorous Luke has taken

hostage; so Theo searches for his charges, entering the war-torn building after them despite the tank battalion's skirmish with rebels inside. When Theo finally hears the sound of the infant's cry, it affirms his actions and changes the whole tenor of the scene: the soundtrack softens and the chaotic ringing becomes the voices of an angelic chorus. As Theo enters the room, the camera turns to Kee and the child, zooming in on the face of the infant; tear streaked, soot and dirt covered, the infant's face is a rictus of agony. She screams with the particular energy and vitriol unique to the newly born. Kee has wrapped her body around the infant, shielding the smallness of the neonatal form with her own. And throughout it all, the baby girl cries, her voice matching the intensity of the gunfire and calling the attention of all around them.

Instead of dooming them by revealing their location to the foes who want them dead, this cry saves Theo, Kee, and the baby. When the baby's vicious cry pierces through the din, it speaks through the voice of pain and "aligns this body with other bodies" (Ahmed 39). Stunned by the sound of the first child in 18 years, everyone in the building abandons their protected positions and leans, yearning and keening, towards Kee and her child. The camera, released from the extended take, can focus again on the miraculous pair, follow them down the packed hallway, and focus on the hands reaching out towards the baby. The fighting stops to let Theo and Kee pass, as 'fugees, rebels, and soldiers sing, pray, and beseech in a Babelian symphony. In an instant of reverie that stretches through the building, the war pauses. Theo and Kee walk outside and are allowed to pass unhindered as soldiers kneel and cross themselves. One soldier drops his military phone and we hear the staticky disconnect on the other end, adding the familiar symbolic sound of missed communication to the choir of prayers directed at the baby.

This crystalline moment continues until Theo and Kee are out of acute danger, when a rocket from the building strikes the tank and the fighting starts again.

This scene demonstrates how the voice of pain can chance the way characters interact with each other. Throughout the battle in Bexhill, the camera has unflinchingly presented the human casualties and pains of war: bullets make vicious contact with human flesh, severed limbs are abandoned in rubble, and for nearly half of the take, the camera itself is splattered with blood, implicating the viewer's own perspective in the violence and depravity of the scene. The extended take format doesn't allow the viewer time to pause and co-suffer, to see these bodies as human subjects and to feel into their pain. Stoically, heedlessly, the camera has pushed our gaze along, mimicking perhaps the traumatic depersonalization and desensitization that is the consequence of war. And the characters within the scene behave similarly; though some are shown crying over the bodies of their fallen companions, overall the characters do not stop to tend to one another's wounds and do not seem to be bound together in shared humanity. This is a fractional battle, with people pitted against each other as if they were facing off against monsters. Yet when the baby cries, the bodies that were moments before mere cannon fodder are suddenly sites of holy worship and humanity. It is the cry that shocks Bexhill back into its humanity.

Indeed, it is her cry that gives the baby personhood and subjectivity, her ability to exhibit signs of pain that cause even the most inhuman characters to recognize her humanity. One of the most evil characters in the movie is Luke, the leader of the revolutionary group The Fishes; he orchestrates the assassination of Julian and the coup in Bexhill, and participates in the ultimate shootout. Earlier in the film, it becomes clear

that he cannot be trusted when he claims that "This baby is the flag that could unite us all!" Kee disagrees, asserting that her baby "is not a flag," and it is this ideological disagreement that leads Theo and Kee straight into Bexhill as they try to escape Luke. To Luke, the child is not a person but a symbol, a tool (even a weapon) to bring down the government. Yet Luke's course of action changes when he hears the baby cry. As Theo and Kee attempt to escape from the besieged building, Luke is still trying to grab hold of his "flag" and, headless of the harm he could cause, he turns his gun on Theo. In the ensuing interaction, the baby's humanity becomes apparent to Luke as her cries remind him of his own sister:

> Luke: I started crying. I'd forgotten what they look like – they're so beautiful. They're so tiny. […]
>
> Theo: It's a girl, Luke.
>
> Luke: Okay. A girl. I had a sister.

Upon hearing the baby's cries, Luke co-suffers and produces his own cries, reminded bodily of the sister he'd once loved, a sister who was, to Luke, more than just a flag. It is through his realization that the baby is a real person and not a symbol that Luke allows Theo and Kee escape. In a way, this is precisely what the fetal pain legislation hopes will happen: the baby's cries of pain transform that baby into a full subject, whose life should be protected. Yet in this case, the baby's life does not elide the mother's, but instead affirms her subjectivity as well.

It is therefore precisely the language that comes out of pain that saves Theo, Kee, and the unnamed baby. A language older than words stops a war, allowing soldiers on both sides to recognize the other as kin and the three survivors to reach the ocean. The

baby's cry delivers meaning using the symbolic of a changed world; she does not speak in language, rather in the pre-verbal howl of the newly born. All around the soldiers, examples of pained bodies abound: mothers rocking the dead bodies of their grown children, limbless detainees staggering across the warzone, blood and dirt in equal measures. Yet the soldiers do not recognize these bodies, are inured, perhaps, to those signs and therefore ignorant to their meaning. But the baby's cry – the piercing, reverberating cry – is a marker of pain that cannot be dismissed or overlooked. It signals the humanness of the baby and her companions as nothing else could, turning herself, Kee, and Theo into subjects that require care. As the case study of anti-abortion rhetoric shows, pain expression helps humanize neo- and prenatal bodies; hearing the cry humanizes the unfamiliar, nearly unrecognizable figure of the child. Her cry, the only sound that breaks through the din of warfare around them, makes her a part of the world, and it saves Kee and Theo from being cast aside like all the other bodies around them.

But escape does not necessarily indicate survival in this postapocalyptic world. In the film's final scene, Kee, her child, and Theo have made it out of Bexhill's maelstrom and are on a dinghy in the ocean, waiting for the boat *The Tomorrow* to come save them. They have no way of knowing whether the boat will reach them and they watch as fighter jets stream overhead, directing devastating rocket blasts to Bexhill; in their laughably small boat, socked in with fog so thick that they can't see more than a few feet around them, with no place to go to and no place to return to, they truly are alone in the world. Kee looks down into the boat's shell and sees blood – she panics, thinking that it's coming from her, until Theo explains that it's his blood. Calmly, he declares that he'd been hit during their escape and we realize that he's dying. Kee, wincing in pain from her

own wounds, and the baby, still crying, exhibit their pain vocally and visibly; Theo, on the other hand, seems unperturbed. With bloody hands, he instructs Kee how to burp the baby, miming the action as if on the ghostly body of his own deceased son. "Like this," he says, as Kee's body learns the motions of motherhood. Without showing the pain, Theo dies, gutshot but upright, as Kee and the baby cry; he dies mere moments before *The Tomorrow* glides into view, too late to save all three. So in the final scene, the two survivors are the two characters voicing and displaying their pain, their claims to humanity, their wounds; the character who does not survive, who cannot journey forth into whatever tomorrow *The Tomorrow* heralds, is the one whose pain does not show[1]. Pain therefore acts as a marker of futurity and survival; to feel pain and to show pain is to be rescued, to be welcomed once more into the family of creation.

The same function of pain as future is present in Cormac McCarthy's Pulitzer Prize winning 2006 novel *The Road.* Featuring a future that is certainly as bleak as *Children of Men*'s, the novel follows two unnamed characters – the man and the boy, a father and his young son – as they struggle to survive a sunless wasteland of ashes and fire, moving doggedly southward without knowing whether they'll make it nor to what they are journeying. With its spare, terse prose, the novel represents the bleakness of this postapocalyptic world through a number of embodied means. McCarthy uses the materiality of the page to signal apocalypse, eschewing quotation marks to denote speech, combining words to show their lack of referent in the new world, and even eliding certain

[1] The other three protagonists who die on their way to deliver Kee to *The Tomorrow* similarly die without showing pain. Miriam and Julian each die so quickly they don't have a chance to display any pain response, and Jasper dies laughing, even though he is being tortured. Thus lack of pain behavior is a feature of characters who do not enter the future of *The Tomorrow*.

punctuation marks to show the loss of referential meaning in a world slowly losing written words[2]. Moreover, McCarthy's text remains stubbornly silent about the causes of the end, providing readers only with the first-hand knowledge our central characters had gleaned. Of the cataclysmic event, we learn only that "The clocks stopped at 1:17. A long shear of light and then a series of low concussions… A dull rose glow in the windowglass [*sic*]" (McCarthy 52). The light and sounds experiences by the man, and the aftermath of desolation he and the boy live within, utterly encompass our knowledge of this apocalypse. In these ways, the postapocalypse is signaled through material constructs.

Yet devastating and austere though the text may be, like *Children of Men,* the novel elicits a shimmering kernel of hope, not necessarily that the world will be saved but that there remains something precious and holy about the human animal. In much the same way the *Children of Men* ends with both destruction and the tenuous chance for some renewal, so too does *The Road* point towards a faith grounded not in religious salvation but in the human potential to create community[3]. And to demonstrate this hope, the text relies upon the boy listening to the pain of others and translating it into his own embodied experience of the world. In the world of *The Road*, survival requires a community of people who treat each other's bodies and lives with respect, who treat each other as subjects instead of chattel, so attention to pain language is a necessity for the boy. Because he is able to listen to the voice of pain, to hear it even over the din of his

[2] These stylistic choices are evident in some of the novel's text that is quoted here. All spelling errors in my selections of McCarthy's language are intentional and denoted with the [*sic*] hereafter.

[3] For more on the difference between religious redemption and the novel's representation of hopefulness that I argue for, see Shelly Rambo's "Beyond Redemption?: Reading Cormac McCarthy's *The Road* After the End of the World." *Studies in the Literary Imagination*. 41.2 (Fall 2008): 99-120.

own fear, he is able to see others as co-subjects. So the one element of this bleak text that speaks to the potential for a future is the boy who witnesses the pain of others and lets it testify to their humanity.

The boy is clearly marked as the harbinger of a potential human future – he is the one "carrying the fire" (McCarthy 83), the one whose survival the reader fervently tracks. As we learn early in the text, the boy was born just days after the apocalyptic cataclysm and has therefore never know a world other than this dark, foreshortened place. Within his short memory, his experiences with other humans have been brutish, pain-filled, and traumatic. In one typical encounter with other humans, the man and the boy see a band of barbarians on the road who bring with them the abject chattel of the wasteland world:

> wagons drawn by slaves in harness and piled with goods of war and after that the women, perhaps a dozen in number, some of them pregnant, and lastly a supplementary of catamites illclothed [*sic*] against the cold and fitted in dogcollars [*sic*] and yoked each to each. (McCarthy 92)

Seemingly embodying the worst cruelty and savagery humanity is capable of, such men represent the boy's greatest fears and account for the majority of the contact he seems to have had with others.

In this terrible future, the boy is time and again witness to this kind of human depravity. While searching a seemingly abandoned house for food, the man and the boy find a basement filled with slaves, reduced to livestock and trapped as if in a pantry. The description of this scene is visceral and sensory:

> Huddled against the back wall were naked people, male and female, all trying to hide, shielding their faces with their hands. On the mattress lay a man with his

legs gone to the hip and the stumps of them blackened and burnt. The smell was hideous. (McCarthy 110)

The man and the boy flee this charnel house, barely escaping the cannibals, and spend a terrified night crouching in the freezing woods, the man prepared the shoot the boy to save him should they be found. With this as his examples of the human race, what trust in goodness could the boy have? What ability to relate to the other, what desire for community? Yet the event is seemingly traumatic for the boy not because it makes him fear his death, an event that he treats nonchalantly, but because of his fear of evil and, specifically, of *being* evil. After this experience he asks the man, "We wouldn't ever eat anybody, would we? … Even if we were starving?" (McCarthy 128). When the man reassures him that they wouldn't, "no matter what" (McCarthy 128), the boy is relieved because it means that they are "the good guys" (McCarthy 129). For the boy, seeing the pain of the human subjects is unbearable – he does not want to be the kind of human who would treat fellow creatures as chattel or as food. His response to the pain of others, then, sets him apart and marks him as one of the "good guys" he so badly wants to be.

Yet the boy is special because he can do more than just co-suffer with other good guys; his ability to see the humanity in others extends to even those who are perhaps not "good guys." This is most powerfully evident when the man and the boy encounter a thief on the beach. Throughout the novel, the man's stated purpose is to get south, where he hopes to find some "good guys" and a warmer clime. Yet their arrival at the beach is anticlimactic and uninspiring. The land they've walked through has been gray and arid: "barren, silent, godless" (McCarthy 4). So the ocean had represented the hope for some greater semblance of verdancy and all its rich color. Sadly, their first glimpse of the sea

shows only “the gray beach with the slow combers rolling dull and leaden and the distant sound of it. Like the desolation of some alien sea breaking on the shores of a world unheard of. … [T]he ocean vast and cold and shifting heavily like a slowly heaving vat of slag and then the gray squall line of ash” (McCarthy 215). Marooned, then, on this alien shore, the man and the boy have not only reached the literal end of their road, but they are also now exposed and vulnerable, as they have rarely allowed themselves to be before. In this reduced state, the pair falls victim to the thief who robs them of their supplies and leaves them for dead with no shoes, food, or warm clothing. They hunt frantically for the thief as the pitch-black night threatens to fall and strand them, probably to die.

In these dire straits – facing a miserable death, naked and afraid – the boy is still able to co-suffer and hear the voice of pain. When they find the crook, the man acts on pure rage and terror. He not only recovers their stolen belongings, but also demands with the point of his gun that the thief strip and leave his clothes in the pair’s grocery cart. The thief, “standing there raw and naked, filthy, starving” (McCarthy 257) begs for his life, shivering in the wind as he “pile[s] his vile rags” (256) in the cart and “unlace[s] the rotting pieces of leather laced to his feet” (257). Despite his pleas, the man leaves him there, turning away from the “nude and slatlike [*sic*] creature standing there in the road shivering and hugging himself” (258) while the boy “turn[s] away and put[s] his hands over his ears” and sobs (257). It is the most brutal act the two commit in the whole novel, their only homicide in a world that demands murder for survival. The boy cannot stop weeping after this, imploring his father to alter their behavior, crying, “He was just hungry … He’s going to die… He’s so scared” (McCarthy 259). The man tries to explain why he had treated the thief in this way, saying that “he’s going to die anyway” and

"you're not the one who has to worry about everything" (McCarthy 259). But the boy, the constant arbiter of the just, replies sadly "yes I am… I am the one" (McCarthy 259).

The difference in affect is marked. While the man is able to ignore the suffering of another human in order to protect his kin, the boy co-suffers with the thief's trembling, abject body and sees in it a human subject, a member of his community; while the man insists that he "wasnt [*sic*] going to kill him," the boy knows that the damage has been done, acknowledging his culpability: "we did kill him," the boy says (McCarthy 260). The boy's compassion wins out, in the end, but without bearing fruit; though he convinces his father to right this wrong, they are unable to find the thief again and seem to lose something of themselves in the process: "They went up the road calling out in the empty dusk, their voices lost over the darkening shorelands [*sic*]. They stopped and stood with their hands cupped to their mouths, hallooing mindlessly into the waste" (McCarthy 260). The tragedy of the novel, then, is not just the end of the world; it is the way the postapocalyptic world treats human bodies. The boy and the man look at the same scene, but they see different things: the man sees a thief, stripped as a precaution against further danger, while the boy sees a body in pain, a shivering person who deserves care. The man sees danger, the boy sees kin. And yet neither is able to find the man again, to save him from the frailty of their shared human condition.

But the novel doesn't end there. This experience on the beach is the beginning of the end for the pair. The man succumbs to a fever shortly after their encounter with the thief, leaving the boy alone in the world. While the boy expresses a desire to die alongside his father and quit the brutal world he inherited, he instead returns to the road and is found by a group of others. Wary and cautious, the boy does not know whether to

trust these people; will this community be a repetition of the savage gangs he's had such horrific dealings with in the past? It is only after the boy receives confirmation from the group that they are "good guys" that he joins their community: "You don't eat people? No. We don't eat people. And I can go with you? Yes. You can. Okay then" (McCarthy 284). The novel thus ends with the boy surviving his father and walking into the uncertain future with a small group of others, kin created by necessity, fellow "good guys" who recognize the boy's pain and have built a community with shared suffering. The man can't continue into this future, but the boy can see these others as fellow subjects and therefore can keep walking forward to whatever lies ahead.

In the 2013 film *Elysium*, the postapocalypse is likewise signaled through a lack of care for the human body. Combining the totalitarian future government of *Children of Men* and the slavery of *The Road*, this movie depicts a technological dystopia that results in unequal bodily experience of the world: while the wealthy use technology to live pain-free, possibly endless lives, the poor are exploited for their physical labor. Through it all, technology is presented as having both the revolutionary potential to free humans from pain and also the grotesque ability to transform human bodies into painless, cyborgian monsters that threaten human survival. In the film, then, pain itself symbolizes the potential for humanity to overcome the worst features of the changed future and to rediscover the kinship communities that bind humans together.

The film opens on Los Angeles in 2154. The film's depiction of the environment implies overpopulation, ecological devastation, and stratification as the agents of the

apocalyptic downfall[4]. In the establishing shots, the camera pans over blanched landscapes, smoking and overgrown ruins of once-glamorous cities, and teeming shanty towns filled with a panoply of indiscriminately-ethnic, tattooed, tatter-clothed, dirty slum-dwellers. Set apart from the rest of his peers in the slums is Max, played by Matt Damon; though he wears the clothes, has the tattoos, and even speaks the pidgin Spanglish of future-LA, Max is different, willing to stand up to the unequal treatment of his impoverished community by the wealthy oligarchy[5]. Max's difference is demonstrated in the opening moments of the film, when the robotic police force accosts Max and breaks his arm in a stop-and-frisk style encounter while he waits for his bus to work. His cast arm is an immediate mark of his frailty and humanity, particularly in contrast to the officers of the government: the exoskeleton-robocops he builds in his menial-labor job, the robot parole officer that is no more than a mannequin with a tinny speaker-box voice, and even the extraplanetary services offered on Elysium, the man-made space station community that typifies the stratification between rich and poor.

This distinction between robotic and human is mirrored by the distinction between rich and poor: while the robots on the planet are designed to police the disenfranchised poor community, the robots aboard Elysium are designed to serve the empowered rich community. On Elysium, the perfectly primped and coiffed citizens are

[4] In this way, the film is representative of progressive apocalypticism, sometimes called a soft apocalypse or cozy apocalypse, a genre of apocalypse marked by a slower progression into apocalypse instead of an apocalypse marked by a cataclysmic event. See Brian Aldiss's *Billion Year Spree: The History of Science Fiction* for more.

[5] Max is also gleamingly white in contrast to his predominantly Latino community, setting up some problematic white savior tropes that are, sadly, all too frequent in such texts. See Matthew Hughey's 2014 monograph *The White Savior Film: Content, Critics, and Consumption* for more.

also served by robotic and cyborgian support systems: robo-butlers, appearance-changing futuristic tanning beds, wearable computers that dangle on their wrists like Wonder Woman's golden cuffs. On earth, in contrast, the robots serve the power system and are therefore enforcers, slave drivers who keep the human characters in line and the hierarchies intact. Yet the greatest distinction between these distinct groups of subjects is their experience of pain. On the planet, people seem defined by the pain of their bodies; the crowds are full of scarred, wounded subjects, canes and crutches as outward markers of their painful pasts. On Elysium, not only are the subjects inured from any of the discomforts of planetary life, they are also protected from future pain: their body-scanning technology finds and cures everything from cancer to broken limbs with seemingly no pain as a consequence.

Amassed between these two groups are the cyborgs who use the technology of this future not to cure themselves of ills or make their lives easier, but to make their bodies stronger and more deadly. Elysium employs an arsenal of these cyborg soldiers who brutally protect Elysium's interests at the behest of Secretary Delacourt, Elysium's political leader. Agent Kruger, the "sleeper agent" sent to earth by Delacourt is the worst of them all: he has been accused of human rights violations by the Elysium senate and ruthlessly polices earth, destroying homes and endangering lives as he carries out the Delacourt's illegal plans. Kruger is a cyborg in the classic sense: his body is augmented with military tech that he uses to overpower and control the bodies of others. His exoskeleton allows him superhuman strength, speed, and agility; he has weaponry literally at his fingertips and his technological enhancements are grafted into his very skin. Yet he moves comfortably in augmented skin, the exoskeleton an organic extension

of his physical form that enriches his experience of the world. And it is his human attributes that are most terrifying; while his mechanical strength can be deadly, his sadistic treatment of other humans and his seeming indifference to the pain he causes are what truly set him apart as the emblem of evil.

The film deposits viewers in this stratified world of rich and poor, human and machine, pain and its absence. By following Max's journey through pain and machinery, the film plots a course that shows how the other can become kin and how objects can become subjects. Pain, then, acts as a marker of humanity, distinguishing the heroic characters on earth from the immorality engendered by Elysium's technologies. And as Max acts to bring down Elysium, his encounters with the cyborgian and robotic agents of Elysium's power structure serve to reify his status as subject, even as he must take the tools of Elysium into his body, embodying the cyborg technology of Elysium's power structure while still fighting against it.

Max's journey to overcome Elysium begins through pain. At work, Max experiences technological failure in the process of building one of the robots. As he sends the robot into the firing room to set its paint, the door jams and his boss forces Max to climb inside and unjam the door. When he does, the system starts immediately, trapping him inside; as the firing process begins, he screams in pain and terror as the central computer system registers "organic material present." Shockingly, Max survives and is pulled out by another robot, which tells him that he has been exposed to radiation that will kill him within five days. The voice is dispassionate, computerized, and inhuman: no sympathy, consideration, or warmth. The robot drops a bottle of pills on his bed, telling him that they'll keep him functioning normally until his death. The meeting is over. On

his way home, he falls, vomits, slurs his words, cries, and shakes – his pain and humanity overflowing his body. The only hope he has for survival is on Elysium, in the medical technology used there to treat and prevent pain and illness for any citizen of the space station. So Max is set on his mission: make it to Elysium to save his life and, in the process, bring down the walls that separate Elysium's life-saving technology from his community on earth[6].

But making it to Elysium to save his life requires losing some of his humanity: Max will need a "third-generation exo-suit" that makes him into cyborg just like Elysium's cruel enforcers. From the first moment of his transformation, Max's experience of enhanced cyborg physicality is marked by pain, contrasting him with Kruger and the cyborgs who work for Delacourt. The procedure that makes Max a cyborg takes place in a grimy room that looks more like a torture chamber than a hospital: Max asks "is it going to hurt?" "Yeah man," the technician replies, "it's gonna hurt real good." And then they split his body open like they're renovating a car: they saw bone, staple tech to his spinal cord, drill the exoskeleton into place, and start up the computer that now operates out of the back of his skull. When he awakes, he stiffly moves and the technician responds in surprise, "you made it, eh?" Max, walking around in his suit, seems powerful yet still human: his body bleeds at the surgical sites, he sweats and breathes heavily, but he is undeniably stronger. He has become the same kind of cyborg as Kruger, but his pain response sets him apart from Kruger's carefree physicality, marking Max as human.

[6] Max also hopes to save the daughter of his childhood sweetheart, adding Knight in Shining Armor and Damsel in Distress tropes to the White Savior complex already mentioned.

In the battles that ensue, Max is continually shown in pain while the cyborgs he fights are pain free. Kruger's body undergoes a degree of damage that cannot be withstood without technological assistance, yet he never exhibits pain. For example, during the flight that takes Max and Kruger to Elysium, a grenade blows off Kruger's face; yet when his comrades resurrect him, Kruger immediately returns to action, no indications of a changed form or a response to the physical trauma – he doesn't even take time to feel the new contours of his face or try out his rebuilt musculature. Contrasted with Max, who breaks down a little more with each beating, Kruger is particularly invulnerable. In their final showdown, Max is outmatched, bleeding, and wounded, while Kruger taunts him, saying that he looks "dizzy and weak." Though Max has not been nearly as damaged as Kruger, he exhibits a pain response that Kruger never shows. Yet their bodies are equally strong and they are, as cyborgs, well matched as opponents. Thus Max only prevails after Kruger shackles the two together, and Max chooses to rip off part of his exoskeleton, sacrificing his body to win. In order to bring down his pain-free cyborgian counterpart, Max must not only endure pain, but also be willing to inflict pain upon himself. And when he wins, he turns everyone into a citizen of Elysium, assuring that the medical technology previously kept in reserve solely for the rich is now available to cure all who need it. Whether this means an end to pain, we don't know. The film ends without answering the many questions its world-building presents.

Throughout the film it is robotic and cyborgian creatures are the symbols of oppression and dehumanization. Robots are inhuman and inflexible, but they are not inhumanly cruel. That designation is reserved for the cyborgs, the humans who rely so fully on technology that they transcend their animality and therefore become evil. The

greatest evil is Kruger and his men, overt cyborgs, their bodies completely transformed and taken over by mechanical technology. Only Max, affected as he is by pain, remains human through this encounter with this evil. What marks his separation from Kruger is not just his actions, his form, his use of technology; it is his ability to feel pain that keeps him human and makes him the hero. In this way, it is the ability to experience pain that marks Max and his peers as the future of humanity. Technological advancements are posed as both saviors and threats to humanity, so the ability to make use of such technology but still experience the pain of a human body are the markers of continuity and kinship in this changed future.

Thus in all three of these texts, the ability to feel pain is a prerequisite for a character's presence in the future world to become. None of these texts offers a concrete or clear narrative of that future: unlike in religious apocalypse narratives, the story about what happens after the end is not preordained. These postapocalyptic settings offer only the rough edges of the world, freshly hewn and not yet constructed, and they allow their characters to engage in the world-building of the postapocalypse. So to signal to readers and viewers which bodies will live on to see that future built and which will remain residents of the old world, each narrative relies upon representations of pain. Kee and her baby, the boy, Max: all of these characters experience and enact pain, their bodies responding to the pain of those around them or their bodies eliciting such response in others. Because of their ability to speak and hear pain language, they are markers of human continuity. While it might not be paradise, there may be space for human subjectivity, community, and kinship. It is pain that defines the human subject and caries the human body forth to the future.

Insides and Outsides: Fetal Pain and the Apocalypse

In her 1930 meditation on the experience of illness, Virginia Woolf contends with the mind-body split that literature suffers from, arguing that

> literature does its best to maintain that its concern is with the mind; that the body is a sheet of plain glass through which the soul looks straight and clear, and, save for one or two passions such as desire and greed, is null, and negligible and non-existent. On the contrary, the very opposite is true. All day, all night the body intervenes. (4)

The body intervenes particularly through the experience of pain, which puts the lie to any notion that the self is separate from the body or that the mind is independent of the fleshy suit of the self it wears as costume. But when literature takes on pain, it is faced with the unspeakability of the experience; as Woolf says, we have words in profusion for virtually all experiences, but "let a sufferer try to describe a pain in his head to a doctor and language at once runs dry" (7). This drought of language comes, perhaps, from the primordial nature of the experience itself; pain is before language, prior to speech. If, as Morris asserts, pain "has presumably accompanied humankind right from the start, playing a crucial role in making us who we are" (107), then it belongs to the realm of the creator and speaks the ethereal language of the deities. In Judeo-Christian tradition, God speaks the world into being, speaks life into clay and brings forth animal – what power, such words. If pain is the language of creation, it is no wonder that we mere mortals struggle so profoundly to speak it.

Yet we excel at speaking *about* it. And we use the discourse of pain to create discourses of life and subjectivity. Jill Stanek's testimony is emblematic of this rhetoric.

In the conversation about so-called "fetal personhood," the so-called "silent scream" of so-called "fetal pain" is evidence for the fetus' subjectivity. Indeed, as Steve Chabot, Ohio State Representative, said in his opening statement to the November 1, 2005 "Pain of the Unborn" Senate Subcommittee Hearing, "Because the unborn are incapable of verbal expression, the evidence for pain of the unborn must be based on anatomical, functional, physiological and behavioral indicators that are correlated with pain" (2). The subcommittee recommends listening for the voice of pain echoing from the wombs of pregnant women, speaking to the subjectivity of the fetus within.

The trouble with this notion of fetal pain is the way that it is used discursively to denote fetal personhood and simultaneously reduce *female* personhood. In rhetoric of fetal pain, the argument revolves around claims about the pain that termination supposedly causes for the fetus. Because this being feels pain, the story goes, it deserves a full personhood, equal to that of its mother, including recognition under the law. Such legal recognition would include the right to life and liberty, in this case the right to exist within the body of another subject, regardless of that maternal subject's wishes. And this rhetoric nowhere acknowledges the personhood of the woman in whose body this fetus must reside. What of her pain? What of her rights to life, liberty, bodily integrity, and all the rest? What the rhetoric about fetal pain therefore does is elevate the potential pain of a fetus above that of its mother, silencing the lived reality of the woman, forgetting her body entirely.

The fetus, of course, cannot (for most of its development) exist outside of the body of its mother. The two bodies are intertwined in ways that complicate the fiction of bodily integrity and singularity. No body is truly just *one* body – indeed, "The human

body contains trillions of microorganisms – outnumbering human cells by 10 to 1" (NIH). Yet these microorganisms have not become subjects in the way that personhood rhetoric makes fetuses into subjects. And this is therefore a unique moment for the treatment of pregnancy and the maternal body. Of course, reproduction has been a fraught subject for many years, but the ideological position of the fetus has rapidly changed over the last century. Ann Oakley, in her history of the medical care of pregnancy, explains that medicine as a profession has always rested upon "the claim that medical knowledge, being highly esoteric, specialized and 'scientific' is, indeed, the exclusive property of medical practitioners" (3). It became important, then, as the profession of medicine established itself, that pregnancy be placed within the domain of the physician and removed from the dubious realm of the unscientific, the intuitive, the female.

That the idea of allowing pregnancy and childbirth to remain the provenance of women was so fraught with ideological concern represents a distinct change from "the eighteenth and nineteenth centuries" when medical practitioners "had to place some reliance on women's own opinions as to whether or not they were pregnant" (Oakley 19) and trust "women's own bodily sensations" (Reagan 12). Technological and moral restrictions over how to acceptably view the female body greatly influenced medical understanding of those processes that were unique to a female body[7]. So through the regulation and medicalization of pregnancy, reproduction, contraception, and indeed the

[7] For example, it wasn't until research in 1908 on the cadavers of women who had died while menstruating that the medical establishment even understood where menstrual blood came from (Oakley 21).

theretofore blurry realm of the female body, "doctors claimed scientific authority to define life and death" (Reagan 13) and claimed their right to view the female subject.

For these and myriad other reasons, pregnancy and childbirth became the site of heated medical debate and fervent political concern in the modern era. As Leslie J. Reagan explains in *When Abortion Was a Crime*, a history of the legal status of abortion in America, for much of American history, abortifacient herbs were widely available and abortion was an open secret, a practice that was "widely available throughout much of the era" (14), generally "accepted" by "many American women and their friends and family" (21), and yet also the site of a "triangle of interaction among the medical profession, state authorities, and women in the practice, policing, and politics" of the act (1). What Reagan's social histories show is that, in the early twentieth century, what had once existed comfortably in a legal, scientific, and social grey area – outside the need for policing inspection – was becoming of great concern as discourses of medicine, politics, and morality sought to fight their battles on new soil; the battlefield they chose was the ideological space of the woman's body itself. Today, the battlefield has again jumped, this time from the woman's body to the fetus's body. By inventing fetal pain, anti-choice rhetoric has also invented a new human subject, one that exists in a paradoxical state of simultaneous ideological autonomy and physical dependency.

Arguing against the rhetoric of fetal pain does not mean arguing for the pain of children, or even fetuses. As the literary examples in this chapter show, a child's pain creates subjectivity just as powerfully as an adult's pain does, and with the same ethical and interpersonal implications. So why argue that fetal pain rhetoric is dehumanizing and unethical while also arguing that a baby may become a subject in the first moment of its

pain? Why does Kee's baby in *Children of Men* become a subject, in my reading, while the fetuses Ms. Stanek discusses do not? The difference is in the rhetorical range of focus. Fetal pain rhetoric argues for a fetus's subjectivity without considering the body in which that fetus lives; person or not, subject or object, a fetus is an element of a maternal body. Divorcing fetal body and maternal body requires ignoring the maternal body entirely. In contrast, Kee's baby is powerfully and viscerally connected to her mother throughout the film; Cuarón shows the bodily work of gestation, labor, delivery, and motherhood, acknowledging the physical sacrifices Kee makes to bring her child into the world, letting the viewer witness Kee's pain. Discovering the baby's subjectivity occurs through and after birth, making both mother and child full subjects. As this new life bodies forth into the universe, a subject is added to the equation; in the rhetoric of fetal pain legislation, the fetal subject replaces the maternal one, ignoring the bodily reality of the human species.

From the examples of *Children of Men*, *The Road*, and *Elysium* we can see the way witnessing pain breaks down bodily boundaries and creates subjectivity. Witnessing others in pain causes us to share a physiological and social space with them, bringing them into our bodies and reconstituting them as kin. While this function of pain can powerfully alter the way we see others and the way our species develops the systems necessary for survival, the rhetoric of shared bodily suffering can also be used to elevate some subjects over others. In an apocalyptic world, witnessing the other in pain and being able to share bodily suffering is a marker of continuity and hope; when Kee, Max, or the boy take into themselves the bodies of the past and the potential for life, they kindle small sparks of hope for a future that will still contain such bodies, still sustain such life. Yet

through the same techniques, the anti-choice movement seeks to create fetal persons whose subjectivity is ensured by a supposed ability to feel pain and whose fundamental rights override and elide the subjectivity of the maternal body. Voiceless, apparently painless, the maternal body takes on the same non-subject status as the moribund denizens of literature's postapocalyptic worlds. So pain is a powerful rhetorical tool and social marker, one that can create subjectivity and personhood, one that can recreate and reimagine bodies. When we listen to the voice of pain, when we embody the experiences of others, we treat those others as kin, as subject, and family.

CHAPTER III

WHICH FACE REPRESENTS YOUR PAIN? SUBJECTIVITY IN NON-NORMATIVE PAIN RESPONSE

Case Study: The Pain Scale

Most people who have encountered the medical establishment have at some point been asked to assess and describe their pain. Often, it is not enough to observe and interrogate the body itself; for all the useful information that blood tests, heart rate monitors, and MRI machines provide, there is no substitute for learning what the patient's experience of illness, injury, or impairment is. In order, therefore, for doctors and other care providers to diagnose, manage, and treat a variety of medical conditions, they need to understand what the patient's internal knowledge is – where is the pain, how does it feel, what are you experiencing? Tools like the McGill Pain Questionnaire, which both asks specific questions to classify pain and offers the image of a body on which to mark the location of pain [fig. 1], exist to aid in this process and help to turn the patient's experience of their body into quantitative data. In the McGill Questionnaire, the graphical body provides a truncated vision of the human form that lacks obvious gender signifiers, racial markers, and even superfluous bodily

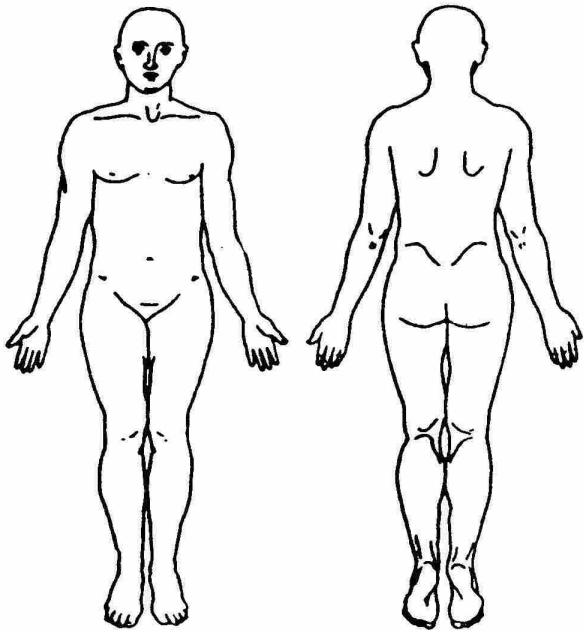

Figure 1: The McGill Pain Questionnaire's human figure (Melzack 280)

details like hair. Thus it is not meant to be representative of the subjects themselves, but merely to offer a blank space upon which to place data. And the data can be incredibly, exquisitely specific: the McGill Questionnaire offers seventy-eight options for pain descriptors, from "pounding" and "throbbing" to "rasping" and "grueling," in twenty categories, from "punctate pressure" to "fear" to "thermal" (Melzack 281). If nothing else, this data can tell the doctor where and what to look for, and the severity of pain can indicate what level of intervention will be necessary.

For these reasons, most people who have encountered the medical establishment while in some amount of pain have also encountered the numerical pain scale [fig. 2].

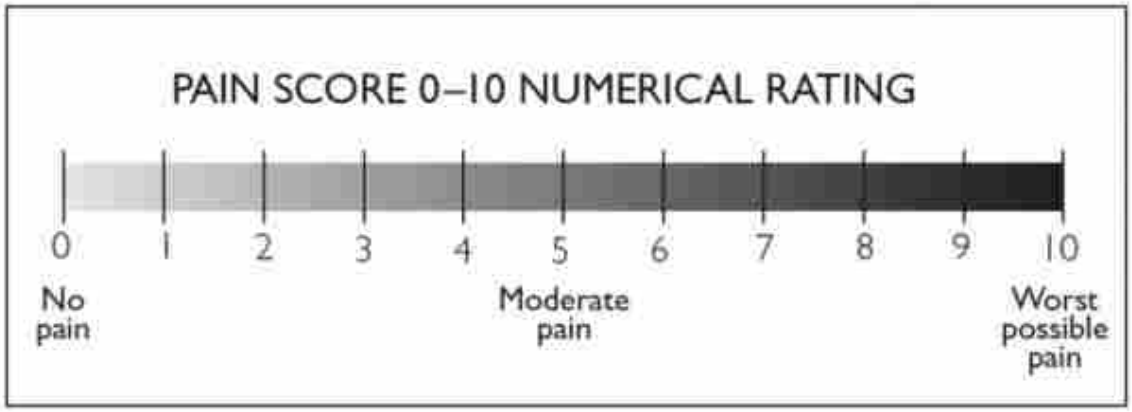

Figure 2: The standard numerical pain scale (National Institute of Clinical Studies)

It's not enough to just know what and where the pain is: care providers need to know how intense the pain is and whether or not it has changed since the last assessment. So denoting the degree of pain is also necessary, and thus the pain measurement scale is meant to serve as a tool for describing solely how severe the pain is. Administered in a variety of different formats – colors, faces, numbers – the goal is the same: translate the interior, subjective experience of pain into exterior, objective data. The trouble, of course, is that a ten is not an objective description of "worst possible pain." How is a subject to

determine what is the worst of possible pain? Is there an outside boundary to pain? Lacking narrative or tangibility, this numerical scale presents a real challenge for both patients and care providers, more useful for denoting change in pain than in the pain itself.

The solution to this problem is a pain scale that offers up the possibility of identification: the subject can match their internal experience to an external representation, a description that has purchase for both subject and care provider. There are a variety of ways that care providers have attempted to bridge this gap between patients' experiences and care providers' understanding. Using descriptive terms, such as with the McGill Questionnaire, can be useful for this; being able to differentiate between pain that aches and pain that stabs is crucial for determining care. Yet in using of language, this kind of measurement can falter in interpretation: the descriptive terms must be translatable, relevant, and communicative to both patient and care provider. What if ache translates differently for subject and care provider? What about pain that resists such classification (freezing ache? numbing pressure?)? How is the subject to articulate the severity and composition of their pain?

Researchers, noting the inherent slipperiness of language, have attempted to employ other tools for measurement. One possible solution is to use a symbolic form that is more universally evocative for both patient and care provider, such as color. In one study, researchers found that "the colour [*sic*] that was most frequently chosen by participants to describe high intensity pain" was red (Wylde 43), and thus ranking pain on such a scale might be more demonstrative than using words. Yet Wylde notes that the association of red with severe pain is a culturally specific one; for patients in this study,

red “symboliz[ed] inflammation, fire, moods such as anger, and the stop signal in a traffic light system [because of the] many negative associations [with red] in Western culture, including blood, fire, anger, violence and brutality” (43). Moreover, while red was a frequent choice for depicting the most severe pain, on the other side of the scale, the picture was less clear: colors chosen to depict the absence of pain “were diverse and individual, often chosen for their association with positive emotional feelings or as metaphors for sensations” (Wylde). Far from being a universal symbolic, the color scale was functional only in specific cases. In response to such problems, the faces pain scales seem to offer a unique advantage, providing a relatable face with which to identify.

Though there are a number of different pain scales using representations of human faces, perhaps the most familiar one is the Wong-Baker Pain Scale [fig. 3]. Featuring a

Figure 3: The Wong-Baker Faces Pain Scale (Baker).

simple 0-5 range of pain intensities coupled with plain cartoonish faces, the Wong-Baker was developed in 1981 as a response to the very difficulties using numerical systems for pain assessment discussed above (Baker). Use of the scale is simple: find the face that represents your pain and then tell your care provider, “my pain is a 2; it only hurts a little bit.” In particular, the Wong-Baker scale was designed to assess pain in children, who, as the designers Donna Wong and Connie Baker assert, “had considerable difficulty using any scale with a number concept, a ranking concept, or unfamiliar words, and [may] not

know colors sufficiently well to create their own color scale" (Baker). In response, Wong and Baker provided empty circles for their patients to draw faces on and then used these drawings as spaces for those children to assert their own sense of what a subject might look like when experiencing "no pain" to "worst pain" (Baker). Though the many children who participated in the initial study each drew their own representations of pain, Wong and Baker took the commonalities found in all the drawings and used them to create the composite images of the scale that we now know. So the scale was gradually reformatted from the intensely personal representations generated by each patient for use in his or her own treatment (often featuring "elaborate faces and hairstyles" (Baker) and other personal touches) into a more neutral image, one that allows any subject to map themselves onto its blank slate.

Of course, this scale does not answer all the questions of pain assessment that opened this chapter. Subjects must still find an exterior representation of their interior experience, identifying with a cartoon face that exhibits a limited range and variety of pain behavior. Indeed, these limited examples may not even be representative of the actual lived experience of pain at that level; for example, on the pediatric burn unit where Wong and Baker first developed their eponymous scale, "the majority of the 'worst pain' faces drawn by children" featured the faces crying "even though many of these hospitalized patients did not cry when undergoing painful procedures, such as burn dressing changes" (Baker). So the material experience of what may be the worst pain a patient has ever experienced – changing the dressings on a burn – may not cause the physiological response that the face marking "worst pain" displays. These faces, then,

lack a referent to the dominant pain behavior of those bodies upon which the scale is modeled.

Moreover, what small amount of pain response data these faces give may in fact be misleading for some subjects, particularly children or others who are less adept at working within the complicated politics of the medical establishment; as Margo McCafferey points out,

> the "no hurt" and the "hurts little bit" faces are smiling, which may cause a child to feel he must choose the "hurts little more" face [even] if he's experiencing mild pain. [Or a] child may think he can't choose the "hurts worst" face unless he's crying. (68)

Does lack of pain necessarily produce a smile? Do tears necessarily indicate the worst pain? Institutional and social pressures, assumptions, and stigmas influence behavior, particularly in regards to socially acceptable embodiments of extreme emotions. So what kind of smile is the "hurts little more" face exhibiting: strained, tense, performative, ingratiating? We might imagine that patients, especially when they are children, know better what kind of response they are *supposed* to have than what kind of response they are organically having, and thus they may be better able to identify the face (and the pain response) they are performing than the one they genuinely *feel*. In turn, they may mirror the behavior indicated by the faces in order to be seen as adequately or believably experiencing that level of pain. In essence, because experiences of and responses to pain are so individual and so culturally mediated, the way faces on the pain scale represent the experience of pain may influence the ability of subjects to identify with those faces and assess their pain in a manner that is legible to their care providers. In this way, the Wong-

Baker scale both solves and creates problems with pain assessment, allowing greater self-identification and therefore greater accuracy in assessment but also representing a fixed physiological response to pain that does not describe the many and varied ways bodies react to pain.

The 2001 Faces Pain Scale – Revised [fig. 4] attempts to remedy some of Wong-Baker's drawbacks. The scale moves in increments of two, potentially allowing for more

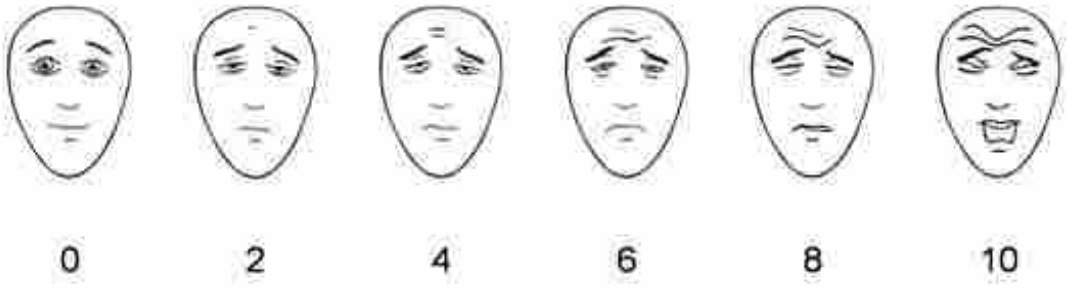

Figure 4: The Faces Pain Scale – Revised (McCaffery 68).

subtlety in assessment, and it also removes some of the ways that emotions are figured on the faces; no longer do wide smiles represent the lower numbers nor spherical tears mark the higher numbers. These serious faces may more accurately represent the kinds of facial pain responses exhibited in living faces; they show wincing, grimacing, furrowing eyebrows, even a silent scream, making them more illustrative than the simple Wong-Baker faces. Notably, these faces are meant to look more realistic, with their oval shapes and less cartoonish visages. The intent is to create greater ease of identification and greater accuracy of reporting, as patients may be better able to replicate the Faces Pain Scale – Revised expressions. And the subtlety of the facial expressions serves this process of identification: because these faces are more similar to organic bodily responses to pain that many people (though of course not all people) exhibit, patients may be better

able to asses their own physical response (perhaps even by looking in a mirror) in order to match themselves to the corresponding spot on the Faces Pain Scale – Revised.

Of course, realism is not the only way to represent faces in pain in order to elicit patient identification; in 2013, the cartoonist responsible for the wildly popular animated children's show *Adventure Time* drew a version of the faces pain scale using the face of Finn, the young protagonist of the show [fig 5] ("Finn Pain Scale"). According to a post on the Tumblr blog of *Adventure Time*'s production company, the Finn Pain Scale came about after a nursing student "suggested [that] kids in her pediatric ward might better respond to Finn's face" than they would to the traditional Wong-Baker faces ("Finn Pain Scale"). The Finn scale features Finn's face (including his iconic hoodie-with-bear-ears) in increasing pain, similar to the previous two examples of faces pain scales. Displaying an impressive economy of lines and a subtle gradient of color, the faces move from

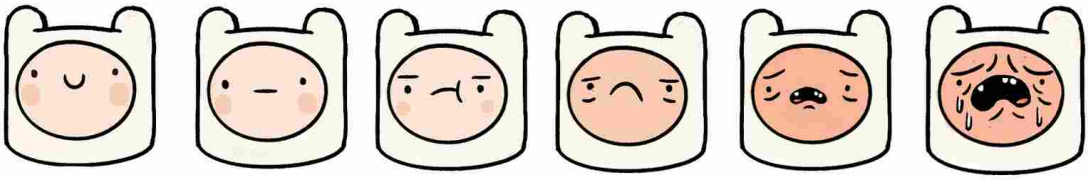

Figure 5: The Finn Faces Pain Scale ("Finn Pain Scale").

happiness to anguished tears. On the Finn Pain Scale, patients can identify with not only the pain response each face is emblematic of, but can also know something of the personality behind that face. For patients who are familiar with the show, being able to match the image not only to a bodily response but also to an emotional state that fits with the character's behaviors and personality may help aid identification. Indeed, even the

surrealism of the show may be of use here, as pain often feels unreal or seems to alter the fabric of normal life.

In an even more overtly humorous approach to the scales, cartoon artist Allie Brosh developed her own faces pain scale after an unsatisfactory experience with the Wong-Baker chart. As Brosh describes in her blog post "Boyfriend Doesn't Have Ebola. Probably." on her popular webcomic *Hyperbole and a Half*, during a trip to the Emergency Room, her boyfriend was asked to rate his pain using the Wong-Baker faces scale. Brosh points out the inadequacy of the chart, offering her interpretation of the level and kind of pain each face indicates[1]:

> 0: Haha! I'm not wearing any pants!
>
> 2: Awesome! Someone just offered me a free hot dog!
>
> 4: Huh. I never knew that about giraffes.
>
> 6: I'm sorry about your cat, but can we talk about something else now? I'm bored.
>
> 8: The ice cream I bought barely has any cookie dough chunks in it. This is not what I expected and I am disappointed.
>
> 10: You hurt my feelings and now I'm crying! ("Boyfriend Doesn't Have Ebola. Probably.")

Though obviously on the nose, Brosh's descriptions indicate the central problem with Wong-Baker as well as the other faces scales: the images themselves do not necessarily

[1] Though Brosh shows a picture of the Wong-Baker scale, indicating that she is directly referencing those faces, she uses the 0-10 numbers common to Faces Pain Scale – Revised. The image she uses in her post, however, shows the 0-10 number system. It's clear from just this one example that there are many ways in which medical practices use and adapt these (and likely other) pain scales.

telegraph physical pain. Tears indicate emotional distress, physical pain, frustration, and even autonomic response. The lack of narrative renders the faces themselves awfully ambiguous, allowing Brosh to replace the direct, clear, and medically relevant "hurts worst" with the disembodied non sequitur "You hurt my feelings and now I'm crying!", an assessment that is certainly a description of a kind of pain but is unlikely to be diagnostically pertinent. Indeed, Brosh's comical reimagining of the Wong-Baker labels illustrates the problem with individual identification: the face Brosh's character produces when eating disappointing ice cream may mimic Wong-Baker's fourth face, "hurts a lot." Is this, for Brosh, what "hurts a lot" looks like? How would she rate a more intense variety of physical pain? Brosh's hyperbolic comedy lampoons how the lack of a universal referent for these pained faces might play out in the real world.

Brosh's solution [fig. 6], though hyperbolic (as befitting the title of her webcomic), addresses a variety of issues with the standard faces model.

Figure 6: Allie Brosh's Hyperbole and a Half *pain scale (Brosh)*

Using her characteristically unsophisticated artistic style, Brosh manages to demonstrate impressive subtlety and nuance in each of her twelve faces. The addition of arms transforms the face into a body and allows greater display of pain response behavior. The addition of color reflects temperature and intensity. Finally, the very nature of the various mouth shapes, eye positions, and movement of limbs – physically impossible though they are – telegraphs a greater variety of pain. With increasing asymmetry of the eyes, contorted fingers, and wavering, jittery mouths, each face displays not only physical pain response but also the emotional vulnerability, fear, and instinctual physical movements brought on by fear.

All these faces scales still ask of patients the same task: find the face that represents your pain. Each scale therefore asks the subject to engage in a process of identificatory self-representation. And this is a significant task: assessing pain not only determines what kind of intervention care providers may offer, it also asserts humanity, subjectivity, and trustworthiness to the care provider. Is this drug-seeking behavior, or legitimate pain? Is this person faking it, or ill? Such questions may literally determine life or death for patients seeking care, turning the seemingly simple process of picking a face to represent your pain into a hugely significant experience. Identifying with the cartoon other, who cannot feel pain but who represents pain by exhibiting pain responses, allows pained subjects to validate their own subjectivity and certify their trustworthiness as human subjects. This provides an avenue for doctors to see their patients as subjects and also provides doctors with a narrative subject with whom they can co-suffer. So choosing correctly – the patient choosing the right face, the care provider choosing the right scale – is no small matter.

The pain scale is therefore part of the same co-suffering system described in the previous chapter. It is an act of embodied translation: the patient co-suffering with the cartoon other, whose symbolic representation of pain response allows the care provider, in turn, to co-suffer with the cartoon and therefore embody the pain of the patient. For this reason, the cartoon images themselves carry a heavy symbolic load: they must effectively act as intermediary between patient and care provider, a conduit through which these two bodies briefly entwine. The composition of the image thus plays a large role in determining the connection between doctor and patient. And what an absurdist project this is, what an impossibly heavy load to be born by these drawings. Acting as intermediary body between sufferer and care provider, translating the unspeakable pain of one body into the medical lexicon of the doctor, is a task doomed to fail, doomed to relegate bodies to the silent, helpless categories of patient, defective, disabled, freak. Any victory for the pain scale is a pyrrhic victory, one that wins at funneling unruly pain into orderly definitional categories, but at the cost of the patient's full subjectivity.

Identification with the pain scale "narrows the portals of self-representation through which one must pass in order to be recognized, known, helped, and human" (Gilmore 86). In Leigh Gilmore's reading of life writing texts from pain sufferers, she illuminates the ways that the pain scale's medical narrative inheres within the subject's knowledge of self. Paying attention to the host of metaphors that arise in the treatment of pain, she argues that "[m]etaphors that link animal, vegetable, and human within the language of pain evidence the larger linguistic web in which the human loses its humanist sharp outline, its false mastery, and categorical unity" (Gilmore 89). As Gilmore shows, the language used to describe pained bodies blurs categories of life, mixing the object in

with the subject, and therefore upsetting the body's narrative wholeness. In this way, it is not the experience of pain that dehumanizes a subject; instead, it is the attempt to fit the experience of pain into strict, normative bounds that ultimately causes the dehumanizing effect. Thus in this medical arena, the process of co-suffering that should be taking place between patient and care provider is mapped from the pained subject onto the cartoon face of the pain scale, transforming the cartoon into the subject and thereby dehumanizing the human subjects themselves.

And yet this is precisely the function of the medical model of disability, which has historically understood disability as a medical problem to be fixed or at least hidden. According to disability studies pioneer Tobin Siebers, this medical model of disability operates on the notion that disabilities are medical problems that require "fixing" through medical technology; the medical model, he argues, "strives to cure [disabled subjects] by particular treatment, isolating the patient as diseased or defective" (*Disability* 54). In recent years, however, this norm has been challenged by the social construction model of disability, which argues that disability arises not from innate traits but from environmental structures: to quote Siebers again, "disability [is] the effect of an environment hostile to some bodies and not to others, requiring advances in social justice rather than medicine" ("Body Theory" 54). The social construction model demonstrates how power systems "disable" subjects and calls for a restructuring of social space in order to respect and include different or non-normative bodies, something the pain scale seems wholly uninterested in.

The pain scales are artifacts of this medical model; they are tools used to universalize the body and render it into fixed, simple data points. Each of the four pain

scales described above – the Wong-Baker, the Faces Pain Scale – Revised, the Finn Pain Scale, and Brosh's pain scale – perform the same function, yet each does so in different ways and therefore each perhaps offers a different vantage point from which to stand and survey the body. For that reason, some of these pain scales may be, from a perspective of disability rights, more disciplinary while others may be more emancipatory. Because these pain scales are focused on the face, the main difference in how each one functions as a co-suffering agent is based upon the composition of each cartoon. Whether or not patient and care provider are going to be able to co-suffer with one another is contingent on how effectively the pictorial icon of the pain scale will translate. As Scott McCloud explains in *Understanding Comics: The Invisible Art*, "in pictures … meaning is fluid and variable according to appearance" (28), so the appearance of each cartoon image will determine how the meaning of that icon coheres, and therefore what kind of control over the body each pain scale is demanding.

The different pain scales feature varying levels of realism in their facial iconography. The Faces Pain Scale – Revised employs the most realism in its icons to depict rising levels of pain, using oval faces with detailed forehead wrinkles and eyebrow shapes; looking at the FPS-R faces, one can contort one's face into those expressions with relative ease. The Finn pain scale is slightly less realistic. It uses the perfectly circular face of the character Finn the Human, wearing Finn's usual costumed bear hat-hood, which would seemingly point to lack of realism altogether. Yet while the Finn faces are overtly cartoonish and therefore not realistic (pinpoints for eyes, no nose, etc.), the facial expressions they depict are evocative of natural facial expressions, with eyebrow movement, forehead wrinkles, and mouth positions that can be replicated on the

face of someone viewing the scale, providing an element of embodied realism. In contrast, the Wong-Baker scale uses perfectly round faces with bold outer lines, perfectly round eyes, and simple lines for eyebrows and mouth; while its facial expressions are evocative of functional facial movements, they are overtly cartoonish and most reminiscent of the smiley face icon. These facial expressions are more like broad directions for movement: the parabolic smile of "no pain" an easy referent for a wide smile, but without the functional facial details concomitant with an embodied version of such a smile. Similarly overtly cartoonish and non-realistic is the Brosh pain scale: the heads are nearly perfectly round, the eyes perfectly round black circles with perfectly round white irises that dilate to impossible proportions and bulge off the round skull, and the mouth varies from a deep gash to a gaping chasm with ragged edges. Brosh's scale also depicts arms and hands, unlike the rest of the scales, with three fingers that bend in every direction and bones that wiggle like noodles. Unlike the more realistic faces, these images do not replicate a physical body with much precision; moreover, unlike the Wong-Baker, these bodily contortions do not provide a clear referent or roadmap to embodied behavior.

So what do these different levels of realism indicate? Are the most realistic faces the easiest to co-suffer with? Do non-realistic features that are impossible to replicate in reality inhibit or support co-suffering? We might instinctually point to heightened realism as the best conduit for co-suffering: an icon that looks almost real might best perform legible pain response. But as McCloud points out, photorealism is not a necessary component of understanding an icon as representative of the original subject. Even the most basic smiley face icon, McCloud argues, "seem[s] just as real" as more detailed

icons (29). Seeming real, then, is as good as *looking* real, making the relative realism of each icon less important than its seeming realness. And truly, a lack of realism may support identification – *seeming* realness – in a way that realism cannot; as McCloud says, "when we abstract an image through cartooning, we're not so much eliminating details as we are focusing on specific details" that amplify meaning (30). That amplified meaning, that cartoonish distillation of the image, is, in McCloud's analysis, a reflection of everyone's inner sense of their own image, making it easier to identify with. And this identification is the locus of co-suffering: identifying with the other by virtue of seeing their body mirror your own and thereby feeling that body within yours.

So which faces are the easiest to identify with? When a person looks at an icon on a faces pain scale, the job is to identify with one of those cartoon faces, to see the self in the representation of the other. The face acts as a stand-in for the body of the patient, offering an external body with which both patient and care provider can identify. Realism, then, is not necessarily useful because "when you look at a photo or realistic drawing of a face – you see it as the face of another" (McCloud 36). This means that what ought to be the neutral, person-less object of the pain scale face becomes, when too realistic, its own subject; in that case, the patient is not projecting forth a representation of themselves but instead offering up a separate other with whom the care provider will interact. Realism distracts from identification because it makes one "too aware of the messenger to fully receive the message" (McCloud 37). In contrast, a non-realistic face provides that identificatory blank slate because "when you enter the world of the cartoon – you see yourself" (McCloud 36). When the patient bodies forth the cartoon, both

patient and care provider can identify with the mirror image of themselves and therefore are more likely to co-suffer with one another, not with a third party.

For this reason, I argue that the Faces Pain Scale – Revised, in its attempt at neutral realism, inhibits identificatory self-representation. Though the facial expression is easy to replicate, it is not easy to identify with – it looks like another individual, another subject, and not like a blank slate version of the self. The Wong-Baker and the Finn are both somewhat easier to identify with; the enclosed facial field features identifiable emotional responses and simple directions for feeling. The Wong-Baker faces, however, don't change substantially between grades of pain; each cartoon uses roughly six shapes to generate the facial expressions, and these shapes alter only the slightest bit to differentiate a one face from a three. For this reason, though each individual face might be identifiable, the faces are not wholly identifiable as representations of pain in varying degrees; there is simply too much room for individual assumptions. The Finn faces, on the other hand, are even more simple than the Wong-Baker yet the amount of difference between each feeling is much more profound; a four, for example, is almost exactly the opposite of a one: the simple U mouth turned upside down, simple dashes above and below the pinpoint eyes. Moreover, the shapes of the mouths change dramatically, from that simple U to an open kidney-shaped gape, with each change easy to mimic on the face of the viewer. The simplicity, the progression between faces, and the wider range of emotional expression make the Finn faces relatively easy to identify with.

However, the most evocative and identifiable is the Brosh scale. With all the impossible, cartoonish expressions, Brosh offers a greater abundance of pain responses to identify with. But more importantly, the Brosh scale offers arms, which change the field

entirely; the arms round out the body and seem to cringe, shake, and protect the face, all providing additional detail with which to identify. Finally, the exaggerated color scheme and hyperbolic physical states replicate the impossibility of the experience of pain; the least realistic of all the scales, these faces best imagine the impossible feelings that often occur when a subject is in pain. While eyes do not literally turn red and fill with spirals, pain can make it feel that they are. Ultimately, however, though the Brosh faces better replicate the internal experience of pain and create identification, they are perhaps so abstract as to inhibit translation into the medical narrative. While it is likely very easy for both patient and care provider to recognize and therefore co-suffer with these faces, the hyperbolic, distended, oblique nature of their representation perform the kinds of behaviors that the medical model distrusts and stigmatizes (see Introduction for more). Such response is not easily quantifiable by the medical model and thus leads to mistreatment and mistrust.

Overall, the purpose of the faces pain scales is the same: identificatory self-representation, a process of translation through which the individual identifies with a cartoon other and uses that cartoon icon to represent the self to the care provider, who can identify in return. The iconography is a conduit for co-suffering, a way to create a two-dimensional, neutral other with which two subjects (patient and doctor) can identify without the unstated, sublimated biases and assumptions that often inhibit co-suffering with a three-dimensional, flesh-and-blood other standing before us. Providing this neutral avatar for the self allows for a simpler process of identificatory self representation: it allows the patient to distill down the richness of their physical experience and present only a few salient data points to the care provider. With the universalized data offered by

the face, the care provider can thus fix the patient into the narrow definitional boundaries of the medical model and go to work solving the problem of unruly, pain-filled bodies.

We must, then, ask: who, in the end, does this translational process serve? While it may make the sufferer known by the doctor, identifying the self as a face on a scale requires fitting the self into a narrow and impersonal definitional apparatus, ultimately costing the patient some form of bodily integrity. While a face on a scale is an object with which we may be able to co-suffer, it is a purposefully impersonal, indistinct being. The face cannot offer the full richness of bodily experience that a person can themselves represent. Therefore, when we are asked to find which face represents our pain, we are truly being asked to offer up a simpler version of ourselves, and it is only that version that will receive care. The faces pain scales are artifacts of a system that wants, instead of a full and complex subject, a patient who is reduced to a medical subject, a fixed simulacrum of the subdued, docile patient-self that supports and ultimately serves the medical establishment and the medical model of normalcy.

Insensate: Congenital Insensitivity to Pain and Subjectivity

If assessing and identifying one's pain on a scale is one of the ways patients validate themselves and their experiences to the medical establishment, then what befalls those subjects unable to assess their own pain? How might we understand a person who doesn't experience normative pain response, who doesn't exhibit the kind of physical responses to pain that force others to co-suffer with and regard that person as a full subject? One can easily imagine that, absent normative pain response, an individual might have to fight to be seen as a subject: how many inhuman superheroes are figured as invulnerable to pain? How many monsters depicted as so thick-skinned or alien that they

are wholly insensitive to our physical attacks? How many times does the be-robed and be-hooded masked killer of urban legend fame rise from the grave or charge through a hail of bullets, unstoppable because it does not feel pain? While it may be interesting to think about these non-human characters (and Chapter IV will consider them at length), there is also much to be said for considering how human subjects are perceived when they don't exhibit normative pain response. Indeed, we may ask: can a subject lack pain and still be considered human at all? For people with Congenital Insensitivity to Pain (CIP), a hereditary, genetic analgesic condition that renders a subject wholly insensate to pain stimuli (including, in some patients, as the ability to feel or respond to temperature), this is no metaphorical question.

Unlike these cartoonish monsters and superheroes discussed in the next chapter, whose pain response (or lack thereof) is given as evidence for whether or not they attain subjectivity, subjects with CIP must exist in the material world marked by that metaphorical taint. Their non-normative pain response alters their status in the world and creates dangerous, even fatal assumptions about their humanity. The medical model enfreaks fully human subjects with CIP because of their lack of normative pain response, diminishing their humanity but also demonstrating how essential an element of kinship pain response is. As we'll see in following chapters, pain response can engender kinship with non-human subjects, so the inhumane treatment of CIP patients demonstrates just how substantively their humanity is questioned.

Congenital Insensitivity to Pain (CIP)[2] is extraordinarily rare: according to Orphanet, a European genetics reference encyclopedia, the condition is documented in fewer than one in a million people, meaning that less than seven thousand people are living with recorded CIP at any time. Yet, perhaps due to its sensational and fascinating nature, popular media featuring the condition are common – the website TV Tropes lists one hundred and thirty two examples of popular media texts wherein analgesia (often specifically CIP) is used as a character trope ("Feel No Pain"). Dozens of examples from every kind of media show that the notion of insensitivity to pain is powerfully intriguing as a narrative device, lending CIP an air of allegorical significance and cultural fascination that does not match the lived reality of the condition. As this chapter will show, pain becomes bound up with questions of the soul in ways that illuminate the great importance of pain and the great terror of those bodies that avoid it.

Despite the intrigue surrounding analgesia, it is simply very hard to understand just what is means to not feel pain. As case studies of individuals living with CIP show, far from a superpower-granting gift, the condition is a deadly one. If you prick them, they will bleed, but they won't feel the sensation of needle entering flesh; indeed, some people with CIP do not even feel variations in temperature or produce autonomic responses to temperature (such as sweating or shivering). Thus it is not just that the subject does not register pain at a conscious level: CIP means that the unconscious body itself does not experience pain or danger. Living without the warning system of pain can cause

[2] CIP is sometimes also referred to as CIPA, Congenital Insensitivity to Pain with Anhidrosis; anhidrosis, which is the inability to sweat normally in response to increases in temperature, is not present in all CIP patients. Because Congenital Insensitivity to Pain is already such a rare and complex condition, I will refer more generally to CIP unless the diagnosis clearly includes Anhidrosis.

immeasurable damage. While teething, infants with CIP may chew through their own tongues and lips. Adults with CIP may walk miles on broken limbs before seeing external evidence that cues them to stop and seek treatment. Moreover, without the basic discomfort of pressure, people with CIP never learn to shift their weight while sitting, standing, or lying down, which can lead to infected sores and musculoskeletal dysfunction from years of grinding friction without relief. Indeed, lacking pain seems to also dull the fear concomitant with bodily injury, so people with CIP must be taught the relative urgency of their various physical needs or they may simply never seek care.

Though subjects with CIP vary in their sensory apparatus, the primary feature of the many analgesic conditions considered under the CIP umbrella is a lack of pain response. Due to mutations in the SCN9A[3] gene (among others), subjects with CIP simply do not receive the messages of pain, do not register physical sensation much at all (Heckert). According to Stephen G. Waxman, a professor of neurology at Yale University School of Medicine, this is due to a translation error: for most of us, "[p]ain-sensing nerves along the body's surface normally fire more frequently when we touch something hot or sharp, sending electrical signals to the brain, causing us to react" (qtd. in Heckert). Put another way, sensory nerves translate bodily damage into physical sensation, something the subject can understand and respond to; this is a warning system, a message that whatever action is causing the pain should immediately cease. Yet in a subject with CIP, "the gene [is prevented] from making the channel, and the electrical impulses are never produced" (Waxman qtd. in Heckert). The message is never translated and the subject never deciphers it; pain passes through the subject's consciousness

[3] Not all SCN9A mutations cause analgesia; different mutations on the same gene are linked to chronic pain conditions (Heckert).

without his or her ability to even recognize that the utterance was made. So pain is a way of recognizing one's own body, an internal system designed to teach subjects how to avoid damage through modified behavior. In short, pain is one of the processes by which body and person are fused.

It is perhaps no surprise, then, that this particular form of disability is also bound up metaphorically with questions about humanity. Without pain, what is the relationship between a person's body and their self, between the body and what we might call the soul? Without pain, can an individual feel anything else, from pleasure to emotion? Separate even from these philosophical questions, the uncanny lack of pain response is uncomfortable to witness: viewing the kind of damage CIP patients experience causes physical effects in the witness. If we watch a person with CIP casually break a bone and continue to use the limb, alarm bells that are silent in that person's body screech and wail in our own. Unable to control the behavior we are witnessing, these bells go on and on until, repulsed at the abjection of the pain, we turn away.

Seeing a body in pain causes suffering in the body of the witness, as discussed in the previous chapter. However, if the originating body does not sense the suffering, what happens to *co*-suffering? These suspicions about the subjectivity of such people are symptomatic of a narrow normative view of humanity, which creates a class of humans who don't automatically get treated as subjects, whose very humanity is suspect and interrogated. This suspicion is reflected in narratives about subjects with CIP and other analgesic conditions. Such stories ask questions about the characters' subjectivity such as, do such beings experience emotional pain? Do their bodies make them monsters? Do they have morals? Can they love? Inevitably, each narrative must find ways to

"rehabilitate" the character's humanity by inducing pain, or dismiss the character's humanity by inuring them entirely to pain. In doing so, these narratives reveal fundamental prejudices about what pain is and fundamental presumptions about what constitutes humanity.

In pop culture, there are myriad examples of CIP: the villain Ronald Niedermann in Stieg Larson's wildly popular *Millennium Trilogy* (2005-2007) novels has CIP, the horror film *Bereavement* (2010) centers on a child with CIP, and the episode "Painless" (2011) in the criminal procedural TV show *Criminal Minds* features a mass murderer suspected to have the condition. Indeed, the incidence of CIP in pop science fiction seems an order of magnitude larger than the incidence of the condition in the general public. Across genres, media, and audiences, characters with CIP are monster-of-the-week style oddities. The condition is used as a cypher, the subjectivity and kinship of these people requiring interrogation and their basic humanity called into question.

Yet in popular medical narratives, these issues carry additional weight. When lack of pain can be written off as an attribute of monstrosity, the underlying humanity of the character is less important; but when there is a clear medical reason for analgesia, which CIP of course provides, then the narrative is trapped in uneasy space, struggling to display the oddity that is painlessness without losing medical credibility. Certainly medical science can't dismiss CIP patients as monstrous or inhuman, but just as certainly the structure of these shows must assert the differences between doctor and patient. What happens therefore is a slip into the allegorical, CIP becoming emblematic of the emotional experience of the shows' main characters. Using examples from the medical television dramas *House* and *Grey's Anatomy*, this chapter shows how lack of normative

pain response upsets the co-suffering dynamic, therefore causing people with analgesic conditions to be treated as philosophical icons, not flesh and blood subjects, and thereby revealing cultural anxieties about the composition of the human.

House is a show obsessed with pain. A medical Sherlock Holmes adaptation, the main focus of the show is its star, Dr. Gregory House, the brilliant but acerbic diagnostician who each week solves an impossible medical mystery while also alienating and enraging his friends, coworkers, and patients. Virtually sadistic in his narcissism, misanthropy, and brutal honesty, House lays low all those with whom he interacts, using his prodigious intellect to find out what they're trying to hide and expose it. His excuse for his caustic, virulent disregard for other's emotions? His leg hurts. Before the start of the show's timeline, House experienced an infarction, or tissue death due to lack of oxygen, in the muscle of his right leg. In the first season episode "Three Stories," the show reveals that other doctors initially misdiagnosed House's infarction, until he eventually diagnosed himself; he refuses the safe treatment of amputation and chooses instead to risk substantial pain in order to save his leg. The end result of his treatment is severe chronic pain, loss of a substantial portion of his leg muscle, and limited muscular function. So House – both the character and his eponymous show – is always in pain. Though he (ab)uses drugs to manage his pain through most of the series' run, he is frequently shown exhibiting pain response: massaging his leg, limping, wincing, etc. His pain therefore explains and excuses his cruelty, but it also rehabilitates his character; despite his campaign of awful behavior, he is made human, made sympathetic, made deserving of care because of his pain.

Season Three's episode "Insensitive" deals even more directly with House's pain than perhaps any other. In this episode, a teenage girl, Hannah, who has CIPA[4], begins suffering seizures and high fevers after surviving a car crash; House becomes involved not only to solve the medical mystery, but also because he believes that harvesting a piece of the patient's spinal nerve could be used as a cure for his pain. Through their testing and treatment, the medical team repeatedly discounts Hannah's emotional connection to her mother and searches for answers about her body without her consent. Whenever she is shown without a normative pain response, the story juxtaposes this behavior by giving her an intense emotional response, either concern for her mother or anxiety about her treatment. So while the doctors interrogate her mute body, the show's narrative must continually assert her vocal emotions, tying the one to the other and using her ability to love, empathize, and emote as a way to prove her humanity.

The opening scene of the episode follows the formula of most of *House*'s episodes: the narrative opens with the patient or medical mystery beginning to unfold, prior to entry into the hospital. In this case, we see Hannah and her mother bickering while driving through a snowstorm. As the scene progresses, it becomes clear that there is something more than simple mother-daughter adolescent power struggles happening; Hannah's mother announces that she's going to talk to Hannah's friends (about what? We don't yet know) and Hannah responds that she "doesn't want to scare them" ("Insensitive"). In this same moment, the camera pans across Hannah's face, revealing bruising on her chin and faded scars around her mouth. Before we can learn what this secret is and what relationship it has to the physical marks upon her skin, their car is

[4] Hannah is shown to have an inability to properly regulate temperature that characterizes Congenital Insensitivity to Pain with Anhidrosis.

struck by another vehicle and flipped. Hannah's mother is unconscious and bloodied, but Hannah is awake and crawling through the wreckage, calling 911, and telling the dispatcher that she's fine even as we see a piece of metal skewering her calf. It is clear that there is more to Hannah than average teenage angst.

House diagnoses Hannah's CIPA by observing her behavior in the ER, discerning instantly that she has CIPA by pointing to the physical evidence on her body: she is still wet from lying in the snow, but she's not shivering because she can't feel temperature; she has "scarring around her lips and tongue [because] when she was a baby she chewed on herself without feeling it" ("Insensitive"); and while her wounds were cleaned, Hannah's performance of pain response was inaccurate and she "flexed into the pain instead of away from it" ("Insensitive"). House is able therefore to determine her lack of pain by reading the legacy of unfelt pain that is written across her body and behavior, and by observing how she struggles to fit her body and behavior into the normative mold determined by the medical model. She knows that in order to "hurry up" the procedure and be given a clean bill of health, which would allow her freedom of movement and access to her injured mother, she must perform a version of embodiment that compliments and conforms to medical expectations about her body and behavior.

From the start, then, we can see that Hannah is primarily concerned with her mother's wellbeing and disregards her own health and safety in order to ascertain her mother's. She denies her CIPA to House and Dr. Foreman specifically because, as House says, "if she admits she has CIPA, she knows we're not letting her go anywhere without having a battery of tests" ("Insensitive"). This control over her body is treated as a given: because she cannot know herself, it is never questioned that the doctors will have control

over her physical movement, her treatment, her body itself. Moreover, Hannah is treated as unstable and overly emotional because she wants to make her own decisions about her bodily autonomy; instead of regarding her emotional desires as rational and indeed normal, her requests to avoid further testing and go see her mother are given as evidence of her abnormality. Indeed, her behavior is a clear and logical response to the medical model of disability that overrides disabled subjects' ownership of their bodies in favor of finding treatments and cures for their physical forms. Instead of treating Hannah as a full and vibrant young women, fierce in her love for her mother and powerfully motivated by the same adolescent urges (freedom, self-actualization, control) that all teenagers are, her resistance to cruel, torturous medical treatment is written off as emotional volatility or, worse yet, as symptoms of further disability.

The narrative of the show continues to focus on her lack of pain, presenting her as metaphorical counterpart to House himself and therefore as a key to his peculiar personality. When House presents her case to his Chief of Medicine, Dr. Lisa Cuddy, she claims that his interest in Hannah lies in the fact that "he's curious about somebody who can't feel pain because [he] always feel[s] pain and [therefore] want[s] to go exploring" ("Insensitive"). Indeed, his desire to explore her body demonstrates that he doesn't acknowledge or believe in her own bodily integrity or control; he is going to "treat" her against her will because he wants to, not because she wants him to, and he is going to justify it via her condition. He claims to Cuddy that "she has no idea what's going on in her body" ("Insensitive"). Her body is property for House to seize, just like the sandwich he later steals from his friend: he has a desire (to reduce pain, to reduce hunger) and thus he is entitled to whatever he can use to slake that desire. House, here, is the perfect avatar

for the medical model: an oligarchic power system that defines normal and abnormal and exerts total control over the bodies that fall into the abnormal category; a system that applauds those abnormal bodies only when they submit to erasure via normalizing treatments, cures, and procedures; a system that cares more about maintaining rigid adherence to the appearance of bodily normalcy than to quality of life, individual autonomy, and self-control.

Yet there is no denying that Hannah is truly ill, regardless of her uncooperative attitude, and the challenge of the episode is therefore not just figuring out how to diagnose someone who can't explain what symptoms they might be feeling, but trying to diagnose her while she resists and demands to see her mother. The more the doctors withhold information about Hannah's mother from her, the more physical risk she incurs trying to get to her mother. Furthermore, instead of treating her with the same methods they would use for any other patient, the team focuses only on her inability to feel pain. Each medical test becomes about her lack of pain, not just about finding the cause of her fevers, thereby manifesting a battery of examinations that would for any other patient be torture but for Hannah is, as Foreman claims, "just like pricking her finger" ("Insensitive"). Physical torture, for her, is a justifiable diagnostic tool, and the emotional torture attendant to her treatment is never acknowledged. Thus her lack of pain response becomes a spectacle, an oddity, an example of freakery.

Though *House* is a 21st century television show, this episode's depiction of a non-normative body bears strong resemblance to the practice of the freak show, which "flourished and then faded between about 1840 and 1940" (Garland-Thomson *Extraordinary* 56). As Rosemarie Garland-Thomson explains, the freak show has its

origin in the deepest recesses of human history and serves as a medium for juxtaposition between the ordinary or normal body and the disabled, rare, or freakish form, all "in order to sharpen the distinction between the ideal [body] and [its] physical and cultural opposite" (*Extraordinary* 56). So here, then, is House's body – nowhere near the ideal called into being through opposition at the freak show – being redeemed and made normal by opposition to Hannah's even more freakish one. House may not be ideal, but he is human in a way that Hannah is initially not.

And yet Hannah is not just a freak, as worthy alive as dead like the "freaks and prodigies [that] were solely bodies, without the humanity [that] social structures confer upon more ordinary people" (Garland-Thomson *Extraordinary* 57). The narrative fixes Hannah in relationship with her human mother and gives her emotional connections, giving Hannah her subjectivity through psychic pain, all in order to remind the viewer that Hannah is a human. Because if she's human, she deserves humane treatment. In this way, *House*'s treatment of Hannah's body recalls less the freak show than the freak exhibition, wherein freaks would display their bodies to the medical establishment (and often the public, too) for money, exchanging not just the pleasure of seeing, as in the freak's sideshow, but also medical knowledge. As Alice Domurat Dreger explains,

> Those with peculiar anatomies let intensely curious medical and scientific men examine them, and the biomedical men not only enjoyed some free voyeurism – it is clear voyeurism was part of the attraction – but they also published their accounts of the unusual anatomies and thereby increased medical knowledge of the conditions as well as building their own professional reputations. In exchange, the medical and scientific men gave the exhibitors expert opinions about their

> conditions, occasional medical treatment, and written expert testimonies to their strangeness. (166)

Such a display may feel exploitative by current standards, and certainly there is no need to romanticize the freak show, but it was also agentive, quite in contrast to modern representations of unusual anatomies, which are driven by medicine's desire; as Dreger puts it, these days "biomedical professionals tend to feel a primary *right* to seeing and using and owning unusual anatomies – whether those anatomies be ancient skeletal remains, extraordinary genes, or patients deemed 'facinomas'" (169). And that is what Hannah is here: a facinoma, a fascinating freak whose freakishness is exploited and whose humanity must therefore be actively asserted by the narrative's focus on her love for her mother.

For example, the team decides to induce as much pain as they can, assuming that if they induce enough pain, some signals from her surface nerves might be strong enough to "get through" ("Insensitive") her CIPA and give them a clue as to what is ailing her. So they strap her into a steel surgical halo and drill a hole into her skull, rationalizing it as the worst pain they can imagine. Instead of recoiling in horror at the proposal, the Dean of Medicine treats this medieval trepanation as heroic. And Hannah's consent? Immaterial, and never obtained. Obviously still unwilling to be subject to torture (which she psychologically experiences even though she does not physically feel), Hannah initially struggles to get away. But because she is disciplined and restrained by the medical authority, she chooses the same tactic she'd used before, in the ER: she playacts as the patient the doctors want. During this procedure, Hannah voices a desire to understand pain, to know what it feels like, and all Foreman can say is that "it hurts"

("Insensitive"). Just moments later, as the sounds of the drill get louder, she begins to exhibit classic pain response: her eyes get wide, she moans and screams, she struggles to get away, she hyperventilates. Then, with an excited look on her face, she makes her escape, running from the room, trailing wires and tubes, bleeding from the head. She has faked the pain, it seems, much better than she did the first time around, and uses her performance to escape from the team's dubious treatment and get to her mother. Yet this behavior is not treated as logical – what person wouldn't try any method possible to escape trepanation? – but as further evidence that there is something deeply wrong with Hannah.

Finally, however, Hannah's emotional capacity is sufficiently demonstrated and her humanity discovered. After having a brief paranoid delusional episode, jumping off a balcony, and becoming paralyzed from the waist down, Hannah is finally allowed to see her mother, who is in between surgeries. During their interaction, Hannah's mother asks repeatedly about Hannah's physical condition, about whether or not Hannah is monitoring herself and taking care of herself – her mother, then, is acting as the pain system Hannah lacks. Hannah, however, wants the conversation to be about her mom and apologizes for her own behavior, growing increasingly emotional until her mother's condition worsens and she must be taken away. It's in this moment of heightened emotional distress that Dr. Cameron, another of House's team members, notices that Hannah is crying. Wiping the tears away, Hannah responds, "I can't cry" and then begins to actually feel pain, clutching her head and screaming from her first headache ever ("Insensitive"). This pain is the team's breakthrough and becomes the clue to her illness. Emotional pain is therefore equated as the metaphorical locus of her foray into physical

pain – she hurts physically, even though she shouldn't be able to, because she loves her mother.

With this, the House cracks the case and discovers the cause of Hannah's symptoms: a tapeworm upsetting her vitamin balance. Because of her CIPA, Hannah hasn't been able to feel the thing growing inside her; when they perform surgery on her to remove the worm, they do so without anesthesia so that she is able to be awake as House extracts the tapeworm from her gut. She stares at her stomach in bewilderment as the creature – feet and feet of it – is pulled out of her body, shy of the sixty foot record but estimated (by Foreman) to be at least twenty-five feet long; a nurse in the OR takes a cell phone picture, gawking at this freak, these two freaks: the girl and her worm. The episode ends with Hannah and her mother, both post-operative, reunited; Hannah's initial reaction is to jump out of bed to get to her mother, but another of House's doctors reminds her that she will pull out her stitches if she does so. By now, her impulsivity is treated as a mere curiosity, not as evidence of underlying monstrousness.

In this episode, then, what we see is a need for the narrative to compulsively display Hannah's CIPA – her freakish lack of pain response, her inhuman body – while also constantly reasserting her love for her mother. Without the emotional experience, Hannah has no concept of her physical experience; but when she is at her most emotionally expressive, then the team can discover what is ailing her body. Her lack of pain response had rendered ineffective all the tests they had performed, perhaps because without pain response the doctors were not co-suffering with her and seeing her as a full subject. Yet when they can see her experiencing love, guilt, and therefore the manifested physical displays of those same emotions, they can also begin to understand her body and

solve her illness. At the same time, her inability to feel pain renders her the freakish counterpart to House's excessive pain, and thereby neutralizes his behavior; when he tortures feeling patients, he is the monstrous one, but when he tortures Hannah, he becomes a compassionate healer. Thus Hannah's body is a spectacle that must assert its humanity and also a contrast that reifies House's humanity and dis-enfreaks him.

Similar depictions of CIP occur in *Grey's Anatomy*, a medical drama notable for its diverse casting, high drama, and frequent depictions of medical ethics violations [5]. The show perhaps fits better in the category of soap opera than medical serial, more *General Hospital* than *ER*. The show follows a team of surgical interns at a major Seattle hospital, focusing as much on the way their career choices influence and affect their personal lives as it does on the patient studies. In each episode, a variety of patients are assigned to the interns, with each medical disaster or individual challenge somehow speaking to the personal dilemma facing that intern. The patients and their various conditions, then, are metaphors for the doctors and their interpersonal travails. And in its own way, *Grey's Anatomy* is just as focused on pain as *House* is; in *House*, the central story revolve around Dr. House's emotional reaction to his physical pain, while in *Grey's Anatomy*, the central stories revolve around the doctors' emotional pain made manifest in the physical pain of the patients.

Just like *House*, *Grey's Anatomy* often depicts its patients as fascinomas. Season 2's episode "Something to Talk About" is a clear example of the freak show atmosphere

[5] In 2010, CNN's *Marquee Blog* reported on a study performed by the group Global Compliance that found an average of seven ethics violations per *Grey's Anatomy* episode; especially noteworthy in this report is that *House*, a show about a doctor with no regard for professional ethics, scored lower, at six violations per episode. See http://marquee.blogs.cnn.com/2010/12/29/30-rock-biggest-ethics-violator-on-tv/?hpt=T2

of these medical dramas. The episode features a man who has been admitted to the psych ward for an advanced male hysterical pregnancy, complete with hormonal changes strong enough to cause a positive pregnancy test. Two of the residents, Cristina and Izzie, discover his case and "steal" him from the psychiatry service[6], discovering that the patient is not actually a psych case, but in fact has a large abdominal teratoma, a tumor rarely seen in adults that is not only malignant, but also has teeth. The patient's arrival in the surgical service is met with shock and fascination; employees are brought on board to take pictures – purportedly for "case studies… and the quarterly slide show" ("Something to Talk About") – and Izzie and Cristina sell tickets to the surgery, until eventually staff crowds the patient's room, betting on the outcome of the surgery. Though the show's main character, Dr. Grey, eventually reprimands the collected group for their treatment of this man, the show ends with Cristina and Izzie counting their money, obviously neither mollified nor abashed at their callousness in displaying their patient as a freak of nature. Through this enfreakment, both *House* and *Grey's Anatomy* delineate the boundaries of the normate: as Garland-Thomson says, "The dynamic of these performances thus converts private bodies into public exhibitions whose cultural work is to constitute mutually the identities of viewer and viewed by enacting existing power relations" ("The Beauty and the Freak"). Against this backdrop, the public exhibition of the CIP body

[6] Also significant here are the institutional politics on display. Much is made of the impropriety of interns in one service "stealing a case" from another service, and much horse trading and flexing of institutional clout is displayed. This element of the show demonstrates the medical model's metonymy: the case, of course, is the patient himself, and "stealing the case" is therefore taking command, charge, or ownership over a person's body. Little, if any, consideration is given to the ethics of "stealing" a person and commandeering his medical care without consent.

constitutes the normalcy of those around it, even moving those bodies that would otherwise themselves be freaks into the category of normal.

This freak show atmosphere, which juxtaposes a normalized doctor and a non-normative patient, is on display in Season Three's "Sometimes a Fantasy." The episode follows the standard formula: the characters deal with the messy intersection of their careers, their friendships, and their romantic relationships as they navigate forty-eight hour shifts, medical disasters, plague outbreaks[7], and the occasional patient with live ammunition in his chest.[8] Just as in the *House* episode, in "Sometimes a Fantasy," the CIP patient's lack of physical pain is contrasted with the emotional pain of the doctors, making the excess of emotional pain seem normative through contrast with the lack of physical pain. And excessive the doctors' emotional pain certainly is: one is mourning the death of her fiancé, one is struggling with her partner's depression, one is grappling with recovery from a gunshot wound that might threaten his ability to continue his surgery career, one is choosing between two men she loves, and one is trying to learn boundaries with his new girlfriend. Because the emphasis on the show is always the romantic and emotional lives of the interns, these sentimental concerns are the primary contrast for the CIP patient's freakery. Her inability to feel pain makes their emotional pain normal, natural, and healthy instead of hyperbolic, melodramatic, and destructive.

Before we meet Megan, the child who we'll later learn has CIP, a nurse notes that this is the fourth time in three months that she has been in the ER. The doctors therefore assume child abuse, though Megan "just plays rough" according to her foster parents and

[7] This pandemic-that-wasn't occurs in Season Three's "Time Has Come Today."

[8] This scenario occurs in Season Two's "It's the End of the World" and "As We Know It" double episode.

is in the ER because she fell down at school ("Sometimes a Fantasy"). Dr. Alex Karev, one of the interns, assesses Megan's wounds and finds an older one in her arm, this one closed with staples. He believes that this proves child abuse and asks her if it was her foster parents who stapled her wound. Megan replies that she did it, claiming that she'd fallen off her bike but then fixed it herself because she "just didn't want to go to the doctor again. It's no biggy!" ("Sometimes a Fantasy"). During this interaction, it's clear that Megan is attached to her foster parents and concerned that she may lose them if the realize that she's different. She defends them, shouting, "They're my best parents I've ever had. They don't hurt me. I can't be hurt!" ("Sometimes a Fantasy"). To protect her parents and prove that she can't be hurt, Megan pulls the staples out by herself, even using her teeth to loosen one. So immediately, just as in the *House* episode, the child with CIP is freakishly displayed, but made human through ardent and explicit claims of love for parental figures.

The show lavishes attention on the uncanny, freakish bodily behavior in which Megan engages. Unlike Hannah from *House*, Megan is unaware of her condition so though she can tell that she is somehow different from others, she treats her body with an extraordinary lack of care. The indifference to her body that Megan shows is upsetting to both the characters in the show and the viewers of the show, and indeed when she uses her mouth to remove staples from her arm, she transgresses taboo boundaries of cannibalism and physical mortification. So in order to humanize her once more, the narrative explains away her self-destructive behavior: when Karev acts shocked, Megan whispers her secret, telling him that she believes she has superpowers. She explains that she has gotten all her wounds from fighting. As she explains, "I'm stronger than the other

kids, so I end up defending the ones who are wimpy or small or whatever" ("Sometimes a Fantasy"). Though Karev points out that she's neither big nor strong herself, she explains that she can take "the big kids" in a fight. Her sense of herself as a superhero justifies her behavior – she is not self-destructive, she is self-abnegating, a hero who sacrifices her body to protect others (a trope we will see again in Chapter IV). This is a holistic identity for Megan, explaining not just her CIP but also the rest of her life; as she explains it: "Superheroes are all kids with dead parents, like me. And they all figured out when they were around my age that they could do stuff that no one else could, like me" ("Sometimes a Fantasy"). What she can do that no one else can is withstand pain, and in her mind, that makes her a superhero.

The doctors diagnose Megan with what they call "chronic insensitivity to pain" and explain to the foster parents that this is "a chromosomal condition that means she doesn't feel pain" ("Sometimes a Fantasy")[9]. Dr. Addison Montgomery explains that, usually, the condition is caught early but, because Megan had been bounced through the foster system, her symptoms may have been missed. They find that she has a massive bleed in her abdomen, certainly from the repeated blows she's taken. Dr. Bailey, the resident who teaches all the interns, exclaims during surgery that "everybody wants a life without pain, and look what it gets you. She needs to be on a poster somewhere to remind people [that] pain is there for a reason" ("Sometimes a Fantasy") – this "poster" calling up memories of the freak show once more, as well as public service announcements

[9] From the way Megan's condition is described, it is clear she has Congenital Insensitivity to Pain with Anhidrosis (she is even shown taking, and failing, a temperature test). Why the show then calls Megan's condition "chronic insensitivity to pain" is unclear; "chronic insensitivity to pain" is not a diagnostic condition of its own and the depiction of Megan's condition doesn't seem significantly fictional in any other ways.

about health that were common in the midcentury and onward. As the episode ends, Karev asks Izzie, the intern who is struggling to recover emotionally after her fiancé died, "does it hurt?" When she replies yes, he asks her to tell him where it hurts. "Everywhere," she replies. "Maybe it hurts for a reason," he responds, and takes her home, behaving in many ways like the superhero that Megan believed herself to be ("Sometimes a Fantasy"). Thus Izzie's emotional pain is constructed as normal through contrast with the physical pain that Megan lacks. This is the ideal body, if Megan's is the freakish counterpoint: able to hurt, able to learn from pain, able to feel that pain and move forward. Megan's body, in the show, therefore performs the pedagogical function that Dr. Bailey invokes when she recommends that Megan be put on the "poster somewhere." Because Karev can learn that hurt happens "for a reason," Megan has served her didactical purpose and has normalized the doctors' pain.

In these two episodes, therefore, depictions of CIP/CIPA reconfigure the position of pain in the medical field. Medicine can often be seen as a fight against pain: if we treat or cure the body of its illnesses, injuries, and aberrations, then we can banish pain. Yet the complex imbrication of emotional and physical pain is apparent and therefore pain is an uneasy bedfellow in these medical dramas. In order to have emotional transformation and development, doctors and patients alike must be subject to emotional pain and so too must they grapple with physical pain. So how to differentiate the two? How to maintain a separation between patient and doctor? In medical dramas, because the CIP body is a patient's body and therefore a pathologized space to be cured, treated, and made normal, the inability to feel pain has to itself be made medicine. These medical dramas display CIP patients as freaks, using their bodies to define the outer boundary of normalcy. With

invasive attention to the minutiae of their bodily existence, each show enfreaks these human bodies, calling into question the very humanity of such bodies. Yet in order to maintain control over such aberrations, these medical dramas offer emotional pain as a fix, offering subjectivity to CIP patients only after their ability to love is apparent. Only then can these doctors co-suffer with the patients, recognize their own emotional existence within their patient's body, and begin to treat them as humans. Against this backdrop, pain does not have to be the demon that modern medicine fights, but can instead be the means for becoming whole subjects. In each show, pain becomes the avenue through which characters are humanized: cruel House is sympathetic because of his pain, hysterical Izzie is pitiable because of her pain. CIP narratives are therefore employed in such dramas to assert medical control over pain, to explain how and why doctors experience emotional pain, and to justify the utility and healing power of pain.

Pain and People: CIP and Subjectivity

Before she is given a name, she is "The girl who feels no pain" (Heckert). In Justin Heckert's 2012 *New York Times Magazine* cover story, Ashlyn Blocker, a teenager with CIPA, is presented first and foremost as a diagnosis, not a subject. In an interview about why he wrote the article, Heckert explains that he'd initially become interested in writing about Ashlyn when she was only five, but after speaking to Tara Blocker, Ashlyn's mother, had decided against it, reasoning that Ashlyn was too young to be interviewed. Later, when she was 13, Heckert returned to the story and discovered that "She was playing clarinet in the middle-school pep band. She was crocheting purses. She liked the color blue. She was learning to cook. She had a personality" (qtd. in Nolan "Behind the Cover Story: Justin Heckert on Learning About Pain From a Girl Who Feels

None"). Realizing that Ashlyn was a full and whole person, Heckert decided to write the story. Yet despite the relative normalcy of Ashlyn's life and behavior, Heckert still chose to frame his story with what makes her abnormal, defining her through her lack of pain. Like the sideshow barkers of old, Heckert draws the reader to the curtain, promising to divulge to us CIPA's secrets, to show us the hazards of growing up painlessly (as the title of his piece reads). Then he pulls back the red velvet curtain to display the freak within: bespectacled, brunette Ashlyn, playing her clarinet and making beaded bracelets like so many other little girls, all the more stunning for these outward signs of normalcy.

In the article, Ashlyn comes across as a clear-headed, self-possessed young girl. She complains, "People don't get me" (Heckert), a statement just as at home in the mouth of a non-CIPA teenager as it is in hers. And she clearly loves and is connected with the people around her: she's shown with her friends, her siblings, even curling up in bed with her parents. Yet one of the primary questions of the piece, as in the TV shows, seems to be how she experiences emotion. As Heckert explains, Ashlyn's primary doctor, Roland Staud, has spent time assessing not only the range of her physical sensations, but also whether or not "she could feel emotional pain and empathy" (Heckert). Her inability to feel physical pain realm colors the way her emotional self is viewed:

> Staud wondered … "How will she be emotionally? How will she evolve?" We sometimes experience emotional pain physically — Staud used the tried-and-true example of heartbreak, how the end of a romance can cause a physical pain — and he wondered if the relationship between the body and emotions also goes the other way; if a person lacks the ability to feel physical pain, is her emotional development somehow stunted?

Here, then, the doctor is equating her inability to feel physical pain with a potential inability to experience the fullness of love. Indeed, the full panoply of emotional learning seems at issue for the doctor, who muses,

> "Will she have fear? She is only threatened by emotional consequences. She is an easygoing girl, and she has parents who have learned how to influence her without additional means of physical contact… I don't think she cries very much." (Staub, qtd. in Heckert)

These questions about Ashlyn's emotive capacity are persistent, despite indications in her comportment that she is well aware of and attuned to the physical and emotional worlds of others.

While doctors and journalists seem to be wondering whether or not CIPA causes some form of sociopathy, Ashlyn's family goes about their lives, secure in their loving and stable family. Nowhere do the Blocker's express concern about Ashlyn's affection for them, her moral and ethical responses to other people, or the trajectory of her maturation. Her parents explain her response to the pain of others: she says, " 'Ow!' when someone else [is] hurt. And Ashlyn yelped when her father described the time he put a nail straight through his thumb" (Heckert). Though "she had no idea why [her father's] face got red and his voice got loud and he held his thumb in the air," she nevertheless learned to imitate and perform co-suffering behavior, "cring[ing] when someone described something painful" (Heckert). Though she cannot understand what the suffering feels like, she can understand the emotional dimension of pain: "'Girl, what goes through your mind when you see someone hurt?' [her father] John asked her. 'I feel

bad for them,' she said" (Heckert). Thus it should be clear simply from speaking to Ashlyn that she is sympathetic, empathetic, and emotionally intelligent.

Despite this evidence, questions about the emotional world of Ashlyn and people like her remain. Assumptions about the connections between emotional and physical pain are pervasive, as are fears about what lack of pain might do to morality. After Adam Lanza shot and killed twenty-six people, twenty of them children, at Sandy Hook Elementary School in December of 2012, media reports rushed for answers that might explain his terrifying, bewildering, amoral actions. Much was written about Lanza's possible Asperger's diagnosis[10], but many news sources also fixated on the possibility that Lanza had an analgesic condition. Based solely on conjecture from "the advisor for Newtown High School's technology club" (Wagner), it seemed that some were hopeful that this diagnosis could justify Lanza's behavior.

Wagner takes an anecdote about Lanza's "apparent inability to feel pain" and proclaims that "these statements square with a condition known as congenital insensitivity to pain" (Wagner). Wagner implies that research shows a positive correlation between lack of pain and lack of empathy, but the study he cites to support this claim disagrees: in "Can We Share a Pain We Never Felt? Neural Correlates of Empathy in Patients with Congenital Insensitivity to Pain," researchers Nicolas Danziger, Isabelle Faillenot, and Roland Peyron conclude:

> Although CIP patients cannot refer to their own experience of pain to understand how the pain of others feels, they showed normal responses to observed pain … Indeed, no group differences were seen … whether others' pain was represented

[10] See http://time.com/19957/adam-lanzas-violence-wasnt-typical-of-aspergers/ and http://www.newyorker.com/magazine/2014/03/17/the-reckoning

> from a somatosensory perspective (body parts in painful situations) or from an emotional perspective (facial expressions of pain). (204)

Despite the poor evidence and uncooperative research, the supposition that Lanza might have had CIP was written up in *Business Insider*, *Buzzfeed*, *Yahoo News*, *The Atlantic*, and elsewhere.

As I've argued, the ability to co-suffer is one of the ways in which kinship bonds are formed between subjects. Prejudicial though the assumption can be, it is not surprising, then, that some might believe that absence of pain prevents co-suffering and therefore perhaps also indicates absence of empathy. As David Borsook and Lino Becerra pose the question, "How can one have an emotional response to pain through empathetic feelings for a sensation that these patients have apparently never experienced?" (Borsook and Becerra 153). If empathy is, in part, the physiological process of co-suffering – that blending of bodies wherein one's brain transforms in response to another's pain – then how can co-suffering occur when one of the brains in question does not have the necessary structures to speak pain's voice? There is a clear desire to answer the questions that analgesic conditions present, but the rarity of analgesic conditions makes it hard to even begin the process of asking those questions.

And perhaps it is that rarity that makes CIP so much more prevalent in fiction than nonfiction: in these fictive worlds, those questions can be answered not through peer-reviewed research studies, but through narrative exploration, experimentation, and examination. In the fictive medical worlds of television hospitals, Congenital Insensitivity to Pain presents philosophical challenges and allegorical lessons. CIP patients confront doctors with their freakish bodies and demand that those doctors deal

with their own pain. In the heightened, dramatic world of these shows, CIP is a crisis and an opportunity, but the people who live with it – the patients themselves – are, on the whole, unexamined. While the doctors dig through their bodies, looking for pain that the patients cannot feel, the lived experience of the CIP patients gets pushed aside to give attention to the doctors' emotional reactions to those patients. The medical model can only see these people as patients, as conglomerations of symptoms, and thus in the service of curing disability, personhood is lost. So what of the way CIP alters a person's world? What of the lessons it teaches to its subjects, who cannot listen to the voice of pain? Because people with CIP cannot engage in the identificatory self-representation of the pain scale, they need to be given chances to represent themselves in other ways, to show how their bodies and their lives adapt to and work with a life without pain. Only in holistic representations of CIP, only getting to know people with CIP as people and not just as patients, can we actually learn about what the "hazards," and lessons, of living without pain truly are.

In Melody Gilbert's 2005 documentary *A Life Without Pain*, three young children with CIP and their families have the chance to engage in this self-representation. Gilbert's documentary features three families with three young girls living with CIP. The majority of the film chronicles the family of Gabby, a four year old from Minnesota. Gabby is young enough to struggle to fully comprehend her condition and alter her behaviors in accordance with its demands; her body shows the acute signs of CIP in a young patient: bite wounds on her mouth and fingers, damaged vision from poking herself in the eyes, burns on her hands. Most of this damage arises, it seems, from Gabby's own actions, from a little girl not yet old enough to learn how to protect herself

from a painless body in a painful world. The film begins as Gabby's mother shows medical records, discusses the way her daughter treated her own body before her CIP diagnosis, and shows how the family problem-solved to protect her body. This is interspersed with images of Gabby, both family images from her childhood and current documentary footage. Her parents detail her injuries, showing the camera the scars on her skin and the legacy of CIP on her body and behavior.

Yet the narrative doesn't end with Gabby's physical condition; the film spends as much time getting to know Gabby's personality, her whole experience of self. Glimpses of her personality that seem completely unrelated to the facts of her CIP sneak into the narrative. Before filming an episode of the *Montel Williams Show*, Gabby excitedly explains to the documentarian that she can't leave the hotel room without her blanket, "Ducky." Gilbert asks why it's called Ducky, and Gabby declares that she loves ducks and she loves to take her Ducky with her everywhere; Gilbert asks if the blanket has ducks on it, but Gabby says no, that's just its name. And then she quacks in joy. Just like any child, the logic of her favorite toy is secondary to the pleasure of it.

In this way, the documentary allows these families to represent themselves and their experiences in a way that resists freak show assumptions, and in turn it shows the representational tools the families have developed. For example, when Gabby must have an eye removed, she wakes up disoriented and upset, as any child would. She cries after surgery because she can't open her eyes, because her voice sounds gravelly "like a lion" (as her dad says) instead of like a girl, because she's medicated and confused. And as she cries, she says "owie, owie." As her parents explain it, "We tell her it's good to say 'ow' because it helps people know" that she might have been hurt (*A Life Without Pain*). She

has been socialized to produce those normative behaviors that encourage co-suffering, even when she cannot physically feel the reasoning underlying those behaviors. This shows the ways that the family has learned to help Gabby self-represent in a way that will translate pain (and thus injury or danger) to others, even when she doesn't understand the language itself.

The other families show similar adaptive techniques. As ten-year-old Jamilah's family explains, doctors initially did not believe them when they brought their daughter in for treatment of injuries. They didn't believe that Jamilah could be truly injured, because she would have been crying if she were actually hurt. Doctors dismiss Jamilah's body because of her lack of normative pain response; without pain response, these doctors didn't trust her self-representation. Thus Jamilah, in order to be accurately seen by the medical community, had to learn to perform pain response, to make her body legible. So Jamilah's mother educated her: she recounts a story of sticking herself with a pin and then doing the same to Jamilah, comparing their bodies and pantomiming pain response to help Jamilah understand something of what it is to be in pain and therefore know how to recognize pain and injury more generally. The body Jamilah lives within, then, is greater than her own physical corpus. The families and communities act as ancillary sensory surfaces, reflecting back to her those signals that her body does not produce. Indeed, all the families affected by CIP demonstrate this kind of embodied methodology; as Jamilah's dad says, "Her lack of feeing pain is not as bad [because] we feel it for her."

Throughout the film, the similarities between each girl are certainly on display; however, presenting their individuality and uniqueness is also clearly a priority. Thus the

film shows CIP within a framework of childhood, not as isolated freakery. Miriam, at seven, lives in an altogether different way than Gabby; her eyes and teeth remain, and she uses adaptive technology (like ankle braces and a watch that reminds her to use the bathroom) that Gabby does not. Jamilah, at ten, is further different: she dances in costumes, goes to movies with her friends, and plays with frogs and bunnies and horses with her brother. The older girls seem better able to cognitively respond to their condition; they can understand why they have to do the things they have to do to protect and care for their bodies. But they also all three have had different upbringings and have different personalities, and therefore have struggled with different manifestations of their condition. Gabby's condition is most visible in the damage to her face: her eyes, her teeth. For Miriam, it's her legs: the ankle braces and wheelchair. For Jamilah, it's the interpersonal: she details abuse suffered at the hands of peers, three older boys who learned of her condition and took to beating her up at school, and she struggles with Attention Deficit Disorder. Each of these children can learn from one another, though they don't know one another, but they can also learn from interactions with other children in the world.

This is a technique Gabby's mother uses regularly. Gabby's parents explain some of the things she has to do by comparing her needs with the needs of other "different" kids, thereby creating a community that naturalizes disability and enhances disability consciousness. In the film, Gabby is particularly interested in meeting a girl named Paris, who has a rare allergy to ultraviolet light. Because Paris "had to do special and unusual things to protect herself," as Gabby's mom says, Gabby identifies with and feels connected to Paris. Gabby asks sweetly, "Can I be your friend?" when the two girls meet.

The two sets of parents also indicate feeling "a special connection" due to their shared experience responding and adapting to extraordinary circumstances. By developing these relationships and crafting a disability community, Gabby's parents are expanding Gabby's sense of the normative. Instead of typing her body as defective in contrast to the normative bodies of children around them (as the medical establishment does, marking growth on charts and calculating each child's relationship to the standard deviation), Gabby's parents compare her bodily experience with other children, including those who deviate from the norm, thereby building consciousness about the many and varied ways to live within bodies. In this context, Gabby isn't defective or non-normative or othered – she's just another little girl with the same kind of difference as her friends.

In this kind of radically expanded disability community, the individuality and personality of each child is displayed and valued. While Gabby plays with dolls and thrills at the feminine pursuits of her childhood, Miriam is a tomboy who likes to snowboard and ride horses, and Jamilah loves animals and wants to do veterinary medicine as a career. What is similar is the baseline similarity of all children: their reactions to frustration, their responses to emotions, their love for their families and friends. All three children display normative emotional capacities, clearly bonding with family and enjoying friendships. They all laugh, cry, and play just like their siblings. Seeing them transform as fully drawn humans allows for a different kind of relationality; by knowing their personalities – Gabby's energy, Miriam's impishness, Jamilah's still focus – we can recognize them as kin and as subject, as we never can if they are displayed as freaks.

A Life Without Pain allows the girls' uniqueness and individuality to be on display as much as their shared experience with the condition; it allows their shared experiences of adaptation and community building to be normalized and lauded. By depicting a disability community that values the similarities and differences of all its members, the documentary disrupts the freak show model and unfreaks children who might (and perhaps will) be paraded as visual spectacles, oddities, and horrors elsewhere; it rejects the sideshow attitude of "The Hazards of Growing up Painlessly" and refutes the fear mongering about Adam Lanza's ghoulish (and fictional) inability to feel. In this way, instead of contrasting "abnormal" CIP bodies with "normal" others, the various ways to live as a person in the world, CIP or not, are displayed, celebrated, and explored. Perhaps the medical establishment could learn from this model and offer a transformative version of the faces pain scales, one like Brosh's, which respects the individuality of subject and does not demand fealty to fictional, performative displays of self.

CHAPTER IV

SUB, SUPER, AND EVERYONE ELSE: NON-NORMATIVE PAIN RESPONSE

FROM ZOMBIES TO SUPERMAN

> "The normate [is] the veiled subject position of the cultural self, the figure outlined by the array of deviant others whose marked bodies shore up the normate's boundaries. The term *normate* usefully designates the social figure through which people can represent themselves as definitive human beings" (Garland-Thomson *Extraordinary Bodies: Figuring Physical Disability in American Culture and Literature,* 8, italics in original).

Case Study: Crips in Culture

Before a fall from grace worthy of Shakespeare – a conviction for murdering his girlfriend after months of a highly publicized trial – Oscar Pistorius seemed to be living the perfect inspirational story of hard work overcoming the hard luck of being born in a disabled body. Dubbed "The Blade Runner," "the fastest man on no legs," and even "a pioneer on the posthuman frontier" (Sokolove), Pistorius was for a time the shining poster boy for the supercrip. The supercrip is a particular narrative role inhabited by or read onto certain disabled subjects. According to this reductive narrative, unlike lesser pathetic crips, who cannot live normally, the supercrip achieves impressive performances of normalcy and overcoming, essentially beating back the demons of his or her body to ascend towards something like the normate. In their examinations of the Paralympic games, Carla Silva and David Howe describe the supercrip role as a way that disabled subjects are praised because they "can actually do something positive, 'despite' their disability" in "contexts where an able-bodied individual would be just an ordinary person" (175). This might be, for example, a story about a blind person climbing Mt. Everest: while this is an impressive feat for any person, because the person is blind, the narrative therefore becomes metaphorical for overcoming adversity, which in this case

would be blindness itself. Indeed, supercrip narratives inhere within more simple achievements, such as the feel-good stories of disabled people earning college degrees or getting married and thereby "not letting their disabilities get in the way of their life" (as the story would go).

In this way, the supercrip is a role that codifies compulsory able-bodiedness by praising a good crip who aspires to be better than his or her body while simultaneously reasserting the lesser nature of that body. These stories are meant to demonstrate how surprising it is that such lesser beings have achieved fairly average goals, implying therefore that disabled people are not expected to be able to achieve much of anything. As Silva and Howe explain it, "Supercrip narratives can be considered to be an expression of society's low-level expectation placed upon people with disability, which ultimately perpetuates the understanding of their existence as a 'problem'" (175). The supercrip narrative turns the attention towards the freakish body, marveling at the crip's body succeeding in normative space, as if the subject were a dog walking on its hind legs. The supercrip gets accolades for living – how inspirational to witness a crip bettering him or herself! Look how he wants to pretend he's people! – but does not get recognition for his or her full humanity and remains a problem to be solved.

A standard supercrip narrative, such as one that frames a deaf student attaining a college degree as inspiring, applauds the crip for succeeding in a system not designed to include disabled subjects; while this narrative about the deaf student lauds the student's success, it does not challenge the dominance of hearing-centered education. Indeed, in Silva and Howe's explanation, these "successes are generally judged in terms of the ability to conform to able-bodied norms" (179). The narrative leaves the standardized

educational system unexamined by focusing attention away from the material challenges put in the deaf student's way and onto the remarkable feat of that student's success. From a disability rights perspective, we might say that the deaf student is inspirational for succeeding in an educational system that hegemonically asserts the preeminence of hearing by standardizing all its systems for hearing subjects.

In the realm of Paralympians and the athlete-slash-cripple, this narrative is further complicated. In contrast to supercrip narratives about disabled subjects succeeding in normate space, the athletic crip is achieving in an arena wherein most able-bodied subjects themselves cannot succeed: they are successes outside the realm of the able-bodied norm, in non-normative spaces. Few humans are capable of running as swiftly or swimming as quickly as an elite athlete. Such extremely able bodies push on the outside edge of the normalcy bell curve, at times even transcending it; this creates an uncomfortable cognitive dissonance, subjecting able-bodiedness to more intense scrutiny. In a world with Usain Bolt and Michael Phelps, what is able-bodied anymore? These, then, are dangerous bodies, bodies that rattle the cages of normate supremacy. If one person can run as fast as Bolt, then certainly others can, too, and eventually might we not reach a critical mass wherein ability to reach high speeds becomes a necessary component of a normative body?

This challenge to the privilege and composition of the normate form cannot be tolerated. One narrative strategy to manage the dissonant reality of such bodies and maintain normative consonance is to treat athletes as superhuman: bodies that contain traits (genetic or personal) that set them outside of the normalcy bell curve and therefore do not upset its composition, leaving the average subject still average. So how to manage

a crip who succeeds in this rarified arena? The supercrip narrative of the crip-athlete must be even more profound to make safe a subject who has transcended not only disability but also indeed ability itself[1].

The athletic supercrip therefore must be ghettoized into a realm separate from the normate and from the superhuman. The Paralympics fit this bill, offering up a representative space that is "widely understood and promoted as potentially empowering for athletes and for people with disabilities in general" (Silva and Howe 180) but nevertheless narratively presents its subjects as other than human. The Paralympics' othering narratives can be seen most directly in the treatment of the athletes themselves. In programs like *Inside Incredible Athletes*, there is a recurring rhetorical equation between the superheroism of the crip merely living in the world and the hidden interior difference, the "secrets inside their bodies" (Silva and Howe 186), that make this crip different from the rest of us.

Oscar Pistorius, for a time, was the most pure image of the athlete-supercrip, and nowhere is Pistorius's depiction as supercrip more apparent than in his Nike commercials. By using Pistorius to sell their running shoes, Nike obviously had a problem of representation to solve: Pistorius doesn't use their shoes the way most runners do, and of course, when he runs he doesn't use any shoes at all. He uses Cheetah blades, specially-made prostheses designed to allow a man born without tibias to run with an elegance and speed only achievable by the most skilled, practiced, genetically gifted athletes in the world. He doesn't need Nike's shoes – he has more advanced technology

[1] See David Epstein's *The Sports Gene: Inside the Science of Extraordinary Athletic Performance* for an example of how super athletes are made narratively safe through scientific explanations of their ability.

on which to run. So Nike's Pistorius ads aren't selling the usual aspirational narrative of advertising; there is no false equivalence implying that purchase of the advertisement's shoe will lead to achievement similar to that of the advertisement's athlete. Instead, the ads sell the inspirational supercrip narrative, implying that anyone born *with* their legs can at least try as hard as Pistorius – can buy the shoes and the gear, as a start – because they already have it so much easier than he. At the same time the ads imply that he's somehow other than human because of some inherent, physiological force.

The 2008 "Bad Listener" campaign features Pistorius's voice intoning the many ways he'd been told he couldn't play sports over the years. "They told me that I'd never walk. That I'd never compete with the other kids," Pistorius tells us, as the camera stares at static shots of a wheelchair and a pair of prosthetic legs, abandoned beside a pool (MacLeod). The ads details the ways Pistorius has been a "bad listener" to all these messages he has been told, ending with a shot of his impressively fast running and his question, "anything else you want to tell me?" (MacLeod). Of course, the final word goes to Nike's famous slogan: just do it. Thus you, viewer: just do it, just start being a bad listener to those who say you can't, and be a good listener to us, who say you can (purchase our products).

This is the supercrip writ large, a hero who has transcended the words of those who doubted him but, just as importantly, has transcended the weakness of his disabled body. Gone are the sad, static, passive devices – the wheelchair, the common lower-leg prostheses – and therefore gone, too, are the reasons to disdain him: Pistorius, unlike those other pathetic crips still dragging themselves around in wheelchairs and average lower-leg prostheses, can run. So why don't the rest of us in the viewing public – a public

assumed to be able-bodied and capable of running – "just do it" already? If someone like Pistorius can overcome such freakish bodily circumstances, there's no excuse for any better, able-bodied person to not do the same. This narrative coheres around many disabled bodies, forming such memes as the "Your Excuse is Invalid" posters, which feature the saying laid over images of smiling, usually white supercrips in action [fig. 7]. Such posters make the crip subject into an object, eliding and ignoring the humanity of the imaged person in favor of using that person as a narrative object. "Your" excuses, feelings, drives, and needs are in the foreground; the child's thoughts, feelings, experiences, knowledge, even *name*? Never mentioned. The inspirational crip is an object, meant for consumption by normative audiences and safely confined away from the normate's identity.

Figure 7: A common iteration of the "Your Excuse Is Invalid" meme (Jen).

Yet Pistorius is more than just an inspirational crip. As an athlete, he also embodies the narratives surrounding the super athlete, the Olympian. These bodies, too, are othered and non-normative, but they fall on a different end of the spectrum. The Olympian's body is one that can perform superhuman acts: run faster than any other body, swim more swiftly, climb more deftly, jump higher, endure longer. As Michael

Sokolove puts it, the Olympian is meant to be "the highest order of the human form" (Nolan "Behind the Cover Story: Michael Sokolove on Oscar Pistorius"). Olympians, like superheroes, are on a slightly higher order than the normate human, able to perform feats that leave the normate in the dust. Yet Sokolove also describes the Olympian as "a human thoroughbred" (Nolan "Behind the Cover Story: Michael Sokolove on Oscar Pistorius") – by virtue of being more than human, the Olympian is also, then, inhuman, bestial, animal. By making this body animal, by setting it both above and simultaneously aside from the normate, the normate's position as ideal is preserved, unchallenged. The Olympian who is disabled, then, shows the complicated overlap of sub and super that must always be shifting, expanding, contracting, and reorienting in order to maintain the normate's subject position. In order to not challenge the normate, Pistorius was made superhuman and also made supercrip, was an inspiration and a meme: he was, as the exalted often are, placed on a shining pedestal above and outside of the human realm.

Of course, in the months since Pistorius shot and killed Reeva Steenkamp, a crime for which he was convicted in 2012, all trace of his brief reign as Nike's supercrip in residence has been erased from Nike's public persona. His ads are gone from the websites, his contract terminated, his billboards covered over. Ironically, his final set of adverts for Nike featured the tagline "I am the bullet in the chamber" (Lincoln), a metaphor Nike obviously wanted to distance itself from after Pistorius loaded literal bullets into the chamber of a literal gun and fired them into Steenkamp's body. While Nike rushed away from him, the news media sought Pistorius out, seemingly delighted at the fallen hero. The sensationalism of the story was ideal for news-as-entertainment coverage: the murder of a stunningly beautiful white woman, a superhero turned deadly,

a crip finally revealed as a freak. Time Magazine's cover story captured the change in narrative best. Featuring the image of Pistorius that had become standard in media representations of the athlete – naked from the waist up, muscular and handsome and intensely staring down the camera, his prosthetic blades emerging from his bemuscled thighs – the cover layers the pronouncement of his character over his contested body: three words, in progressively bigger fonts, "Man Superman Gunman" (Perry).

So even in his reduced, disavowed state, Pistorius has performed superbly within the supercrip's narrative realm. Charming and handsome (a South African magazine once named him sexiest man in the country (Sokolove)), Pistorius not only excelled in the crip-ghetto of the Paralympics, but defied expectations by also competing in the Olympics in 2012. And it is this crossover between crip and able that has produced such media interest in Pistorius. As a supercrip, he is safe and reassuring: his talent while running on his "blades" reasserts his otherness and codifies the normalcy of the bipedal human form. At the same time, his prostheses allow him to achieve within the realm of the normate, and this discomfits many, leading to claims of unfair advantage. An image from Michael Sokolove's *New York Times Magazine* cover story illustrates this dissonance: his "normal" prostheses are discarded on the track, looking uncannily human yet obviously marked as non-human [fig. 8]; as he dons his running blades, he sheds his safe prosthetics, the ones that keep him human, and he becomes something more. Pistorius's ability to put on and take off the appearance of normalcy is

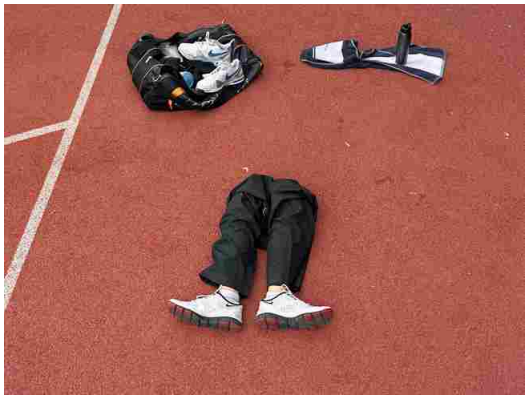

Figure 8: Pistorius's "everyday prostheses" (Sokolove).

part of his ability to put on and take off superhuman skill, that thing that makes Olympians more than mere humans, mere mortals, merely the rest of us. For those reasons, "track and field's ruling body [in 2008] deemed Pistorius's Cheetah blades a competitive advantage and banned him from competing against able-bodied runners" (Sokolove). It was only after testimony about the interaction between his body and his blades that Pistorius was allowed to compete. According to Hugh Herr, the director of the Biomechatronics Group at the Massachusetts Institute of Technology, because the Cheetah blades do not "emulate physiological function" (Sokolove), meaning that they didn't actually act like fleshy legs do and speak to the body, they do not confer an advantage; it was then only because the prostheses weren't flesh – couldn't bespeak pain, perhaps – that they were allowable. The prostheses Pistorius uses certainly make him a supercrip – able to transcend the limitations of his broken, defective body – but because they remain outside of his body, separated by a thin film of pain, they do not render him super*human*.

Sub, Super, and Everywhere in Between

Exploring the range of bodies and narratives that inhere within monster and superhero narratives provides the context necessary to fully image the spectrum of sub to super begun above. By filling in the bodies that exist above and below the normate, we can better see how those bodies construct the moving space that is the normate. When thinking about the spectrum of beings that ranges from gods and superhumans, on one end, to the primitive and the subhuman, on the other, it's important to think about the spatial metaphor at work. In the middle of this spectrum, umbrellaed safely under the bell curve of normalcy, is the human; of course, not all humans are precisely normal, so there

is a clean center, a fulcrum upon which the normate sits. This razor's edge is moveable: it changes with the fashions of the time, with the predilections of the culture, with the mass from which its averageness is derived. Balancing there is no small task: the normate must constantly shift and adjust, must control those bodies edging their way under the bell jar from left and right. And so some bodies become superhuman, while others subhuman, and it is only with this division that the normate can stay safely in the center, poised for attention and power, destined for greatness. Yet the spectrum isn't a simple line; perhaps it's more of a Möbius strip, a quantum recurrence of space wherein bodies may simultaneously exist in two places at once, may hover mirage-like between the superhuman and the subhuman, between the normative and the transcended, between the base and the pinnacle. As Oscar Pistorius's status as athlete-supercrip shows, being afforded superhuman characteristics may also relegate a subject to the subhuman class, placing such bodies in a quantum state of above and below the central point of the spectrum.

As I have argued in the past two chapters, it is through the interactions between bodies that beings earn or are granted subjectivity. It is through bodies encountering one another, listening to enfleshed language, and speaking back the same that individuals become kin, become human, become whole. So the way those bodies are read – the way that embodied language is translated – influences the role and status each body attains. Cultural narratives about the personhood and character of different kinds of bodies bias and bend translation. In this chapter, then, I will draw out the scale from sub to super, showing how the presence or absence of pain interacts with bodily ability to influence where a body falls on the spectrum and whether that subject is kin, or something else

entirely. In the subhuman zombies of *The Walking Dead*, we see how the absence of pain causes some bodies to change state from human to subhuman. In the differences between the superheroism of Batman and Superman (one human, one alien, both superheroes) we see how pain makes each hero human in different ways, rendering safe and subjective bodies that would otherwise be nonhuman (and therefore perhaps dangerous). And in the Celestials, we see bodies that transcend beyond the human, eerily and unknowably existing above and outside the human realm, their preternatural otherness signified in their painless, emotionless bodies.

Subhuman Others: *The Walking Dead*

There is perhaps no more abject creature, nothing more distinctly subhuman, than the zombie. In her seminal work *Powers of Horror*, Julia Kristeva explains that the abject is not an object, not an othered thing over which the subject has the power to imagine and name. Instead, the abject is a "being opposed to I" (Kristeva 1), a being that is defined by its opposition to the self-subject of the human. And of course, in being connected via opposition, the abject is the hidden other side of the human that repulses and draws in a "fascinated start that leads [the subject] towards and separates [it] from" (Kristeva 2). This is the uncannily familiar – famili*ar* as famili*al*, as a witch's familiar. The abject is the reminder of those aspects of life that are shunted aside in order to live, those inassimilable parts of the body that must be rejected from the body. And thus the zombie, rising from its deathbed, is the very definition of the abject. Kristeva herself could be describing the zombie mythos when she defines the abjection of death, arguing that:

> A wound with blood and pus, or the sickly, acrid smell of sweat, of decay, does not signify death. In the presence of signified death – a flat encephalograph, for

> instance – I would understand, react, or accept. No, as in true theater, without makeup or masks, refuse and corpses show me what I permanently thrust aside in order to live. These body fluids, this defilement, this shit are what life withstands, hardly and with difficulty, on the part of death. (3)

So it is not just their wounds or their graves that make zombies abject: it is their bodies in and as death. The zombie as the walking corpse reminds us that we are always "at the border of [our] condition as … living being[s]" (Kristeva 3). And therefore the zombie is more than just the ghoulish monster of late night B-movies; the zombie is a cultural emblem of the abject, always waiting to emerge from below the surface (of the grave, of humanity). This sets zombies apart from other monsters and makes the zombie a particularly interesting case study of sub-humanity.

The television program *The Walking Dead* engages with this abjection in its depiction of an apocalyptic plague of the walking dead. The show follows a small and diverse group of characters as they try to find ways to survive this peculiar death. The television show, adapted from the long-running graphic novel series by Robert Kirkman and Tony Moore, has thus far featured almost no hope for a future. The zombie apocalypse is mysterious, pervasive, and seems to have utterly taken down the country's political, economic, and social infrastructure: we see images of abandoned tanks, emptied police offices, destroyed refugee camps, and in the five seasons thus far aired, there has been no indication of a surviving human civilization. While the zombie apocalypse story is not unique to *The Walking Dead*, the show includes a new form of devastation: we learn at the end of the second season that everyone is infected with the zombie virus, so no matter what, no matter how people die, their dead bodies will continue to rise.

Zombiness is therefore even more abject, as it is not just a dramatic reordering of the boundaries separating life and death, but also a latent presence within living bodies.

Not only are the zombies utterly outmatching the human survivors, those survivors themselves are shown engaging in inhuman behavior – mutilation, cannibalism, murder – in order to survive. And so the bodies in *The Walking Dead*, human and zombie alike, are all headed towards the same gruesome end: death, hunger, and decay without rest. In this bleak and unrelenting apocalyptic space, the distance between the human and inhuman portions of the spectrum is foreshortened and blurred. Yet human characters are still treated as human, no matter what they've done. Death is taken as a true loss, and each character's life honored and death mourned. In contrast, the zombies are irredeemably inhuman, and only the dangerously naïve or hopelessly deranged characters treat them any differently. So how, then, to differentiate between zombie and not, between inhuman and human? Despite the underlying connection between zombie and human, the distinction between the two – their separate places on the spectrum of humanity – is reified in the depictions of pain (or lack thereof).

From the start, *The Walking Dead* positions its audience in sympathetic relationship to the human survivors it portrays, causing us to feel their pain alongside them. This is no surprise: the zombie genre almost always positions viewers as human protagonists, the horror and shock coming from our sense of ourselves as the survivors, menaced by uncanny, venomous ghouls. The zombie seems to have originated in Haiti, where local lore and practice feature a kind of living death inflicted upon a person by a powerful mystic, who can then bend these zombie subjects to his or her will. These

zombies become slaves, unable to know themselves or their own will, which is a fear that makes sense in a culture so shaped by the transatlantic slave trade.

Yet the zombie has transformed and found new incarnations in the contemporary era, moving away from the rules and myths of its inception. In his study on zombies in cinema, Kyle Bishop shows the chasm of difference that separates the zombie myth's Haitian origins from its current articulation. The current version is much more akin to the vampire myth with all its attendant fears of the foreign outsider that takes up residence within not only the country but also the bodies of victims. These fears of contagion and a horde of othered sub-humans are distinct to today's zombie and greatly differ from the fears attendant to Haitian zombie lore. From George Romero's genre-defining 1968 *Night of the Living Dead*, the film that invents the zombie trope as we now know it, to current zombie incarnations, audiences are traditionally situated as survivors, our bodies absorbing and responding to the cruelties and terrors inflicted upon the bodies depicted on the screen. Yet *The Walking Dead* does this to particularly devastating effect. It elicits in viewers the despair and hopelessness of the characters they watch by forcing us to witness not only the bodies of our protagonists as they respond to pain but also the bodies of the zombies as they *don't* respond to pain.

In *The Walking Dead*, zombies don't seem to feel pain, but that does not mean that they have no bodily sensation; instead, lack of pain is lack of pain *response*. Though we know very little about the zombie physiology created by the show, these zombies react to stimuli such as noise and light, and exhibit responses to their physical condition, most notably hunger. Whether they experience analgesia similar to people with CIP or whether they just don't care about pain is impossible to know (if for no other reason than

that they're fictional). Without zombie specimens to study with fMRIs[2], we have to assess their behavior as it manifests in each fictional universe in order to learn the rules of their existence[3]. What we know from *The Walking Dead* is that they do not appear to have any emotional reaction to pain nor do they display any self-protection or threat reduction behavior. They push their bodies forward through all manner of damage and wounds, endlessly and primarily searching for food at the expense of any other bodily need.

The body itself seems a secondary concern for zombies: they are often shown maiming and irreparably damaging their bodies in the search for food. This lack of pain *response* functions just like lack of pain itself. As Sara Ahmed says, "The recognition of a sensation as being painful involves the reconstitution of bodily space," meaning that subjects change the position of their body, in response to "that which gets attributed as the cause of the pain" (24). Zombies don't reconstitute their bodily space when experiencing pain, and thus they clearly don't recognize any sensation as being painful. They don't move away or exhibit what is called in medical discourse "pain behavior": normative human reactions to painful stimuli such as grimacing, guarded movement, and limping, etc. (Merskey S70-S71). It's not, seemingly, that they recognize that painful experiences won't kill them and therefore interpret pain differently from the way we do –

[2] fMRIs, or Functional MRIs, use the magnetic resonance imaging of an MRI to show real-time images of the brain as it is used by the subject, allowing a live view of the brain in action.

[3] In fact, in some contemporary zombie texts, learning the rules is a primary plot point. The graphic novel series (now a TV show) *iZombie*, the novel (turned film) *World War Z*, and the film *Zombieland* all present characters who have to learn what kind of zombie infestation they're in, dramatizing that process of discovering the etiology and physiology of the zombie.

super bodies that don't need to heed their pain – but that they simply do not care about pain stimuli. I therefore say that they have no pain as a shorthand for the longer explanation: zombie bodies do not react to pain, do not listen to the message of their pain, are not engaged in the push-pull of safety versus need that human bodies are. Zombies are not stopped by pain, and that is the primary difference between their bodies and the human bodies. Therefore, to say that zombies "don't feel pain" is to say that zombies don't feel pain in the way we feel pain, don't engage with it on the same cognitive level.

What we can say for certain, however, is that zombies experience a drive for food; whether we can call that hunger or not depends upon what we assume the internal experience of a zombie is. If hunger is a feeling of weakness or discomfort because of a need to eat, then we might ask whether zombies feel that discomfort at all. We might say instead, then, that zombies have a drive to feed themselves and that this drive is the central organizing principle of their existence. From on-screen depictions of zombie physiology, what we understand is that zombies have fundamental damage to their brains that causes them to be biologically dead and yet still mobile. In their book *Do Zombies Dream of Undead Sheep?: A Neuroscientific View of the Zombie Brain*, neuroscientists Timothy Verstynen and Bradley Voytek question whether zombies are conscious at all. They argue that zombies are "locked in a consciousness-deficit state that results in overall slowed neural activity" (47) such as their lumbering walk, their inattention to detail, their lack of memory, etc. They coin a cheeky diagnosis for zombism that they call "Consciousness Deficit Hypoactivity Disorder" (203) that accounts for the lack of pain response by focusing on presumed damage to the frontal lobe, resulting in zombies that can "register pain … but no longer have the ability to care about it" (207).

This lighthearted exploration of zombie anatomy provides a useful backdrop for understanding pain. Whether zombies feel pain but do not respond or do not feel pain at all, their behavior clearly does not speak pain to onlookers. And since pain response is an essential aspect of co-suffering, zombies can clearly be said to not experience pain, regardless of what they may feel regarding injury or hunger. Essentially, I argue that we cannot anthropomorphize the zombie experience of bodily stimuli and call it "pain" in the same way we call the human experience "pain." Though they are human in form, it is truly a challenge to recognize these bodies as human. Again and again in *The Walking Dead*, we are shown zombie bodies heedless of their defilement and disrepair contrasted against human bodies in pain and terror. Zombies walk on broken limbs, claw through fences till their fingers rip off, and gnash shattered jaws at living flesh; meanwhile, human bodies limp, sob, and scream, responding to and avoiding pain. One of the starkest instances of this distinction comes in the pilot episode, "Days Gone Bye," as our protagonist Rick encounters his first zombie face to face.

In this episode, Rick enters the zombie apocalypse *in medias res*, having fallen into a coma before the zombie plague began and therefore waking up, seemingly one of the last survivors. As he comes to, Rick finds himself in an abandoned hospital, a bandage covering a healing gunshot wound in his side, naked save for his flimsy hospital robe and a pair of boxers. His disorientation mirrors the viewer's: he stumbles down the hallway and finds a padlocked door labeled "Don't Open Dead Inside", learning that there are zombies inside at the same time that we learn that fact. So Rick is our proxy, our on-screen avatar. In many ways, Rick seems zombie-like: he awakes from a coma much like a zombie awakes from death, and when he escapes the hospital and emerges,

barefoot and barely upright, to shuffle down the street, he moves and looks eerily similar to the zombies we will all soon become familiar with. By putting Rick is such perilous physical state, the show must rely ever more on pain response as the differentiating factor that sets zombies and humans apart.

Rick's physical state is clearly dire. He walks unsteadily, holds his left arm stiffly to his side; his face is pitted and grey, his breath shallow and raspy. Yet when he encounters his first zombie, his humanity is physically indicated. On a residential street, he finds a bicycle lying on its side a few paces from a halved body, also on its side. The camera pans across the naked back, the pile of entrails, and the jutting leg bones denuded of flesh before Rick reaches down for the bicycle, obviously contrasting these two forms.

Both Rick and the viewer have every reason to believe this is a dead being. In that moment, the camera abruptly moves away from Rick's perspective, closing in on the corpse's face as its eyes and jaws open and it flips itself over, reaching for Rick. Immediately, the camera pans back on Rick's face as he falls over backwards, panting in shock and terror. Once more following his gaze, the camera returns to the zombie as it growls and grasps at the air, reaching out its hands in a futile attempt to grab Rick, tearing at the grass on which it lies in order to pull itself forward toward him. Rick shakily moves away, mounts the bike, and rides off as the camera returns to the zombie, gnashing its teeth and growling in hunger at Rick as he departs, as though Rick is looking backward. Here, then, two bodies are contrasted: the zombie's body that moves without care for pain, and Rick's body, which telegraphs pain response in every movement. So though he is emaciated, dirty, and impaired, his obvious pain separates him from the zombies around him.

Throughout this scene, Rick's body displays pain and emotional trauma, his comportment and movement stiff and scared. We see his physical and emotional pain and, because of the way the camera has situated us within his character, we feel it too. Yet throughout the series, the camera causes us to engage with the zombie bodies similarly, demanding that we intimately witness these bodies. Their damage, their wounds: the camera focuses our eyes on empty eye sockets, trailing intestines, torn lips. Unmindful of their bodily transformation, the zombies plunge ahead with single bodily purpose, their jaws working in hunger even when the rest of their body is too destroyed to move.

It is our bodies, then, that absorb the zombies' pain, our obsolete sympathies enacted by the suffering they cannot feel; as Ahmed says, "responding to pain involves being open to being affected by that which one cannot know or feel" (30) – when we respond with this sympathy to the unfelt pain of zombie bodies, we allow ourselves to be affected by them, even as we fear being *in*fected by them. And it is the dangers presented by this kind of co-suffering that speak to the uneasy tension of the spectrum. Zombie bodies can infect and affect human bodies; they are the primary danger in the postapocalypse of the show and it seems that the world has been remade for them. So their existence not only threatens the immediate life and limb of the survivors; it also threatens the human characters' status as the ideal body, the normate for whom the world is specially designed.

Rick's second encounter with Bicycle Girl[4] further illuminates the embodied danger of the subhuman. On his way out of town a few days after waking up, Rick is now clad once more in his sheriff's uniform, the official costume providing him a façade of normalcy. He visits Bicycle Girl to put it down and release it into permanent death. Yet when he pulls up next to the spot he first encountered it, he finds he must follow its trail into the park, as it has pulled itself along by the hands, still searching for living flesh. I want to return to my former caveat – that the notion of "feeling pain" is complicatedly anthropomorphized and therefore not an entirely useful way to speak about zombies – to discuss this second encounter with Bicycle Girl. If ever there were a depiction of a body in pain, this body might seem to be it. Bicycle Girl struggles, wheezes, and strains; it's clear that whatever the particular mechanics of starving might be for a zombie, this one is experiencing starvation. Yet the distinction between its response to the pain of starvation is distinct from a human's response: as Bicycle Girl's body breaks down, the thing that defines it – the hunger – remains. Pain does not destroy this creature's world, but merely makes its quest forward more difficult. If we return to Ahmed's explanation of pain and bodily space, it is not the pain of death or dismemberment that is driving this body to reorient itself in space, but instead the hunger drive that moves it.

"I'm sorry this happened to you," Rick says before he kills the zombie, his words and his sympathy a gesture that is, like his sheriff's badge, as necessary to his sense of self as it is meaningless in the zombie world. His act of kindness is a useless remnant of the world that has passed; this zombie is now, yes, somewhat more dead (and therefore

[4] Though zombies are credited in the show simply as "Walker" if they are credited at all, this particular zombie is referred to as "Bicycle Girl" in online forums and internet databases such as IMDB, showing how important the character is in this episode.

much less dangerous) than it was before, but in truth, its body died long ago and Rick is wasting precious time and bullets, as well as exposing himself to risk, just to euthanize a corpse, a body uncaring of his sorrow and sympathy. Rick, then, is co-suffering; his body enacts and witnesses the pain that Bicycle Girl's body can no longer experience. In this foolish act of kindness, the show's narrative reasserts the normativity and primacy of the pain-filled human body. Situated within Rick's perspective, the viewer co-suffers with the unfeeling body of the zombie and makes it kin, transforming a hostile and inhuman world into a space akin to our own. Such co-suffering overwrites the rules of the zombie world with the rules of the human world and valorizes the human experience once more. To feel pain is to be human, such an act proclaims, and to be human is the highest good.

In *The Walking Dead* it is the ability to experience pain that most fully articulates humanity and normalcy; likewise, the inability to listen to pain marks the zombies as subhuman, that absence of pain response marking a clear delineation between the sub and the human. Amid the wreckage of the zombie apocalypse, the ideal embodied space of the normate has seemingly shifted. Human bodies are shown to be obsolete, belonging to the old world and nearly extinct in the new one, while zombie bodies that do not experience pain are right at home in the new world. The dead, then, inhabit the space of the ideal in this postapocalyptic space and threaten the status of the human normate. Yet when human subjects attempt to co-suffer with zombies, the subject position of the human viewer is preserved. In order to reaffirm and strengthen the human normate, this kind of postapocalyptic narrative asserts the danger and abjection of subhuman bodies that do not experience pain. In this way, the subhuman side of the spectrum is filled out – so what of the superhuman side?

Superhumans, Superheroes, Subjects: *Batman: The Dark Knight Returns* and *All-Star Superman*

In our first introduction to the universe of Frank Miller's 1986 *Batman: The Dark Knight Returns*, the text is preceded by a newspaper clipping, torn from *The Daily Planet* – a story called "Truth to Power," by James Olsen (fans of the superhero comic will remember *The Daily Planet* and Jimmy Olsen from Superman's narrative universe, which is shared with Gotham's narrative cosmos). Olsen describes a bar in downtown Metropolis frequented by former superheroes, all reminiscing about the "glory days" (F. Miller 7). This is the reader's first introduction to the time and space of this Batman story; because these superheroes have lived in so many incarnations, plotted their way through so many stories, and had their past rewritten through so many retcons[5], such a stage-setting prologue helps to determine the particular trajectory of this version of an endlessly recurring story. So through this prologue, what a reader can know about the titular Dark Knight is this: in the bar full of nostalgic superheroes, no one wants to wants to talk about Batman. As Olsen tells it, "they never talk about the mean one. The cruel one. The one who couldn't fly or bend steel in his bare hands. The one who scared the crap out of everybody and laughed at all of the rest of us" (F. Miller 7).

What we know about Batman immediately, then, is that he is an outcast among outcasts. Unlike the rest of his superhero brethren, he's not entirely superhuman (not like the barman, who "says he's from Mars" (F. Miller 6) without fear of being questioned).

[5] "Retcon" is the industry-speak for retroactive continuity: in the narrative present, a character's past being retroactively changed from what previous texts have written it to be, in order to support a planned future that requires a new fictive past for its own internal continuity. Essentially, this is a way of setting up new rules for a character that are not dependent upon the canon of writing that has shaped a no-longer useful set of rules.

As Olsen says, Batman's peers have "seen and done things that are supposed to be impossible" (F. Miller 6). They've been "able to bench-press cars or run faster than a speeding bullet or jump up into the air and stay there" (F. Miller 6). These people, then, are inhuman and superhuman. But not Batman. Batman is neither "Man of Steel" nor "Amazonian Princess" (F. Miller 7). And thus it is his very humanity that differentiates Batman from these superhumans. From the first pages of *Batman: The Dark Knight Returns*, Batman is separated from both humanity and superhumanity; he is a separate spot on the spectrum, and this makes his status as human or subhuman tenuous at best. He is, as the superhumans themselves say, a "mean one." He scares them. He could be evil, be a supervillain, be subhuman, be dangerous. So what makes him a super*hero* and not something lesser? Despite his cruelty, his meanness, his deviance, the character of Frank Miller's Batman is made human through his ability to experience pain; the psychic pain of his parents' murder is certainly what drove him to be more than human, but it's his frail and pain-filled human physicality that keeps him a human among heroes and a hero among humans.

The story of *The Dark Knight Returns* truly begins on the next page, in the thoughts of Bruce Wayne (Batman at night, millionaire playboy by day) as he recklessly races through the Ferris 6000, barely avoiding death in the "flaming coffin" (F. Miller 10) of his car. Miraculously, he survives, and the event is broadcast on nightly television, a testimony to Wayne's daredevil persona and careless disregard for physical safety. It's been ten years since Batman's last flight, and while the public wonders if he's "dead or retired" (F. Miller 11), Wayne himself seems to know exactly where the hero is: "in my gut, the creature writhes and snarls" (F. Miller 12). The creature, of course, is his

superhero alter-ego, a persona he had tried to retire but that keeps rising from the grave.

Caught between these two bodies – the hero and the man – Wayne feels like neither, saying to himself "I'm a zombie. A flying Dutchman. A dead man, ten years dead" (F. Miller 12). Forty years after his parents' murder, Wayne is still haunted by that act of violence, and he's still haunted by the being he created to combat that trauma; the Batman self exists alongside the Bruce Wayne self, each wearing the mask of the other, each battling for dominance in a body that can seemingly support neither. Yet though he calls himself a dead man, Wayne is not a subhuman monster like the zombies in *The Walking Dead*; very much alive in his flesh, Wayne shows himself to be fundamentally human and yet able to act in ways far beyond the normal human. He is a hero, and this embodied being is one that must suffer pain in order to retain its humanity.

In this first scene, as readers acquaint themselves with this iteration of Batman and Gotham City, Wayne is walking the streets at night and finds himself drawn back to the locus of his trauma: the alleyway where his parents were killed. In that alleyway, he is met by two members of a new gang, the Mutants, and they threaten him with "slice and dice" (F. Miller 13). Readers may expect a brawl, especially given the creature that we know is fighting inside Wayne, desperate to get out. Instead, the Mutants back off because, as they say, "He's into it" (F. Miller 14). In a four-panel progression, the focus pans from a tight close-up on Wayne's face outward to take in the whole alley, and this panning back of the panel's eye reveals the dissonance between reader expectations about Wayne and the reality of this version of the character.

In the first panel, the frame is taken up by Wayne's face: furrowed brow and clenched teeth, speech bubble obscuring just the lower right corner of his mouth, voicing

the Mutant's concern that they can't do murders when the victims are into it. (F. Miller 14). Is "it" fighting or murder? The second panel seems to imply the former: it offers a larger section of Wayne's upper body, his face unchanged, right arm across his chest, hand in a massive fist. He looks like he's ready to fight, his large fist tightly clenched and his musculature carefully drawn. But by the third and fourth panels, it is clear that what Wayne is "into" is not the fight, as we might expect from Batman, but the death; in the third panel, we see his body, braced back against the light post, left arm now over right, as if he is shielding his body or hugging himself tightly. In the final panel, Wayne's body is just a small object in a bright sphere of lamp light; still hugging himself, he's now down on his knees, cradled in over himself, alone in the alley with nothing but trash.

So from the very first pages, it's clear that this Batman will be something different from the average superhero. Not all-powerful, not intimidating, not even particularly heroic, this Batman is a body and a psyche wracked by years of battle both physical and emotional. While Batman has always been an interesting superhero because his superpowers were money, drive, and trauma instead of alien genealogy, cosmic rays, or radioactive arachnids, this Batman is even more interesting for having, it seems, lost much of what made him a superhero in the first place. And so the narrative must both allow him to reenter the world of the superhero (transcend a rung on the spectrum, as it were) and also retain his humanity, lest he become a truly dark being and end up subhuman. Indeed, the narrative implicitly asks readers to consider the fine line between good and bad, human and subhuman. In this timeline of Batman's mythos, Harvey Dent, former supervillain, has been released from Arkham Asylum; again, the TV news fills in the backstory: "Dent, a former district attorney, became obsessed with the number two

when half his face was scarred by acid" (F. Miller 16). But after three years of being "treated by Dr. Bartholomew Wolper for his psychosis" (16) he was released and considered cured, his "private demons … defeated" (F. Miller 17). Dent, unsurprisingly, has not been able to destroy the demon of his inner creature and reverts to his previous behavior, holding the city hostage until Batman, returned from within Bruce Wayne, stops him once more. So the tension at the core of this story is clear: the thing that lies within, that makes the subject exceptional, can either be superhuman or subhuman, hero or villain. By transforming once more into Batman, is Bruce Wayne going to be superhuman or subhuman, a hero or a villain, Dent or Two-Face? In this story, the space between super and sub is as narrow as the moment between impact and pain.

The presence of pain – as a tool and as a consequence – is clear in the graphic violence of Miller's text. Bodies endure much in the Gotham of this novel and though most survive, the legacy of pain must be a long one. Yet in his first moments back in action, Batman himself struggles to acknowledge the pain of his body, cut off, as it were, from the physical damage of his behavior. The first page showing Batman in full (not hidden in shadows, not seen in pieces) demonstrates this conflict (F. Miller 34). The page is colored bright and clear, with Batman's iconic blue, grey, black, and yellow costume standing out starkly from the gray background; his muscles are detailed with exquisite care, his hulking and massive body taking up nearly the whole page as he drops down onto the reader, arms and flowing cape stretched across the page's entire horizon. His body here is the object of our attention, the primary symbol of the Batman's power and strength.

Yet the thoughts featured beside that body bespeak a separation between the corpus and the consciousness; Batman thinks, "This should be agony. I should be a mass of aching muscle – broken, spent, unable to move. And, were I an older man, I surely would, but I'm a man of thirty – of twenty again. … I'm born again" (F. Miller 34). So the Batman self is a different self entirely than Bruce Wayne, and this self is not bound by the laws of pain and physicality that Wayne's human form is. Even witness descriptions, relayed on the news, mirror this inhumanity; bystanders describe Batman as a "wild animal," a "werewolf," a "monster" (F. Miller 34). Wayne, on the other hand, is simply an aging man, and once he's back in control of the Batman-Bruce Wayne body, he pays for Batman's adventures; we next see him being worked over by his butler Alfred, who accuses him of engaging in slow suicide and refers to Wayne Manor as "Wayne infirmary" (F. Miller 43). So Batman doesn't feel the pain the Bruce Wayne does; Batman is not entirely human, but whether he's superhuman or subhuman remains to be seen.

It is no wonder, then, that people are afraid of Batman. It's not just the criminal element who are concerned about being mangled, broken, and maimed (though never killed) while in the process of committing crimes. Television personalities and politicians also fear the bat, calling him a "fascist" and a "psychotic" (F. Miller 42) and demanding that his vigilantism be brought to an end. The psychologist Dr. Wolper, in fact, blames Dent's crimes on Batman, saying that "Batman's psychotic sublimative/psycho-erotic behavior pattern is like a net. Weak-egoed neurotics, like Harvey [Dent], are drawn into corresponding intersticing patterns. You might say Batman commits [their] crimes, using his so-called villains as narcissistic proxies" (F. Miller 47). Though the reader is clearly

meant to distrust Wolper – he naively believes, after all, that Dent is no longer a threat – his concerns are not illogical. Batman isn't controlled by the law and he doesn't seem to be entirely in control of himself. When accosting and interrogating one criminal who screams that he has rights, Batman responds "You've got rights. Lots of rights. Sometimes I count them just to make myself feel crazy" (F. Miller 45). Though he is saving the city, he is doing so by disregarding the rules that ought to govern that very city. He's a criminal in every way; we root for him only because he preys on other criminals.

And those other criminals, in this text, are truly horrifying. Not only does the novel feature his old adversaries Harvey Dent and the Joker, it also introduces the Mutants, a gang whose very name references an altered, monstrous subhumanity. The Mutants not only "slice and dice" anyone they need in order to meet their "quota" (F. Miller 13), but also intimate the most repellent of taboos, cannibalism, by threatening to "rip the meat from [Batman's] bones and suck them dry" and "eat his heart" (F. Miller 44). These Mutants are subhuman and scary, and though their moral code is contrary to Batman's, their behavior is not all too different. Both Batman and the Mutants want to control the city, both disregard civil procedures and rights, both lurk in shadows. So how is Batman different from those other criminals? What makes him super and not sub? In the climactic showdown with the Joker, Batman breaks all his own rules, endangers young Robin, and fails to prevent hundreds of deaths. Throughout this whole final act, Batman is more monstrous and inhuman in behavior than ever before. His warped relationship with the Joker pushes him close to villainy and nearly unseats him from his

position as hero. And yet it is amidst this carnage that he shows himself to be safely human through his experience of pain.

As in *The Walking Dead*, contrasting pain and lack thereof is the key to demonstrating humanity. At the end of *The Dark Knight Returns*, Joker and Batman face off at the county fair, where Joker has poisoned hundreds and is planning to kill even more. Young Robin at his side, Batman decides that "it ends tonight" (F. Miller 140). As Joker takes a hostage and holds a gun to her head, Batman throws his knives, this time hitting Joker squarely in the face, piercing an eye – an act that fundamentally changes the parameters of the game. Joker himself recognizes that the rules are different, uttering a shocked "—out of your mind" (F. Miller 144). Throughout his years as a superhero, one of Batman's main traits has been his unwillingness to kill – his villains end up in prison or in Arkham Asylum, safely behind bars – and this has been one of the ways he is differentiated from the villains. But in this final fight, Batman enters the ring ready and willing to kill, aligning his actions with those of the villain.

From there, the savagery of the fight escalates: as Joker leads Batman on a chase through the house of mirrors and into the tunnel of love, he shoots Batman repeatedly and finally, in their last grappling fight, stabs Batman multiple times in the stomach. And yet here, with Joker and Batman both wounded, the fight displays difference between the two: the difference that marks Batman as a superhuman instead of a subhuman, that renders him safely heroic and palatable for the normate. As they fight, Batman's inner narrative punctuates the panels. As Joker shoots in him the gut, Batman thinks that the bullet "glanced off a rib – took some meat with it" and then, alarmed, thinks "dizzy – not dizzy – not already" (F. Miller 146). As he swims through the water in the tunnel of love,

he thinks “cold… water’s cold… no… it isn’t… the water” (F. Miller 148). Finally, as Joker stabs him, Batman thinks “the blade is sharp… I barely felt it enter my stomach” (F. Miller 150) and then, just moments later, thinks “the world… is growing dark… and cold…” (F. Miller 151) before the page, too, goes black. In these instances, we see him experiencing the pain of his encounters with Joker: the dizziness, the weakness, the cold. These creeping signs of death are mirrored in his facial expressions and body language: he winces, grimaces, and shudders. He hunches over his wounded gut, holds back the blood, limps through the pain. In every way, his body shows its self to be broken, battered, and pain filled.

In contrast, the Joker seems relatively unharmed and unaffected, even as he dies. His responses to the physical battering are mostly about the game, the battle of wits and bodies that he and Batman have engaged in for so long. He is still playing, because for him, this is play. At the most crucial moment of the fight, Batman has Joker’s face and neck in his hands. Having already decided to break his own rules, Batman strategically plots to murder the Joker, ending the game forever. “His neck… will have to do,” Batman realizes (F. Miller 150), and he therefore twists and snaps Joker’s neck, even while being stabbed himself. At this moment, Batman cannot go through with his plan; even with Joker’s life in his hands, Batman can’t kill the man. Again, we’re shown his thoughts: “I hear voices… voices calling me a killer… I wish I were” (F. Miller 150). Batman, in pain and still a hero, cannot kill. Joker, on the other hand, can; in the panels, he is slumped against the wall of the tunnel, his neck obviously injured, his eye gouged out, but his trademark makeup intact. He taunts Batman, saying “I’m really… very disappointed with

you, my sweet… the moment was… perfect… and you… didn't have the nerve… paralysis… really… just an ounce or two more of pressure…" (F. Miller 150-151).

Paralyzed and beaten, Joker expresses not pain but disappointment in the way the game has progressed. And therefore, Joker makes an abject and horrible move: knowing that "they'll kill [Batman] for this" (F. Miller Joker 151), he takes his own life. As Batman narrates it, "with a devil's strength … he twists … and twists … what's left of his spine … goes … whatever's in him rustles as it leaves" (F. Miller 151). Joker snaps his own neck, and he laughs the whole time, his death mask a gape-mouthed smile of malice and malevolence. At no point, even in his inhuman suicide, does he display pain response.

Batman, then, contrasts with the Joker not just in their actions but also in their responses. Batman may be frightening and powerful and may be able to push his body to superhuman lengths, but he feels the repercussions in his body from the actions he chooses to take. Like a human, he tries to avoid harm, wants to resist pain, even as he forces his body through painful situations. The Joker, on the other hand, is seemingly as powerful as Batman, but he doesn't exhibit pain response, and therefore he is more like the zombies of *The Walking Dead*: he is subhuman and abject, his lack of pain response betokening a less-than-human body. Batman, however, is more like Olympic competitors. His body is a human body, with no special advancements other than the will to be better, and yet his behavior pushes that body beyond the bounds of normal human ability. Here, then, are two more bodies to plot on the spectrum: Joker as subhuman because of his lack of pain, Batman somewhere near the super-athlete because his superhuman ability is coupled with overt indications of human pain.

But what about a body that *is* different, that does actually exist outside the bounds of humanity? Does this body become subhuman, like the zombies, or does it transcend? 2011's *All-Star Superman* shows one of the ways that a non-human body can become super instead of sub while still remaining safe for the normate, unchallenging to the structure of the spectrum. Just like Batman, *All-Star Superman* has to first establish itself within the timeline of the Superman story and make clear which version of the mythos it will develop. The first page of Grant Morrison and Frank Quitely's exquisitely colorful and tender novel provides the background in four simple, horizontal panels, each bearing a two-word summary of the facts of Superman lore (Morrison and Quitely 7). At the top of the page, awash in rich oranges and yellows, the first panel depicts a "doomed planet" squarely in the center of the image; the second panel, this time the oranges and yellows overexposed, is centered on a couple in an embrace, labeled "desperate scientists." In the third, a spacecraft, centered but moving from left to right on the page and from the yellow explosion of the planet into the blue expanse of space, announces a "last hope." And in the final panel, the central image is of two faces, identified as a "kindly couple," their faces blocking the sun, which creates a brilliant yellow corona behind their gentle aspects; everything around them is a soft blue expect the crimson cloth, foregrounded in the image, held in the woman's hand. With this quadriptych, the novel covers all the backstory about Superman that is needed: his origins on a dying world, his journey away from one set of parents and towards another, and the sun as the locus of his power. Yet the color story of this page also sets the tone of the novel; unlike Miller's dark and gritty reality, all greys, blacks, and shadows, Superman is crisp and bright, replete with primary colors and huge expanses of light.

The two texts, then, feature easily contrasting characters and narratives: darkness and light, ambiguity and certainty, antihero and hero. In his every iteration, Superman seems to function as a superhero in ways that Batman cannot: Batman draws his strength from the trauma of the night, Superman from the redemption of the very sun itself. And their bodily depictions follow this trend. In my reading of *The Dark Knight Returns*, I've argued that Batman is saved from subhumanity through his ability to feel pain; his superhumanity is made safe and nonthreatening to the normate through suffering and his subhuman behavior redeemed by his corporeal degradation. Without pain, Batman is just as much of a threat as the villains he fights. So what about Superman? Even more powerful, arguably, than Batman, he should be therefore infinitely more threatening to the status of the normate. His body can do things that no human can do and his power is seemingly unmatchable. So why is he always safe and a hero, in ways that Batman isn't? In *All Star Superman*, Superman takes his place as "super" on the spectrum through demonstrations of his very inhumanity coupled with his *willingness* to feel pain, thereby rendering him fundamentally different from and nonthreatening to the normate.

On that first page, the text makes clear that Superman has had to travel through time and space to find earth. Yet in the next pages, his alienness is made even clearer. The story opens in that same expanse of space: the spacecraft *The Ray Bradbury* is on a research mission to the sun, and it is in danger. The scale and danger are clear: seen from far outside the tiny spaceship, which is overwhelmed by the background image of the fiery, roiling sun, the lines shout, "Gravity shields are shattering!" and "We're falling into a sunspot the size of South America!" (Morrison and Quitely 10). The peril is compounded in the next panels, which show us the inside of the spaceship; not only is the

ship itself breaking down, but the mission has been compromised by a "genetically modified suicide bomb in human form" left there "courtesy of Lex Luthor" (Morrison and Quitely 10). Into this devastation flies Superman. On the facing page, a quadriptych shows his body flying through the overwhelming yellow flames as one of the scientists worriedly says, "I know he arrived on earth from the planet Krypton. I know every cell in his body is a living solar battery, evolved to store raw energy from the sun. But the temperature at the solar chromosphere is 6000° Fahrenheit" (Morrison and Quitely 11). In the next few pages, Superman saves *The Ray Bradbury* from the bomb and from the sun itself, "extending his own bioelectric field" to shield the scientists from the damaging radiation and heat (Morrison and Quitely 19).

This heroic, inhuman, impossible feat is just the beginning of this story. Superman's status as hero and as superhuman is earned not just because he is able to do things that the normate can't – like Batman or Olympic athletes – but also because he is simply *not* human. Though he is raised on earth and has human parents to call mother and father, he is endlessly shown to be alien, to be connected to more than just the carbon of the earth. He is a Kryptonian, built of solar energies and star stuff. Yet instead of his alien nature making him more dangerous, it paradoxically humanizes him. After his miraculous solar rescue efforts, instead of being burned to vapor immediately, his body becomes even more super. A force that would decimate the cells of a human has supercharged his, rendering him stronger and better: as the scientist Quintum explains, he is now able to "push against the equivalent of 200 quintillion tons" and his "strength has tripled, at least, [without reaching] an upper limit" (Morrison and Quitely 20). And it is right here that the narrative humanizes him: this radiation, we learn, has caused cell

death. Superman himself describes it as "a bizarre irony [that] the source of [his] powers winds up killing [him], when everything else has failed" (Morrison and Quitely 21). So he is even more super than ever, but he is now dying, exhibiting a human weakness that he's never experienced before. At the same time, however, he doesn't feel the pain of his exploding cells, and describes being hit by green kryptonite (a force that would have once badly wounded him) as just something that "tickles" (Morrison and Quitely 50). With so much power and so little weakness – so little evidence of pain – how is Superman not dangerously subhuman, like the Joker or the zombies in *The Walking Dead*?

Superman is certainly not a wholly unthreatening character and has every capacity to become frighteningly subhuman. Later in the novel, he is exposed to black kryptonite, and it turns him evil. Dosed with this poison, he embodies the opposites of his normal character, looking down on humanity with contempt: "Earth! Look at them! Swarming like futile bugs in the sun," he says, asking "Who's going to stop me from doing anything I want?" (Morrison and Quitely 91). All the danger of having a super-powered being on earth is realized: Superman attacks Metropolis, threatening Jimmy Olsen and destroying the safeguards he himself had set up to protect earth. Yet it is in this moment, when he is terrorizing and threatening humanity, that his own humanity is restored; in his fighting, he is struck by a powerful blow and gaspingly shouts "Me feel!" and realizes that he grows weaker as his bad impulses grow stronger (Morrison and Quitely 97). In this weakness, he eventually breaks down, his fear of dying and of pain overriding his desire to destroy, and he stays in this reduced state until the dangerous kryptonite in his body can be neutralized. Once again, he is returned to his normal form, albeit this dying one.

So at his most dangerous, his body becomes open to pain and therefore marks him as a subject, not a subhuman other.

When Superman dies at the end of *All-Star Superman*, his death again reiterates the complicated position of the superhero on the scale of sub to super. His cells are so full of solar radiation that it has begun to crack through the shell of his body; throughout the novel, veins of light are shown entering his face and slowly becoming more brilliant and glowing. The sun is inside him, and while it is killing him, it is also making him once again the savior of the planet. The sun has been damaged in the course of the novel, and so in his last moments, as his "cells are converting to pure energy" (Morrison and Quitely 289), he flies into the sky and pierces into the sun, "building an artificial heart to keep the sun alive" (Morrison and Quitely 291). As he flies, his body becomes even more consumed by light, replicating the color story from the novel's first page: he turns from the blue of the earth into the yellow of Krypton, and when he penetrates the blue and dying sun, molten red heat spreads through it as well, sending streams and crags of color through the blue. In a reverse of the transition from red to blue depicted in that opening vignette, this final act moves from blue to red, a return to his alien origins as the final stage of rescuing the earth.

So Superman is a solidly non-human character. He is a creature of an alien solar species capable of restarting the sun, of restoring or destroying the earth. And he seemingly feels little pain, never wincing or drawing back from the heat or the many blows in his many fights. Yet he is not a dangerous subhuman because in his one moment of evil, when his character is altered by another form of alien radiation, he is also made vulnerable to pain, a pain that returns him to his self, his heroism, his superhumanity. For

these reasons, Superman is a hero and not a monster. Moreover, he is safe for the normate: his body can't challenge the normate because it can't rightly be compared to the normate. He sits on the spectrum just beyond and outside the human, marking the truly sur-human.

The contrast between these two forms of superhumanity show how flexible and complicated the spectrum is. Batman is superhuman yet human, dangerous and potentially subhuman because of his abilities but made subjective because he has a human body that can feel pain. Superman is superhuman and inhuman, made subjective because of his willingness to be human-like but made safe by his very inhumanity. The truly subhuman, then, is not just the *in*human, but the degraded human. And that which is above human resists challenging the status of the human by virtue of being beyond it rather than of it. Finding the end of the spectrum, then, means finding bodies beyond even Superman: the bodies of the gods, bodies that have no native connection to the earth and the human form at all.

Otherworldly Inhumans: The Celestials of *The Eternals*

Contrast these humanized superheroes with the Celestials, the ur-gods of Jack Kirby's *The Eternals*, a series that ran from 1976 to 1978. It is clear how inhuman and non-subjective the Celestials are, even just from a glance at the splashpages. Blocks of color, interconnected geometric shapes, multilayered ink tones, non-signifying hieroglyphics, and lines of broiling energy overwhelm the page, crowding the densely packed speech bubbles and dwarfing the human figures tucked at the bottom of the page. Once the eye adjusts to the chaos of the scene, the streaks of color coalesce and the disorder of the page can begin to make sense; what we are looking at is not (or not *just*) a

profusion of shades, lines, and negative spaces, not (just) a landscape of skewed or impossible relations [Fig 9]. Instead, we are looking at the spectacular challenge of Jack Kirby's artwork in *The Eternals*: a graphic representation of the unrepresentable, an attempt to envision the face of the Gods, a comic book page expanded to display the awesome scale of the Creators, an image of what is beyond human imagination. With this in mind, the excess of imagery on the page can be understood; this is a Celestial, the giant space god Arishem, robotic and immense, looming above a mountain range and an Incan monument, its body chrome and reflective, the function of its machinery beggaring belief, while below its hulking mass, humans and Eternals operate futuristic Incan machinery.

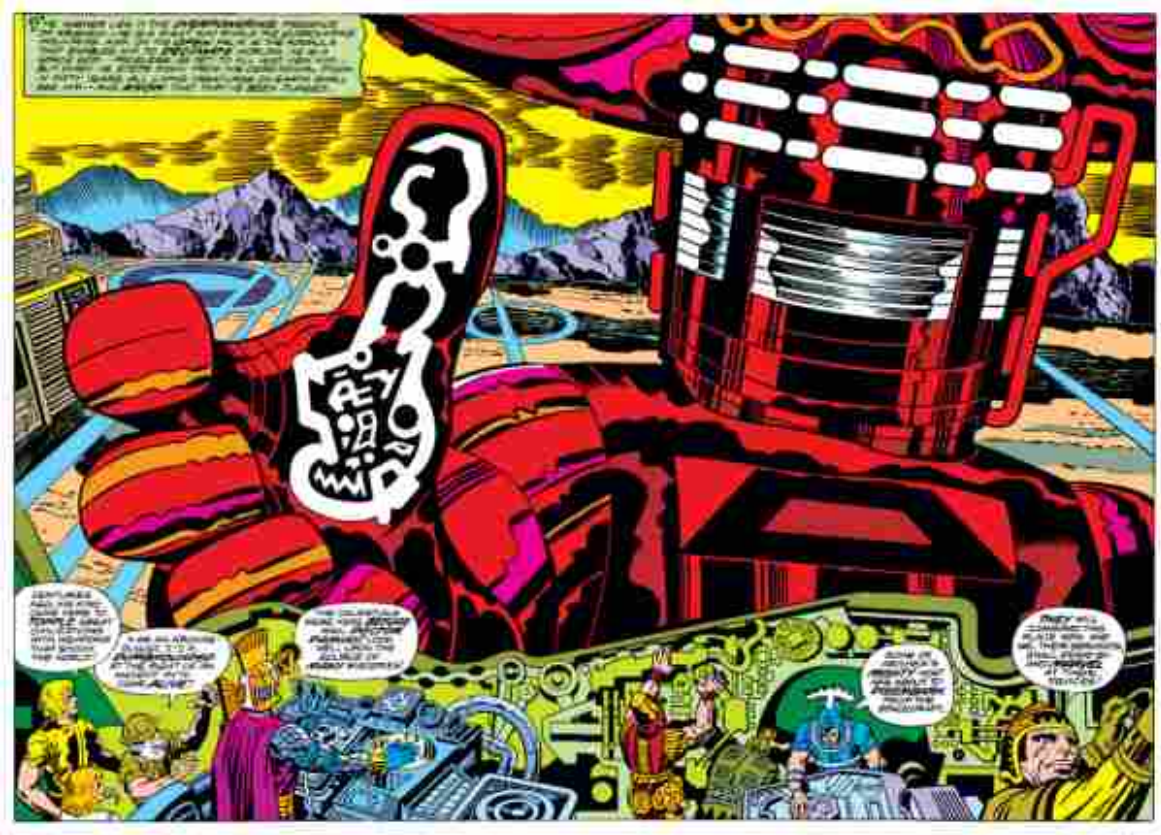

Figure 9: The Celestials, from The Eternals #3 *(Kirby 38-39).*

This double-page spread, the opening splash of *The Eternals #3* "The Devil in New York," attempts the impossible: representing the Gods so that humans can understand them. In Kirby's world of immortals, superheroes, humans, and deities, the distinction between human and not, between subject and other, can grow hazy. Yet through Kirby's expressive and complex artwork, the contrast between Gods and everyone else is clearly delineated. Kirby's vision is immense: a comprehensive mythology that explains the entire scope of human spiritual history, an encounter with the creators that marks the beginning of earth's final judgment, and an apocalyptic setting colored by Cold War fears. Among the staggering range of superhuman bodies in *The Eternals*, the greatest gods of them all are the Celestials. Great robotic space Gods tasked by their role in the creation of intelligent life on earth to take part in the ultimate judgment of that intelligent life, the Celestials are as enigmatic as they are epic. Free of words, personalities, even clear motives, they glide through the text, demanding nothing and yet threatening all life on earth.

If ever there were a depiction of super-humanity, the Celestials would be it; unlike the demons and fallen angels of Milton with their human cruelties, jealousies, and needs, the Celestials just *are*. Though the text's other non-human figures, the Deviants and Eternals, are given pseudo-scientific explanations, origin stories, and myths, the Celestials are outside of all such explanatory systems. They come from beyond and have created that beyond. They are all-powerful, all-knowing, all-seeing; they can, it seems, manipulate the very stuff of reality, though the physics of their power is never explained. How to depict such figures, demonstrating their awesome powers while also working within the narrative constraints of story and graphic text? Kirby set himself a seemingly

impossible task: his Celestials are silent and indefinable; they do not telegraph their purpose, their goals, or the calculus through which they judge. And it is in this very ineffability that they become godly.

This ineffability is best represented in the form of Arishem [fig. 10], the Celestial who "is a planet-killer!!" (Kirby 125, exuberant punctuation in original). Arishem is described as "the mightiest of the Fourth Host" because "engraved on his thumb is the formula for world destruction" (Kirby 125). In *Hand of God*, his scholarly work about Kirby, Charles Hatfield reads Arishem as "another take on that sort of Old Testament God, but refigured as a machine-like functionary, inorganic, almost robotic: the destruction principle couched in anthropocentric form, yet imbued with no character per se" (168). The discordance that Hatfield points to is not (just) in the collision of Old Testament texts with pulp comics; it comes from a human-like body that uncannily refuses to behave as a human. Arishem is immobile, impenetrable, and impossible to read. Indeed, after his arrival upon the great stone pylons, Arishem doesn't move: he

Figure 10: The final page of The Eternals #7 *"The Fourth Host" (Kirby 125).*

merely waits to activate whatever process, machine, or being it is that his formula works upon. None of the most essential questions readers may have about the Host are ever answered, and the way Arishem is drawn is a reflection of this silence. His face as we see in close-up at the conclusion of *The Eternals #7*, "The Fourth Host," is virtually featureless. Red, chromed metal encases Arishem's body (or makes it up – is this a robotic exoskeleton, or is Arishem solid metal? The text reveals no hints), reflecting with thick orange and black lines that mirror that red, orange, and black of the famous Kirby Krackle style of depicting energy. The fine lines that bound Arishem's figure similarly wrap around the wrists and neck, but not at other places, such as the knuckles, where we might expect joints to go, though this doesn't prevent the fingers from bending. In place of human facial characteristics, Arishem's grille is wrapped with white panels – are they tubes of neon light? Electrical conduits? – that seem to reflect light, as the central part of the grille features what appears to be a glare from an exterior light source.

In contrast to these physical features, which do seem to serve a purpose (though not one we can divine), the formula on Arishem's thumb is a negative space. Put another way, though we don't understand the function of Arishem's physicality, though it is perhaps unrepresentable, we can imagine it, whereas the formula is outside the imaginary, entirely unpicturable. Flat and one-dimensional where the rest of Arishem's figure is textured and shows depth, the formula extends from the end of the thumb pad down to the base of the thumb joint on the palm of Arishem's hand. Its coloration does not correspond with the reflected chrome upon which it sits. It does not reflect light nor is it shadowed by light; it even covers up the reflected light on the thumb where it sits, as if it is a hole in the corpus. It is, it seems, a pure negative space, a hole in the fabric of

creation, an empty vacuum bounded but unfilled. If this is a formula for world destruction, as we are told in the expository text, what is the product created by this recipe? What do the zigzagging lines and mysterious glyphs read? These are questions that can't be answered; indeed, it seems that the formula has been created specifically to resist any attempts to answer these questions. Whatever it is that this formula represents, it is not meant to signify.

True gods, then, must be so removed from recognizable embodiment as to become, physically and verbally, silent in order to symbolize their inhumanity. Indeed, critics generally pan *The Eternals*; it has been called "specially, cruelly hobbled" (Hatfield 244) and "impressive, and quite boring" (Lethem qtd. in Fristoe). In his assessment of *The Eternals*, Hatfield describes the Celestials as "faceless unknowns" who "do not speak directly to any of the characters in the series, at least not in any way that we readers are privy to" (166). It is this silence that marks, for Hatfield, that "there's something dispiriting about" the text (166). Hatfield compares the Celestials to another of Kirby's great deities, Galactus, explaining that the latter character is more satisfying as a narrative device because "at least Galactus has a face and speaks in a human idiom [and] can express emotions" (166). As Hatfield puts it, though Galactus and the Celestials share similar functions within the separate worlds of their texts, the Celestials are unsatisfying because they "have no personalities [and] are ciphers, sublime precisely because they are distant and impenetrable" (166). Hatfield here shows that the hulking, massive silence of the Celestials corresponds with their status as gods. In comparing the Celestials to Galactus, Hatfield contrasts different visions of supreme power and ultimately decides that the Galactus deity is more satisfying as a narrative device. Galactus can express

where the Celestials cannot. Galactus displays emotional and physical response, including the recognition of (if not the human experience of) pain. The Celestials do not: they do not experience pain nor do they seem to speak pain language. They are beyond such discourses, and they are therefore not subjects. Stimulus response is necessary for these gods to become subjects. The place past superhero on the scale of sub to super – the place of the Gods – is not a narratively satisfying one because it is, inherently, beyond the concerns of the human animal.

Heroism and Humanity

As we've seen, the spectrum is not a simple linear progression: subhuman to human to normate to Olympian to superhuman to God. Were the narrative this simple, bodies could only inhabit one position at a time and those positions would be fixed and immutable. The normate would be a static category, never challenged and never changing. But we know this is not true; the normate is a contested and contingent role, dependent for its primacy on the constant subjugation of those that fall below and the differentiation of those that fall above. This is a process of reorientation that must constantly dance and weave in quantum space in order to retain a central position for the normate: the Olympian must be marveled sufficiently to differentiate those bodily abilities from the expected abilities of the normate, but also othered so that the way it attains superlative status is sufficiently subhuman. The superhero must be simultaneously valorized for its abilities and humanized by its pain so that its powers don't threaten the normate. Nonhuman bodies are either alien and therefore outside the purview of the normate (thereby preserving the normate position) or they are abject and therefore perversions of the normate body (thereby still preserving the normate as normate). Such

constant motion is necessary to reify the normate and conserve the power of that normative subject; as disability studies scholar Rosemarie Garland-Thomson says, "Every body is in perpetual transformation not only in itself but also in its location within a constantly shifting environment. So who one is and what that means is fluid as well" ("Misfits" 598). Those bodies that do not qualify as normative are shifted out of the center, forced to the margins of humanity.

The margins, then, are where the complex narrative framework of the normate is most visible. Privilege makes itself invisible, creates of itself that which is normal; those bodies that are visibly non-normative and yet who break into the public consciousness as valuable bodies embody important narratives for activist communities. In an opinion piece for *Al Jazeera*, Garland-Thomson writes about the grief she felt after learning of Oscar Pistorius's crimes. Before he became a murderer, she says, Pistorius was an advocate and emblem for disability rights. She showed his pictures in her classes not to replicate the inspirational narrative of overcoming, but to help her students "imagine how disability might be a benefit rather than the shortcoming it is most often considered" ("Elegy"). Yet after he murdered Steenkamp, he not only lost his status, he also threatened a backlash against the very progress his success had previously betokened. Wearily, Garland-Thomson visualizes the fallout from Pistorius's fall from grace:

> I fear the links that may be made between disability and temperament. I can imagine speculation about Pistorius' grim history of abusing women being attributed to some kind of character flaw that parallels what the world takes to be the flaw we call disability. Did the rage that drove him to shoot, someone may

> speculate, arise from the resentment that some suppose corrodes the character of disabled people? ("Elegy")

Garland-Thomson has reason to daydream so. The spaces between the superhuman and the subhuman, the supercrip and the deviant defective, are razor thin; they are not spaces at all, but instead overlapping circles, Venn diagrams of imbricated narratives and roles, Möbius spaces that are simultaneously above and below. So Garland-Thomson's concern for the narratives about disability that may tumble forth from Pistorius's marked and remarked upon body is valid.

But it is not just disabled bodies that are narratively constructed as marginal and subhuman. In order to maintain the safety of the normate position, Olympian bodies of all kinds shift along the Möbius spectrum from superhuman to subhuman, inducing troubling narratives about their personhood. Take, for example, the Kalenjin runners. In his popular science book *The Sports Gene*, which examines the genetics of athleticism, David Epstein relays the curious case of the Kalenjin people of Kenya: only twelve percent of the Kenyan population, members of this small tribe make up over seventy-five percent of the nation's fastest runners (Epstein 190). The facility at distance running exhibited by so many Kalenjin people has lead many sports world insiders to posit evolutionary theories about this tribe; they speculate that there is some fundamental difference in the physical makeup of the Kalenjin that allows even untrained members of the tribe to swiftly outpace other runners.

It's easy to see why such a narrative would be attractive: as Epstein explains, "seventeen American men in history have run a marathon faster than 2:10 [while] thirty-two Kalenjin men did it just in October 2011" (193). Such ability must be genetic, the

theory goes, or it would upset the dominance of the white male normate. The only way to preserve the sanctity of that normate is to make the Kalenjin alien. Just as Superman's Kryptonian origins are central to keeping him safe for the normate, an excuse for the Kalenjin talent would keep the normate safe from them. But it's not enough to look for genetic answers, since they are so unsatisfying and complicated. In a radio interview for the WNYC program *Radiolab*, Epstein expands upon the book's theories about genetics, enumerating the other investigated theories about the upbringing and geography common to the Kalenjin. Is there something chemical in the combination of the water, the traditional porridge, and the traditional cookware? Some contagion that could have infected these people and made them so different? These theories are added to the complicated set of hypotheses about body type, high altitude training, and evolutionary distinctions. With so many competing and outlandish explanations for Kalenjin running dominance, clearly the bodies of these athletes are of particular interest.

In the *Radiolab* episode, Gregory Warner looks at the coming of age rituals that the Kalenjin take part in, and thus it is pain that becomes the dominant theory. Runners, says Warner, know about the "insidious, protean nature of pain" and the best runners must "learn to mentally override these distress signals." But for the Kalenjin, the "ability to withstand pain" is the marker of adulthood; in the coming of age initiation ceremony of the tribe, the children must "crawl naked through stinging nettles… then [their] fingers are squeezed together. Then [they are] beaten on that bony part of [the] ankle" – and all of that is the preparation for the main ritual event: the circumcision. In this ritual, both men and women are circumcised in similar ways; for boys, the thirteen- to seventeen-year olds not only have their foreskin removed with a sharp stick, but also tied into a bow and

pierced. This is, of course, extremely painful, but in the Kalenjin ritual, adulthood is not achieved simply by withstanding this pain; instead, the rite of passage is completed by remaining stoic and absolutely still during the experience. In fact, says Warner, "in some versions of this ceremony, mud is cake onto the face … and allowed to dry. If a crack appears in the mud … all the people around will know to start beating [the child] with sticks."

This is no small matter: inability to make it through the ceremony results in lowered status, being labeled as a coward and shunned from the rest of the Kalenjin society. Successful passage of this rite opens the doors to adulthood and allows youths to be warriors (if they are boys) and mothers (if they are girls), to engage in the tribe's economic activities, even to marry and become parents. Ability to manage pain, then, is crucial for the Kalenjin way of life. And it is non-normative pain response, then, that again categorizes a body as above and below the normate. Like subhuman zombies (or CIP patients), these Kalenjin remain stoic in the face of pain; but like superheroes, they perform fantastic feats of bodily endurance and athletic skill. They are both sub and super, simultaneously inhabiting these two roles in order to reaffirm the normate.

So are the Kalenjin alien like Superman or superheroic like Batman? Are they other or are they human? Warner questions whether two thousand years of this ritual has resulted in natural selection of people with higher pain tolerance: "Maybe it's not just that the Kalenjin are built for speed; it's not just that they have the body type. Maybe they have some sort of innate ability mentally to persevere through pain." Warner argues that this may be genetic, though he recognizes that no gene has been found that codes for

stoicism and acknowledges that the epigenetic threads of nature and nurture are so tightly wound as to be inseparable.

If being an extraordinary runner requires the ability to feel pain and ignore that pain, to push forward and continue moving even when the body says to stop, then this Kalenjin training may be the originating event (like the bite by the radioactive spider, the arrival from an alien land, the cosmic rays) that turns this small group of people into superathletes. Warner likens this answer to the question of how the tribe has produced so many talented runners; instead of the "demoralizing" narrative that there is some inherent genetic difference or inborn fact of the DNA that creates a talented runner, this is an "egalitarian version of advantage" that confers ability through cultural training. If the Kalenjin can be human and also superhuman, if they can become superhuman through human acts, then so can we, too; but because the process for becoming superhuman is so abjectly full of pain and the denial of pain, we normates can safely reject that path and merely watch the Kalenjin run, just as we watch Batman fight. The distance between monster and hero, between sub and super, is never as simple as the body itself.

CHAPTER V

GOOD DOG, GOOD PIG, GOOD ROBOT: NONHUMAN KINSHIP, FOR BETTER OR WORSE

Case Study: Humans, Animals, in Nature

As thinking, talking, writing, storytelling animals, the human is (we assume) unique among animals, alike no other here on earth in our ability to place ourselves into the flow of time and weave narratives around us till they are thick as cocoons and we can emerge butterfly-like into a world that we have linguistically built. How easy, then, to write a story about the world that places humanity above all other animals, that makes the human *not* animal any longer. How easy, and how sad: such a story divorces the human from our animal kin and the earth whence we arose. From Descartes to Heidegger (and beyond in all directions of the Imperial West), human life is often considered separate from animal life. Yet there are other ways to imagine the human body in relation to the world, and those ways may not always conform to the myth of a discrete, inviolable human form. Approaching the body as a Bakhtinian grotesque opens the possibility of understanding forms of intercorporeal connection between all bodies and spaces.

So far, this text has considered human bodies in relation to other human bodies, even when those bodies are not afforded the status of the fully-human normate. In this final chapter, we turn to consider the relationships between the human and the non-human. Placing humanity in relationship with the world that surrounds it means considering carefully the various kinds of embodied beings with whom we exist. And doing so with a science fiction perspective points to an expansive view of what beings deserve such consideration. Thinking beyond dominant anthropocentric perspectives

brings to light new questions about the relationships between humans, non-human animals, bioengineered beings, and technological bodies. What forms of kinship can we develop across the divide of species and sentience, and what role does pain play in determining such new forms of kinship?

To answer such a question, we must complicate and unpack the relationship of the animal to its environment. Kinship, as we've seen, is about a breakdown of bodily boundaries; it means acknowledging and experiencing a grotesque interconnectedness of bodies and taking the other into the self. Pain acts to blur those artificial barriers between bodies, uniting and connecting corporeal entities in a shared kinship. This is both metaphorical and literal: metaphorically, witnessing pain helps us see the other as akin to ourselves, and literally, witnessing pain causes the brain to fire in symmetry with the other, thereby making the self into the other (and vice versa). Similarly, then, pain may allow the boundaries between the self and the environment blur.

In his discussion of the human body from *Nature*, Maurice Merleau-Ponty argues that, instead of being the pinnacle of an evolutionary ladder, the human body is "in a relation of intercorporeity in the biosphere with all animality" (Merleau-Ponty 268). This means that human and animal in the biosphere are not just inter*related* (as in connected to one another), but inter*corporeal*. Corporeity, according to the OED, is "the quality of being, or having, a material body." So *inter*corporeity is a quality of having a shared body, a way of being corporeal that expands the material body outward into the shared space between and among other bodies, be they human, animal, or otherwise; this is precisely what Bakhtin describes when he says that a grotesque body and the world lack "limits between [them], leading to a fusion of the one with the other and with surrounding

objects" (310). All intercorporeity is, then, grotesque. Co-suffering makes this intercorporeity apparent as it injects the material body of the witness with the pain of the sufferer, bridging the artificial expanse between these two forms. Pain, then, is one of the windows in to the human body's intercorporeity, one of the ways to approach the individual self within the blurred, boundary-less expanse of the organic biome. And in this biome, the human must be kin with non-human beings of all kinds.

Thus far, this dissertation has considered the ways that pain can remake kinship. While I have considered a wide range of bodies (normative and non-normative, monstrous and superhuman), the relationships have always been body to body in the human social world. Outside of the strictly human, however, are the relationships between human bodies and non-human bodies. And in order to consider these relationships fully, first we must consider the relationship between humanity and the natural world. So often, we ignore all that is unnatural about the natural and miss the connections between treatment of animals and treatment of objects. We miss the metaphorical slippages that conflate non-normative bodies with animal and object, rendering all such forms below the status of the normate. Therefore, reconsidering the kinds of life that exist within animal and object is part of the same ethical project as reconsidering the value of non-normative human life. So we must look to the way narratives about animals reflect narratives about humans, and the ways all such bodies transform over time.

Moreover, given the central position of objects in current culture, we must consider seriously the kinships that are possible in non-animal bodies. Technological advances have brought the human into a new kind of relationship to the natural. As we've

begun to work with the very building blocks of life, bioengineering bodies and crafting consciousness, these kinds of beings have become integral to living on the planet. So how are such bodies treated? The historical position of the animal as beast of burden is not so different from the current position of the computer. The social and cultural roles proscribed for these kinds of bodies – animal bodies, technological bodies – function, yet again, to protect the primacy of the normate, fixing such bodies in relation to the normate. Illuminating these roles thus sheds light onto parts of the scale of sub to super that we've thus far left in shadow. Animals, objects, and technologies are part of the non-sentient world, the space outside of the human. How can we build an intercorporeal connection with, say, a rock, when it has no sentience and exists merely as part of the world upon which our bodies stand? In order to understand how relationality can form between non-human beings, a deeper sense of the interrelated biosphere is necessary. And here, Merleau-Ponty's phenomenological understanding of the human in the world is particularly useful.

According to Merleau-Ponty, the human body is a being in itself, aware of and feeling itself, and the world is "the 'other side of [that] body'" (268). The world is both the border of the body and that which constitutes its outside edge. The boundaries, here, are weak, much as they are in the co-suffering process of pain. It follows, then, that humans and animals are not related in a neat "hierarchical relation," but in a continuum – a lateral kinship (Merleau-Ponty 268). In saying this, Merleau-Ponty argues against the Great Chain of Being narrative, which proclaims an evolutionary teleology wherein humanity is the purposeful result of evolution's machinations. Merleau-Ponty breaks down causal arguments that assert humanity's preeminence over animality without

understanding humanity's presence within animality or animality's presence within humanity. Instead of being the purpose of nature, humans are all bodies with other sides, bodies living within and being constituted by the world.

This intercorporeity allows for the embodied communication necessary to produce kinship. Intercorporeity is a state of knowing, an experiential understanding of the body's place within that relational universe produced not through consciousness but through "*Umwelt*" (Merleau-Ponty 271). The *Umwelt* is akin to a sense of self: it is the knowledge of the position of our body within its environment. All beings have an *Umwelt* and the *Umwelt* each of us individually lives within includes and overlaps with the *Umwelten* of other beings and other beings are therefore constitutive of the "other side" of our bodies. Thus, even the non-sentient rock upon which we stand can be considered a body and therefore can contain an Umwelt. This can allow human subjects to come to know the rock as its own form of subjectivity. Pain and co-suffering are thus tools for revealing and understanding the Umwelten of other beings.

I argue that pain offers a way to see these intercorporeal relationships and to build interspecies kinship. When the human animal witnesses non-human animals in pain, the artificial barriers of anthropocentricism blur and falter; indeed, human-animal kinships can help expand the notion of what it means to be human and what it means to be animal. The concept of the intercorporeal body provides a framework for exploring relationships between all bodies, be they human, animal, or other. If all beings – conscious or not – have an Umwelt, then non-animal objects such as robots, computers, and even non-corporeal Artificial Intelligences must too have an Umwelt and therefore be intercorporeal with humans. Relationships between humans and both non-human animals

and non-animal objects or intelligences demonstrate two things. Firstly, they show again how pain and co-suffering expand the body beyond its corporeal form, allowing for kinship and communion with othered bodies in ways that may encourage more ethical treatment of those bodies. And secondly, they show the expansive possibilities of kinship, a kinship that troubles the very distinction between human and animal, between object and subject, between sentient and not.

Recognizing these facts means recognizing the role humans have played in shaping the natural world. Whether by breeding animals or changing the ozone layer, humans have fundamentally altered the biosphere; as we learn to bioengineer and build life from the ground up, we are changing the world even more. The intercorporeal world, then, is one that we have co-created just as it has co-created us. Humans are, of course, continuing to shape this world, for better and (often) for worse. In order to survive the future we have brought into being, we must confront not only the human-made changes to the world but also the human position within that world. This means a radical reorientation of the human position within the world and a refiguration of what it means to be a human body within this world.

Simply put, non-human kinship breaks down boundaries of human bodies and behaviors. The very fiction of human corporeal integrity requires eliding the convexities and concavities that Bakhtin reveals in the grotesque body. Bodies that are revealed to be both penetrated by and penetrating of one another and their worlds are, in Bakhtin's thinking, monstrous and powerful beings that elicit fascination and revulsion through their abject forms. Bakhtin's examples are of bodies with insides and outsides that don't conform to the fiction of bodily borders: pregnant bodies, priapic bodies, wounded

bodies. All of these forms make mockery of the boundaries between and of individuals. Intercorporeal bodies, then, extend Bakhtin's visions: these are bodies that blend and merge with the very world around them.

So intercorporeity is a fundamentally grotesque bodily reality. Understanding how human agency has transformed the bodies and biomes in which we live means understanding how interrelated and interdependent we, as animals, are on all other animals and all other spaces. It is the essence of our kinship. And yet it also reorients the teleology of anthropocentricism once more, underscoring the necessity of balanced relationships between humanity and the rest of the world. Thus kinship with non-human beings is perhaps the most challenging and most grotesque: how many social stigmas does such kinship violate? How many cultures have developed taboos against bestiality and cannibalism specifically to distance the human and the animal? Such social mores police the boundary between human and non-human, demanding that all that is animal be quarantined away from all that is human. But the grotesque reaches beyond such social strictures and points in the direction of the future. And the future, it seems, is one in which we will need to embrace the intercorporeity of humans and non-humans in order to survive. The uncanny future relationships between human and non-human presented in science fiction texts offer, therefore, a lens through which to view the way pain works within animal bodies to build grotesquely new versions of the human species. This chapter will chart representations of non-human animals, bioengineered beings, and technological bodies to map out the various ways that kinship can form between the human and the *not*.

Pain, as we've seen, functions to redraw lines of kinship beyond the human. Pain is, in a sense, a way of short-circuiting the narrative construction of self that elides the grotesque nature of being. Pain is a way of breaking down the fiction that our bodies are discrete and separate entities. As pain moves through and is spoken by bodies, witnesses to such pain co-suffer and become kin. This is a process we've seen occur between differing kinds of human bodies and can therefore also explore between differing kinds of animal and technological bodies. But since pain is merely one way to break down this wall, there must be other ways that the same breakdown can occur. Looking to beings that cannot experience a human form of pain, such as artificial intelligences and robots, allows us to perhaps explore deeper the territory beyond simply the embodied. In short, it offers us the next step: to look past pain and into the other forms of grotesquery that unite bodies in shared subjectivity.

Animals All: Cross-Species Kinship

> "The dominant, peculiar story of modernity is of humankind's *emancipation* from Nature" (Latour, "Love Your Monsters").

As we've seen, science fiction stories often place human bodies in extraordinary relationship with the world surrounding them. Because science fiction as a genre is interested in investigating worlds and environments beyond those currently colonized by the anthropocene, human bodies within such stories are always-already in uneasy relationship with environment. The addition of animals, then, can serve many purposes in a science fictional universe. In some stories, the animals may be dominant species, upsetting (or reverting) anthropocentricity; *The Birds* and its oeuvre do just this, asking human viewers to question what would happen if we weren't the ones in charge and if we were treated as animals ourselves. In other stories, radically transformed animals present

cautionary tales about interweaving the human and the animal; *Planet of the Apes* and other texts that present hyper-intelligent animals work on these fear. Finally, the contrast between familiar animals and unfamiliar spaces may serve, in a science fiction text, to mark just how transformed that fictive world is. In all stories, however, the human relationship to the animal is a useful entry point to the text, opening up larger questions about the reality of the world and the position of the human within it. Just as exploring how pain mediates kinship among stigmatized persons troubles the notion of the normate, so too does exploring how pain fosters kinship between humans and non-human animals help trouble the relationship of the human to its world.

It is, however, important to contextualize comparisons between humans and non-human animals and to be wary of the disciplinary potential of comparing humans to animals. The specter of animality has a long and bloody history in hierarchical relations of all kinds. For marked, non-normative bodies, comparisons to animals may justify inhumane treatment and support racist, sexist, and ableist narratives. Historically, the medical model of disability encourages bestializing narratives about non-normative bodies, with real medical and social implications. These narratives can have material consequences when they determine access, encourage extreme medical interventions, or bring about segregational policies. As Sunaura Taylor argues, "there is no way to discuss animal metaphors without recognizing the atrocities that they have been used for: the rhetoric of Nazi Germany, of racism, of slavery" and the rhetoric that "support[s] racist ideologies and demeaning and patronizing stereotypes" (196). Comparisons to animals are also structured by a "great chain of being" notion that already places animals below humans in development. So comparing disability to animality fixes people with

disabilities on a lower rung of being. There is a utility, then, in not only pointing out the negative consequences of human-animal comparison for people with disabilities, but also pointing out the inherent connections between humans and animals in a way that helps to break down such hierarchical thinking. I agree with Taylor that "the ways in which disability studies demands new perspectives on embodiment" (196) offers a way to rethink the treatment of all bodies, animal bodies included. Indeed, rethinking these relationships may upend that "great chain of being" altogether.

My exploration of animality and humanity, then, is meant to pose an expansive understanding of kinship and community. Though comparisons between people with disabilities and animals have troubling histories and very real potential for misuse, I argue that any theoretical perspective on embodiment theory must eventually consider the animality of human bodies and therefore consider the responsibilities and duties we have to our animal kin. I therefore compare animals and humans without either judgment or hierarchies, and yet also without forgetting the historical and material danger of such comparisons. On this theoretical razor's edge, I argue that co-suffering with othered human bodies in pain offers the same potential for expansive kinship as co-suffering with non-human animal bodies. Indeed, co-suffering with non-human animals may alter anthropocentric narratives and thereby allow for an expanded sense of human interrelationship with the world, pointing towards greater ecological and ethical unity. In short, relating with non-human animals may force human animals to change their treatment not only of animals but also of environments in general.

This potential for transformed ethical treatment of bodies and spaces is apparent in Paolo Bacigalupi's 2004 short story "The People of Sand and Slag." In the story, the

familiar form of a dog stands out in contrast with the story's unfamiliar environments, setting up a futuristic parable about the relationship of humans to animals, humans to environments, and humans to their animal bodies. In Bacigalupi's future, humans have lost the ability to co-suffer, so the story presents a discomfiting connection between human and animal. The human characters lose their humanity because they are not able to co-suffer with pain and human readers then build an intercorporeal kinship with the dog instead of the human.

The story features a future wherein humanity has used science to evolve such that the planet and its inhabitants are barely recognizable. Existing in a toxic and hostile environment surrounded by bioengineered species, the humans subsist by eating sand, artistically modify their bodies through scarification and implants, and worki as "slag soldiers" (Bacigalupi 44). The advanced regenerative processes of their evolved forms have atrophied their response to pain. Though certainly a creative example of futuristic world-building, none of these differences feel shocking until contrasted with the dog our three protagonists find one day amid the toxic runoff pits of the mining corporation for whom they work. The dog, weak and fragile as it is, becomes a point of contention among the characters as they debate whether to keep it or eat it. For a time, they keep the creature as a pet, exploring it as if exploring their own evolutionary past, a curiosity from back before they "transcended the animal kingdom" (Bacigalupi 47). Inevitably, however, the dog's weakness and need for constant care make it too much of a responsibility and not enough of an amusement. When it is injured, they decide finally to eat it. The companionship and personality of the creature are not sufficient, in this world, to make it worth keeping alive. For these beings, the dog does not transcend from object

to subject even though the story ends with the narrator, Chen, remembering "its warm breathing beside" him (Bacigalupi 54) and missing whatever it was that the dog had that they don't.

In this way, the story helps us think through notions of the animal and the human and the way such notions work together to define and trouble the human-animal divide. It is easy to read the difference between the humans and the dog – that is, to rely on the seeming naturalness of the human-animal divide – as the driving force behind the defamiliarizing experience of reading the story. Instead, we can see the story subtly displaying a human-animal kinship that arises from and is located within a bodily experience of the world, an experience shared between the human readers and the canine character, in a way that deconstructs both the notion of the natural and the notion of the abyssal divide between human and animal. Following William Cronin's assertion in "The Trouble With Wilderness" that what we consider "wild" and therefore not of human creation is, in fact, very much bounded by human design, I argue that this story articulates a similar problem with the notion of the natural. Natural is supposed to mean not created by humankind, but it seems that human notions *of* the natural very much create the distinction between the natural and the artificial. Bacigalupi's story holds on to this simple binary understanding of the natural and the unnatural, using the presence of the dog to reveal just how unnatural and inhuman the other characters are. Yet the dog is no less created by human design than the futuristic human bodies of the protagonists – the story even attempts to assign a breed to the dog, thereby acknowledging the influence of human breeding upon the canine species. What sets the futuristic humans apart from

the dog is not their supposed unnaturalness – not the technological nor the evolutionary divide between them and us – but their inability to experience pain.

The humans' reaction to their own pain and to the pain of the dog displays an insurmountable discrepancy between their experience of living within their bodies and our "natural" experience of the same. I argue that readers are better able to identify with and recognize themselves within the canine character, creating a cross-species kinship through co-suffering. This is a way of defining humanity, animality, and human-animal kinship that is distinct from our physical forms, our differing cognitive abilities, and our separate evolutionary paths. The way the human characters experience the world through their bodies contrasts with the way the dog experiences the world through its body. This contrast displays the distance between them and us, breaking down the fictional difference between us and animal. Indeed, the breakdown of the human-animal divide remaps the hierarchical chain of being. In "The People of Sand and Slag," this reorientation reframes the direction of the future, isolating readers from the community of humanity in this future world.

The naturalness of a divide between human and animal has a lengthy and bloody history; it is presumed even in the language we use to describe the world. Distinguishing "human" and "animal" implies that there is a fundamental difference between the two creatures. Using language like "human animals and non-human animals" or "humans and other animals" begins to deconstruct this linguistic anthropocentrism, but cannot entirely escape the individuating drive to set humans apart, above, and aside from the animal. Therefore, in order to rethink the relationship between humans and animals (as linguistic constructs and as corporeal lives), it is necessary to rethink the natural as a concept, an

environmental corollary to the importance of rethinking the concept of the normal. Such a project is imbricated within Cronin's call "to rethink wilderness" (69). Cronin claims that wilderness, "far from being the one place on earth that stands apart from humanity," is instead a "profoundly human creation" and a "product of … civilization" (69). In this way, the very linguistic structure that seems to define what *isn't* human in fact reifies an artificial divide between the civilized and the wild. The divide between human and animal follows the same path: a distinction that seems organic but is indeed facilitated by human concepts of the animal and the self. Just as the normate is a constructed and fictional body (see Chapter IV for more), so too is the human a fictional class, only separate from the animal in the telling of it.

"The People of Sand and Slag," opens its very first scene with a depiction of the unnaturalness of the fictional future. In action that at first seems as if it must be out of a video game, we see our protagonists Jaak, Chen, and Lisa encountering "hostile movement" while at work in their futuristic mine (Bacigalupi 39). In response to this intruder, the characters grab weaponry, strap on exoskeletons, interact with genetically modified centaurs, and set off in a hovercraft to intercept this being. All this, in its eerie unfamiliarity, takes place "under blasts of icy Montana wind" (Bacigalupi 40). An immediate contrast, then, is set up between what seems so alien and strange (the environment, the creatures, the jobs) and what is so familiar (Montana's cold wind). Readers are therefore immediately thrown into a state of cognitive dissonance by having to acknowledge that this unfamiliar setting actually takes place in the intimacy of a familiar state. From the start, we are set off-balance, to search for the ways Bacigalupi's fictive world differs from our own and to map the progression from now to then.

This project becomes more dissonant when we discover the makeup of the intruder Jaak, Chen, and Lisa are hunting. It's a "running creature. A mass of tangled hair" (Bacigalupi 41). It must be, they determine, "some kind of bio-job" – a biologically-modified creature, like the centaurs with whom they work – though this realization alarms them because, as Jaak says, "What kind of sick bastard makes a bio-job without hands?" (Bacigalupi 41). Even this early in the story, the language cues the unnaturalness of these bodies; the human characters assume without thinking that the being they see before them is a "job," a piece of work. Bodies are not organic entities that are constantly at work within themselves to attain life; instead, they are compositions crafted by an outside agent. The body, then, is not a self-contained entity in their conception but is instead a process and a creation. As they get closer, they discover it is "a shaggy quadraped with a tail" (Bacigalupi 41) and Jaak realizes, with a whisper, that it is "a dog," a relic akin to a "dinosaur" (Bacigalupi 42). The presence of this beast, so familiar and commonplace to readers, sets up a contrast between the body of the dog and the bodies of the human characters, articulating for us the boundaries of kinship and the definitional constraints of the human.

In every way, the human characters in "The People of Sand and Slag" appear wholly unnatural. They are highly technologically mediated and evolutionarily advanced. In this world, humans eat sand and mud full of toxic runoff, regenerate limbs lost through both violent confrontation and polymorphously perverse sexual contact, and decorate their bodies with scars, tattoos, implanted blades, and glowing lights, each detail of their futuristic lives more grotesque than the last. They live and work with biologically engineered centaurs and can update their brains to boost cognitive power. Yet, as Chen

explains, even they "used to be like that dog" before their "big brains and [their] weeviltech and [their] cellstims" hacked biology and produced a version of humanity set apart from all that the dog represents (Bacigalupi 51). Yet as unfamiliar as that world is, it is, as Cronin's theory shows us, no less "natural" than our world today. Yes, the fictional invention of "weeviltech" – a technological advance requiring humans to ingest genetically crafted worms, spurring an evolutionary leap forward into pseudo-immortality – and is pure science fictional imagination. But such a future is no less crafted and constructed than our world. The story hints at this through its discussion of the dog's pedigree; as the characters research the history of the canine, they learn that "though all the [various kinds of] dogs could interbreed" there were distinct forms and breeds of dog (Bacigalupi 49). This one, they decide, must be "some kind of big sheep dog, with maybe a head from a Rottweiler, along with maybe some other kind of dog, like a wolf or coyote" (Bacigalupi 49). Breeds like Rottweillers and sheep dogs didn't arise from the primordial slime – these were mediated and crafted beings, molded by biological necessity and human need, just as the centaurs that guard the mining pits are crafted (albeit in a much more direct way) by human scientific invention.

Yet this does not mean that there is nothing different about the world of "The People of Sand and Slag" nor that there is no difference between the dog and the rest of the characters. Though the characters are accustomed to living among non-human animals (like the aforementioned centaurs) and among non-human creatures of all sorts (like the computer systems that they treat as a form of life akin to the centaurs), the characters recognize something in the dog that they don't see in these other life forms. After teaching the dog to shake, Chen is alarmed by its fundamental difference from the

rest of them. “It looks at us, and there’s something there, and it’s not us,” Chen muses. “Take any bio-job out there, and it’s basically us, poured into another shape, but not that dog…” (Bacigalupi 51). What Chen cannot fully comprehend is the underlying intelligence of this non-human animal, a being that shares a co-evolutionary path and yet possesses its own embodied Umwelt. When Chen looks into the dog’s eyes, he’s seeing an estranged evolutionary littermate, staring at him from across the divide of science and technology. It’s therefore not simply the setting that makes these characters so unfamiliar to us; the dog exists in the same setting and is no less relatable as a dog for it. The dissonance between them and us isn’t based on how they react to the dog, but how they relate to the world. And it is therefore the very fragility of our corporeal forms that articulates what is kin and what is merely animal.

In “The People of Sand and Slag,” the primary difference between the human characters and the canine character is their diverse responses to their material worlds, responses we see primarily through their dissimilar pain responses. In the moments when the human characters in “The People of Sand and Slag” do not react to pain – their own or the pain of the dog – readers relate better to the dog than to the humans[1]. Within the story, the dog shares the normative human experience of pain, whereas the human characters do not. So it is in this discrepancy that the story’s unnaturalness lives, and in

[1] These characters do not feel pain, which does not mean that they ignore it or are numb to it; both of those claims imply the preexistence of sensory organs necessary to first interpret and then respond to the stimulus of pain. This is different from the zombie’s lack of pain (see Chapter IV), because we don’t know whether zombies feel pain yet simply ignore it; it is also different from Congenital Insensitivity to Pain (see Chapter III), because CIP removes the biological mechanism for delivering pain. Since these characters need not fear physical harm because they can regenerate at will, pain may not be present simply because its purpose (to alert the body to potential harm) is no longer necessary.

this connection between canine and human that the story displays its model of cross-species kinship.

Because of futuristic "Weeviltech," the human characters of "The People of Sand and Slag" are seemingly pain free and this analgesia has changed the way these humans interact with their world. In their first interaction, the dog bites Jaak's arm and Jaak merely chops off the limb, as casually as we might trim our hair, and then waits for a new arm to grow back in its place. The pain we would feel as the dog's teeth pierce our skin is a warning: move away, protect yourself, this is dangerous. Jaak doesn't receive this message because he doesn't need it – the bite cannot possibly be fatal nor even particularly troublesome to him. Thus there is no need for these characters to experience to their world through the framework of pain, anticipating and responding to potential threats and dangers that might cause bodily harm, as most humans do.

In being released from such bodily straits, the interpersonal mores and desires of these humans have evolved to embrace a physically mutable body. They can play and experiment with their bodies without fear of harm, allowing for a rich exploration of the human psyche's hidden and subsumed whims. At the end of the story, Chen amputates all four of Lisa's limbs, "render[ing her] down to her core" and "leaving her more dependent than a baby" as an "experiment in vulnerability," which is, apparently, the "new thing in L.A." (Bacigalupi 52). Extreme though this may seem to most contemporary readers (with our non-regenerating limbs), the underlying psychosexual experiment of such an act is similar to many kinds of BDSM play in our culture; exploring vulnerability, trust, and the line between pleasure and pain through sexual play is commonplace. So it is not the underlying drive that surprises readers, but the reaction of the characters to their

embodied realities that is so disquieting. Their bodies are belongings that they can modify, discard, and tinker with.

This is a way of being embodied in the world that we today cannot experience; though certainly many can (and do) experiment with our bodies as if they were toys, most do not treat themselves like meat, as these characters do. As they ponder how the dog survived so long in the toxic environment, Lisa suggests that perhaps "some of the engineers were giving it meat. Like Jaak did" when he offered up his bitten arm as food for the dog. Jaak disagrees, "pointing out that the dog "threw up [his] arm almost right after he ate it" (Bacigalupi 44). They show no discomfort about the fact that their flesh has been turned into a meal. No matter how readers may numb ourselves to pain and push the boundaries of our corporeal forms, humans today rarely, if ever, treat their bodies like meat. Indeed, one of the primal fears is of seeing human bodies rendered as meat: cannibals, flesh-hungry zombies, and alien overlords dining upon humans as if we were cattle all reverberate through the cultural consciousness. All of these fears are played out and explored in gruesome detail in science fiction and horror stories, indicating the West's deep underlying desire to separate human flesh from meat. So here, then, the divide between human and animal is blurred again: human flesh and animal flesh are both potential protein sources, each laden with no greater or less inherent value or taboo. What separates the human from the animal, then, is pain itself: the humans don't experience pain, their bio-jobs are designed without it, and yet the dog cannot escape it.

So it is the reaction of the human characters to the suffering and pain of the dog that distances them from us. Released from the experience of pain, the human characters are unable to recognize pain in another and sympathize with that pain: they are unable to

co-suffer with the dog because they cannot themselves suffer. Indeed, the characters' reactions to the dog's pain seem sociopathic in their lack of empathy. "I think I broke it when I put it in the cage" Jaak realizes at one point; "It's not moving like it was before. And I heard something snap when I stuffed it in" (Bacigalupi 44). This lack of care – "stuffing" a living animal into a cage, heedless of the snappable nature of limbs – is generally, in contemporary society, a marker of excessive, even pathological cruelty. One of the hallmarks of a serial killer, the pop culture story goes, is the torture of small animals. Yet Jaak isn't delighting in the dog's pain, which pushes against the pathologized understanding of his actions; he didn't find joy in creating this pain, he simply didn't think about the possibility *of* pain. There is no shared sense of physical limits that results in and is strengthened by the warnings of pain. Jaak essentially has no physical limits and therefore does not anticipate the limits of the dog. Though Jaak and the others can recognize injury, they cannot understand why an injury matters; "I don't think it's healing," Jaak says, "I never thought an animal could be so fragile" (Bacigalupi 44). This disconnect separates readers from the human characters in the text; we share with the dog an experiential world that we do not and cannot share with Jaak.

Furthermore, the characters' curiosity instead of empathy solidifies the divide between them and us. Much as the lack of pain response in a human can make that human seem other, so too can the lack of co-suffering cause otherness. By not exhibiting co-suffering behavior, these human characters are rendered somehow less than human. There is, then, a fundamental difference in our definitions of humanity or subjectivity. For human readers today, sentience is generally understood as coming from animal bodies, animal bodies that are fragile and fleshy. This is not the case for Bacigalupi's

humans, who experience the fragile and fleshy body of the dog as something indicating fundamental *in*humanity and lack of sentience. For example, as Lisa excitedly realizes that the dog "doesn't heal" (Bacigalupi 44), she reaches into the dog's cage and "slice[s] a tiny wound into its shank" (Bacigalupi 45). Though moments before Chen and Jaak were struggling to implant blades into Lisa's body because "her flesh kept trying to close before [they] had the blades set" (Bacigalupi 43), for the dog, a small cut leaves it "pant[ing], clearly wasted" as its blood takes "minutes [to] begin clotting" (Bacigalupi 45). These differences are treated as curiosities by the characters, startling reminders of their evolutionary history, leading Lisa to exclaim that the dog is "as delicate as a rock. You break it, and it never comes back together. … It's as easy to kill as [their vehicle] the hunter" (Bacigalupi 45). That which can be wounded and die is, for these characters, that which is neither sentient nor alive: rocks, machines. For readers, just the opposite is true.

Indeed, because of the way the human characters in the story relate to the dog, they are barely able to see it as conscious; when a visiting biologist chatters to the dog in the way many of us do to our pets, Lisa asks, shocked, why the biologist would try to talk to it: "it's not sentient," she states, to which the biologist responds, "no, but it likes to hear voices" (Bacigalupi 46). Its fragile physical state makes the dog seem, to these humans, as sentient as the inert machinery and matter around them. This is similar to the way the characters treat the centaurs, those other animal creatures with whom they cohabitate. Though the centaurs are biologically engineered from the DNA up, though they are made of the same flesh, blood, and DNA strands as the characters, they are seen as machines, not exactly living beings. When Chen describes them, he says,

> they're scary monsters: bigger and faster than a man. Their behavior patches make them vicious, their sentience upgrades give them the intelligence to operate military equipment, and their basic fight/flight response is so impaired that they only know how to attack when they're threatened. (Bacigalupi 45)

So they are technology or equipment, good weaponry "to have at your back when the slag starts flying" (Bacigalupi 46). Yet at the same time, Chen describes them as "critters" (Bacigalupi 46), indicating a level of connection with these manufactured creatures.

Why does he treat and see the centaurs so differently from the dog? Again, the difference rests in pain: Chen has "seen a half-slagged centaur tear a man to pieces barehanded and then join an assault on enemy ridge fortifications, dragging its whole melted carcass forward with just its arms" (Bacigalupi 45-46). Just like the human characters, the centaurs lack the sense of self-protection that comes from pain, lack an awareness of their bodies as temporal and mortal. When he shakes the dog's paws, he has a physical reaction to its body, wondering what programming might cause such a non-sentient life form to interact with him:

> It stuck out its paw. My hackles went up. It was like sending signals to aliens. I mean, you expect a bio-job or a robot to do what you want it to. Centaur, go get blown up. Find the op-force, Call reinforcements. The HEV [vehicle] was like that, too. It would do anything. But it was designed. (Bacigalupi 50)

Chen interacts with the centaurs in a way more similar to how we interact with our pets, seeing the centaurs as co-evolutionary kin that have been created by weeviltech just as the humans have. The centaurs, the computers, and the humans: they were designed, with purpose and without pain; the dog, on the other hand, seems to have no purpose, just

"amber eyes star[ing] up at [Chen], solemn" (Bacigalupi 50). The story is therefore pushing on the divide between human and animal, begging the human characters to co-suffer and interrelate with the dog. While Jaak, Chen, and Lisa are unable to experience an intercorporeity with the dog, so too are readers unable to experience and intercorporeity with Jaak, Chen, and Lisa: we simple cannot experience their Umwelt. So the dog, then, with its pain and its fragility, becomes the outer boundary of the human reader's self. The intercorporeal connection builds between human reader and canine character, and it is there that the story fosters kinship. So as readers witness the varied bodily experiences of these characters, they co-suffer with the dog and welcome its body into their Umwelt as kin.

This is not to say that at all times, the pain of a dog has been considered equal to the pain of a human. The history of human-animal ideologies show that not recognizing the pain of an animal does not necessarily indicate an inability to experience or understand pain in humans. As Bernard Rollin explains in his comprehensive history of how science has treated animal consciousness and pain, the inner lives of animals are often treated as metaphorical: scientists are "professionally reluctant to make claims about animal happiness, for fear that they would be seen as unscientific" so they rely upon speaking about what "make[s] animals quote happy unquote" (Rollin 115). Though this is virtually the least reprehensible repercussion of seeing animal and human as separate, it nevertheless has significant implications upon how we understand animal pain; as Rollin says, "we do not put quotes around our attribution of happiness to other people," indicating that though currently, "science is absolutely committed to the belief that animals feel pain and experience other mental states which are, to a significant

degree, analogous to what human beings experience" (Rollin 115), our treatment of those mental states is contingent on our perception of the other's humanity.

History shows an alarming unwillingness to recognize the rights of other subjectivities, leading to cruel and inhumane treatment of animals. We eat, wear, experiment on, enslave, and (at times) torture other animals, for profit, sport, and (sometimes) seemingly for the perverse fun of it. Yet the unbalanced treatment of other animal species is not limited to just those behaviors that are outwardly and purposefully cruel. As Herzog shows, though research has shown that forty-seven percent of people surveyed believe that "animals are just like people in all important ways," those beliefs have "little effect on … attitudes about the use of animals" (239). Of that group, half of respondents "favored the use of animals in biomedical research" (239), forty percent agree that it would be okay "to replace diseased human body parts with organs taken from animals," and ninety percent are meat eaters (240). The cognitive dissonance of our treatment of other animals goes beyond just turning a blind eye to overt cruelty. In fact, even in our most fervent admiration of and connection to dogs, there is an underlying and often invisible cruelty: as Herzog notes, "in [purebred dog fanciers'] efforts to create the perfect dog, they have produced millions of animals with itchy skin, skulls that are too big, hearts that are too small, and hips that always hurt. Animals that suffer" (128). Such behavior, tinged as it is with eugenics, has deeply troubling moral implications for our treatment of other bodies, be they the bodies of non-human animals or the bodies of disabled, queer, racialized, or otherwise marginalized humans.

Yet dogs have a special position in Western human society, so the cognitive dissonance of the characters' treatment of the dog in "People of Sand and Slag" is

altogether greater than it would be had Bacigalupi chosen a different species; as Herzog notes, the spectacle of fisherman tossing dead fish at Seattle's Pike Place Market would not be the tourist attraction it is "if the guys in hoodies were throwing around the bodies of dead kittens" (238). There is a way that humans interact with dogs that is different from how we interact with animals not from a companion species. Donna Haraway's concept of the companion species is one of "species interdependence" that indicates a need to not just be with our animal companions but "to hold in regard, to respond, to look back reciprocally, to notice, to pay attention, to have courteous regard for, to esteem … where and when species meet" (Haraway 102). Haraway understands that "[we] are who [we] became with companion species, who and which make a mess out of categories in the making of kin and kind" (102). Haraway's claims explain the profound bond that many of us feel with our animal companions and the moral cartwheels many engage in when they grimace at the notion of eating horse while simultaneously consuming a hamburger.

But the keeping of pets and the kinds of animals considered as pets is culturally bounded; in much of Asia, eating dog is treated with a kind of nonchalance many Westerners bristle at. When the characters at the end of the story eat the dog, they are engaging in a cuisine shared by millions worldwide: in Asia, "approximately 16 million dogs and 4 million cats are consumed each year" (Herzog 186). Though eating dog is certainly against contemporary Western social mores, "in many parts of the world, people have historically treated dogs as walking larders to be filled during flush times by feeding them excess food and then harvesting them when protein was in short supply" (Herzog 185). To most Westerners, to do so would be to eat a friend and companion, but are those

cultures that eat dog considered inhumane? In Kenya, as Herzog explains, "villagers keep dogs to guard against intruders and to chase elephants from the gardens. But they never allow dogs in the house, they do not think of them as companions, and they would be horrified at the idea of letting one sleep in their bed" (90). Do we consider Kenyans inhumane because of their cultural relationship to dogs? Indeed, Chen's treatment of the dog is in many ways more like a modern Westerner's treatment than a modern Kenyan's; eventually, the dog begins to sleep in Chen's bed and he notes that "it was warm and there was something friendly about it" (Bacigalupi 52). Thus the fact that Jaak, Chen, and Lisa don't immediately recognize the dog as a companion and a pet is not what makes them seem so unnatural to readers. Instead, it is their lack of response to pain, in the dog and in themselves, that causes them to seem inhuman and the dog to become kin.

In "The People of Sand and Slag," the human characters' bodily experience of the world is fundamentally altered from its current form. Because of this change, the human characters seem less human than the canine character; the way that these characters interact with pain, their own and the dog's, articulates the power of pain. Because these human characters cannot speak or understand the dog's pain language, they cannot learn to see it as kin. In contrast, contemporary readers can and do co-suffer with this evolutionary cousin, hearing the voice of its pain echoing through their bodies. Thus the kinship built in this text is not human-to-human but human-to-animal, modeling a form of kinship that can exist between any two animals. It is not the technology, not the difference in form, not the planet's explosive toxicity, not even the evolutionary divide between the humans and us that make these characters seem unnatural, even inhuman. Such transformational processes of life *are* natural, are part of the way our world already

operates and already evolves. So it's not the humans' unnaturalness that makes them seem less like family than the dog. It is their analgesia, their inability to see pain and to co-suffer in the way pain requires us to do, that makes them seem unfamiliar and the dog therefore seem like kin.

Leap to the Future: Bioengineered Beings and the Limits of Life

As we've seen, the radical transformations of the human bodies in Bacigalupi's "People of Sand and Slag" serve to highlight the recognizable, confortable normalcy of the dog. Bacigalupi's fantastical "weeviltech" poses potent speculative what-ifs: what if humans *were* invulnerable to a toxic environment? What if we *could* play with the capacity of our bodies and our psyches without fear of damage or harm? Such questions push on the definitional constraints of humanity; can a being with such control over its corporeal form be considered human? Does the inability to feel pain render a being inhuman? Just as depictions of Congenital Insensitivity to Pain show, that which we define and recognize as human must have the ability to experience pain. Thus Bacigalupi's human characters are not properly human at all, and the kinship readers create is with the normative body of the dog, demonstrating how co-suffering can foster cross-species kinship.

So what, then, of kinship with such biologically advanced beings? Is it possible to develop kinship with Jaak, Chen, and Lisa? How might we develop kinship with animals (human or non-human) that transcend the bounds of current biology? Margaret Atwood's *Maddaddam* trilogy of novels presents biologically engineered beings that redraw the tree of life by leap-frogging over its evolutionary constraints. These beings come to exist not through hundreds of years of trial and error at the genetic level, but through laboratory

experimentation. They are hybrids, genetically engineered life forms, the next step of scientific progress. The last chapter considered bodies that fall on the spectrum above and below the normative human form because of their abilities, providing a framework for these bioengineered beings. These bodies exist outside the bell curve of the normate, rendered sub and super through their genetic provenance. And unlike Superman's extra-solar origination or Bacigalupi's weeviltech, the scientific equipment and knowledge necessary to create such creatures is not only nonfictional, but also currently in use. Through her depiction of this near-future world and its nearly realizable beings, Atwood offers a glimpse at what might be in the process of becoming.

Like the technologically advanced and therefore unfamiliar humans in Bacigalupi's story, both human and non-human animals in the *Maddaddam Trilogy* are uncannily altered. The series – comprised of the novels *Oryx and Crake* (2003), *The Year of the Flood* (2009), and *Maddaddam* (2013) – presents a world altered in ways similar to Bacigalupi's future: technological advancements in the areas of cloning, gene splicing, and bioengineering have led to the creation of new and discomfiting beings. There are seemingly charming splices, like the rakunks, raccoon-skunks kept as pets, and the lumiroses, bioluminescent roses that adorn gardens, both of which seem easily within the reach of technological advances just over the next experimental hill. These biologically engineered animals and plants don't initially elicit much fear at all, the grotesquery of their recombined parts hidden deep within the genetic code of each being. But there are also grotesque modifications, like the ChickiNobs, chickens engineered in labs and grown like vegetables to meet the demand for animal proteins, supposedly a guilt-free meat product because they lack brains and are therefore not quite animals. Finally, there

are animal creations that trouble ethical and moral lines, such as the pigoons, pigs designed to grow and incubate human organs. Horrifyingly, pigoons have spliced-in human neocortex tissue and trouble the very distinction between human and animal. Finally, there are the experiments in the human animal that result in beings who cannot be clearly classified as animal or human: the Crakers, a new stage of human evolution, designed by the madman-genius Crake who ends the world and ushered in the postapocalyptic future.

In Atwood's terrifyingly familiar future, genetic and technological experimentation have fundamentally altered the world. The environmental and social alterations are the result of a looping endgame of the many incremental changes already happening: global climate change, overpopulation, increasing corporatization of government, biological and chemical warfare between rival corporations, and a corporate police state that deregulates and monopolizes commerce and culture. While the world Atwood presents is a cautionary vision of one potential future, the science she employs is already in use today. Scientists around the world have already begun experimenting with cloning, splicing, hybridizing, and creating life. Dolly the sheep is perhaps the best-known and most iconic example of animal cloning. When the cloned sheep was announced, the "revelation to the world of Dolly's existence, in 1997, was the scientific sensation of the decade" (N. Williams R209). But today, the technology used to bring Dolly into the world is today more commonplace research science than it is sensational *Jurassic Park* subplot. From GloFish, transgenic fluorescent fish sold as pets online[2], to

[2] For more information, see the website www.glofish.com, which is operated by the company that licenses this technology. While this site has detailed information on how to

the creation of "synthetic biology" (Pollack), such technologies are not only commonplace, they are also big business.

With such technologies comes some new questions about the place of the human animal in this biosphere. According to Fiorella Battaglia and Antonio Carnevale, bioengineering is a technology that causes reorientation of the relationship between the self and the world; as they say, technologies that may be used to alter and enhance the body "are not just tools that humans use in order to interact with and experience the surrounding world. They also are means of mediation that shape their world and themselves" (VI). And it is that new shape that we must begin to map as the first step towards building a new epistemology of humanity.

While biological engineering and genetic modification are not currently as prevalent and unregulated as in the *Maddaddam* trilogy, today's technologies nevertheless raise just as many questions for scientists, ethicists, and citizens as those predicted in the novels do. In Atwood's novels, it seems that everything is genetically modified in some fashion. While this is certainly startling and even, at times, frightening, it is also presented as the simple status quo. Eating real meat or drinking non-synthetic scotch might be reserved only for those characters wealthy enough to afford such luxuries, but it seems that most people are content to primarily eat genetically modified foods and exist in genetically modified space. Indeed, many cosmetic technologies

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purchase these fish (and reasons why they are a fun pet for the whole family), specific details on the scientific process of the GloFish's creation are vague.

include genetic modification and involve grafting the animal to the human, such as the Mohair hair extensions made from bioengineered sheep[3].

Crake, a scientist whose prodigious intellect and talent is surpassed only by his monomaniacal willingness to beget apocalyptic technologies and then to see them put to use, personifies the threat of genetic modification run amok. His master plan is twofold: first, to create the perfect life form, the intelligently-designed next evolutionary step for humanity that he egotistically calls the Crakers. And second, he sets out to exterminate humanity as it currently exists and fully usher forth a world swept clean, a dominion designed for the Crakers to inhabit. Crake is the father of the apocalypse, the genocide of his entire species.

In this character, the worst threats of bioengineering are realized. But while Crake's actions are extreme and traumatic, they are not wholly out of the realm of possibility. Bioengineered genocide is not just plausible, it's happening right now: the biotech firm Oxitec, based in the UK, "has developed a transgenic strain of the *Aedes aegypti* mosquito" that is designed to wipe out the organism entirely (Rincon). With their modifications, "a lethal gene [is inserted] into insect embryos" that, when mature, are "released to mate with wild female mosquitoes" (Rincon). Through this process, "The males impart the lethal gene to their offspring which, lacking the dietary supplement to keep them alive, die before adulthood. Continued releases of engineered mosquitoes should cause wild populations to crash" (Rincon). While it may be easy to stomach the

[3] This is a particularly interesting shift in technology, since today's hair extensions are either synthetic (i.e. plastic) or are real hair that is most often harvested from women in the developing world (see *The Guardian*'s expose "The Hair Trade's Dirty Secret" from October 2012). Shifting this form of exploitative labor from subaltern women to animals is one way that Atwood's future builds on changing cultural approaches to animals and humans.

idea of committing genocide against a species of mosquito that transmits Dengue fever, a disease that is dangerous and often fatal and for which there is no cure, the ethical implications of this technology cannot be ignored. Removing one species from the biosphere can have unforeseen complications, and while this technology may be beneficial, it gestures towards troubling possibilities.

The everyday uses of bioengineering display more mundane applications of these technologies, yet such examples are no less troubling for their lack of exceptionality. The GloFish are a fun and seemingly harmless example of genetic modification; many marine animals are bioluminescent, so inserting a fluorescent gene into these fish doesn't fundamentally change the way we perceive them. But what about the spider-goat? Outwardly, these transgenic animals appear and act just like regular goats, but they have "spider DNA squirreled away in their genetic makeup. The only outward difference between spider goats and your garden-variety ruminants is in their milk: It contains elements of golden orb spider silk" (Karis-Nix). This goat species has been engineered to create a super strong spider silk that, once refined from the goat's milk, can be made into "body armor, parachutes, fishing line and surgical sutures" (Karis-Nix). While less than fifty of these goats exist today, they raise the question of just what kind of animal they are. Goat? Spider? Both species is present in their DNA. But "human DNA sequences are over 95% identical to chimpanzee sequences and around 50% identical to banana sequences" ("DNA"), so simply sharing DNA is not necessarily surprising. The questions our spider-goat present in theory will perhaps be more pressing when the animal looks or acts more like the hybrid it is, like the liobams (lion-lamb hybrids) of Atwood's novels. So it is to science fiction, then, that we must look to better understand how we will learn

to interact with bioengineered creatures as scientific technology alters the animal world and brings about new forms of life.

In Atwood's brave new world, three distinct and yet interconnected groups of life forms –humans, pigoons, and Crakers – best demonstrate the way intercorporeal kinship that can come to exist between humans and bioengineered beings. In their divergent physical structures, these three forms of life beg essential questions: who will inherit this world? What body will be dominant? Can the three kinds of bodies come to live together and generate new forms of kinship that will sustain them all after the end? In order to generate this sustainable kinship, these three groups have to learn to read each other's pain and to recognize each other as subjects. As they learn to translate the voice of pain and to co-suffer with one another, so too do they learn how to honor the differences between them and how to build a future that has the potential to nourish new life. Co-suffering thus allows them to see each other as kin, even when doing so means extending kinship beyond the species boundary; and it is therefore pain, not their shared physiology, that unites these beings. Though Craker, pigoon, and human all share the same essential stuff of life, they do not share kinship until they can learn to co-suffer.

So what exactly do these three species share? The physical connection between pigoons, humans, and Crakers is fundamental to their interactions, their conflicts, and their ultimate need for one another. Much like the biologically engineered creatures of Bacigalupi's "People of Sand and Slag," the humans, Crakers, and pigoons all share a genetic interrelation that marks them as biological kin. The pigoons were developed first, part of the wave of scientific advancement that marks the uncanny future of Atwood's

series. Unlike other transgenic experiments, the pigoons were fundamentally connected to their human creators from the start:

> The goal of the pigoon project was to grow an assortment of foolproof human-tissue organs in a transgenic knockout pig host – organs that would transplant smoothly and avoid rejection, but would also be able to fend off attacks by opportunistic microbes and viruses, of which there were more strains every year. (Atwood, *Oryx and Crake* 22)

So the pigoons are brought into being through science and necessity, by human scientists looking to the animal world for solutions to surviving the human world. Moreover, the pigs "have genuine human neo-cortex tissue growing in" them (Atwood, *Oryx and Crake* 56), raising their intelligence to human levels. And these scientists clearly know that their connection to the pigoons is deeper than their connection to other forms of animal life; the OrganInc Corporation that created and marketed the pigoons "claimed that none of the defunct pigoons would end up as bacon and sausages: no one would want to eat an animal whose cells might be identical with at least some of their own" (Atwood, *Oryx and Crake* 23-24). The taboo against cannibalism, then, extends out to the pigoons when their bodies become grotesquely combined with human bodies.

Likewise, the Crakers are also created from a mixture of human and non-human genetics. Though designed as the next stage in human evolution, they come from the human: Crake "had to alter ordinary human embryos" (Atwood, *Oryx and Crake* 303) to build these unordinary beings. And unordinary they are. The Crakers may have come from human tissues and embryos, but their species is different entirely; they are "altered [down to] the ancient primate brain" (Atwood, *Oryx and Crake* 305). These creatures eat

"nothing but leaves and grass" (Atwood, *Oryx and Crake* 305) because they have spliced in genes that allow them "to digest unrefined plant material" (Atwood, *Oryx and Crake* 304). Using genes from plants and animals alike, the Crakers even have "UV-resistant skin [and] a built-in insect repellant" (Atwood, *Oryx and Crake* 304), which protects them from the increasingly volatile climate of the Maddaddam universe. Unfamiliar and inhuman-seeming as they may be, however, the genetic interrelation between humanity and Craker is evident and purposeful. Even though he designed the Crakers to survive his genocide of the human race, Crake nevertheless taught the Crakers English and gave them names such as Abraham Lincoln (Atwood, *Oryx and Crake* 348) and Marie Curie (Atwood, *Oryx and Crake* 349). Moreover, by the third book in the *Maddaddam* series, it is clear that Crakers and humans can interbreed, and so the new species of the Craker and the moribund species of the human remain intertwined on a genetic level. Finally, though Crake attempts to breed out such human traits as singing and religion, the Crakers develop each, indicating their deep connection to the human animal whence they came.

Despite these conscious connections shared between pigoons, Crakers, and humans, they do not initially experience an intercorporeity or a clear sense of themselves as kin. Humans hunt, kill, and eat pigoons, and pigoons respond by not only rooting up human gardens but also threatening predation. In the first book, Jimmy, who believes he may be the last human alive and who was designated by Crake as the protector of the Crakers, encounters the pigoons as a threat equivalent to other transgenic animals, like the wolvogs (wolf-dog splices) and bobkittens (Bobcat-house cat splices). Jimmy, at one point, encounters a group of pigoons and recognizes them as a pack of hunting predators too intelligent to be outmatched; from experience, he knows that they "are clever enough

to fake a retreat, then lurk around the next corner" so that they could "trample him, then rip him open, munch up the organs first" (Atwood, *Oryx and Crake* 235). In the second book, *The Year of the Flood*, another survivor who fears that she may be the last human alive likewise encounters the pigoons as threats. Toby has survived the apocalyptic plague by hiding in the spa at which she used to work; on the grounds, she built herself a small garden and has been growing enough food to hopefully sustain herself. When she shoots and kills a boar that she finds in her garden, she knows that her actions will have consequences because the pigoons "are smart, they'll keep her in mind, they won't forgive her" (Atwood, *Year* 19). Indeed, it is the pigs that drive her from her refuge in the spa after raiding and destroying her garden; as she hikes out of the grounds, she makes her way past the boar she had shot, and finds evidence that "the pigs have been having a funeral" for their dead companion, and there are "fronds scattered about, on top of the boar's carcass and beside it. … Also flowers" (Atwood, *Year* 328). Faced with the evidence of the pigoons' intelligence and adaptation, she is more afraid than ever. So in both *Oryx and Crake* and *The Year of the Flood*, the relationship between human and pigoon is fraught with animus and enmity – these two species, despite sharing a genetic heritage, do not share kinship with one another.

Relationships between surviving humans are just as treacherous. In the first two books, most of the interactions between humans take place in the past, before the apocalyptic plague, and are relayed through the memories of the surviving characters. In the trilogy's final novel, *Maddaddam*, however, these characters come together in the postapocalyptic present and display the schisms between humans that have carried over from before the apocalypse and been heightened by its devastation. The humans treat all

the other beings with suspicion, including each other, knowing that they must only build community with people that they can trust. And it is those humans who are most divorced from normative pain response who mark the outer boundary of human subjectivity: the Painballers, criminals who revel in inflicting pain and seem inured to the experience of pain. Pain is a game to them, marking them as aberrant outsiders divorced from the social norms of pain behavior.

We first encounter Painballers in *The Year of the Flood*, when Toby recounts her mistreatment at the hands of her one-time boss, Blanco, whose danger and willingness to play with pain is clearly marked on his body:

> He sported a full set of arm tattoos: snakes twining his arms, bracelets of skills around his wrists, veins and arteries on the backs of his hands so they looked flayed. Around his neck was a tattooed chain, with a lock on it shaped like a red heart … the chain went right down his back, twined around an upside-down naked woman whose head was stuck in his ass. (Atwood, *Year* 36)

Far from avoiding pain, Blanco makes pain into art, altering his bodily appearance to signal his mastery of pain and his enjoyment of it, so it is no surprise that he later becomes a Painball champion. Painball is a game and an alternative route to obtaining freedom in the criminal justice system: prisoners are provided with "enough food for two weeks, plus the Painball gun – it shot paint … and if you got the paint on your skin you'd start to corrode, and then you'd be an easy target for the throat-slitters on the other team" (Atwood, *Year* 98). Painball is also a spectator sport, initially kept secret but eventually made legal and broadcast widely, and "if you survived for a month, you were good; longer than that, very good. Some got hooked on the adrenalin and didn't want to come

out when their time was up" (Atwood, *Year* 98). Toby understands, when she hears that Blanco has been sentenced to Painball, that such an experience erases the humanity of a survivor. As she says, "after a while [in the Arena], you wouldn't just tow the line, you'd forget there ever were any lines" (Atwood, *Year* 99). Once that line is crossed, the very physiognomy of these men seems to be changed; as Zeb explains in *Maddaddam*, Painballers can be spotted by "the facial scars. The blank expressions: some of their human mirror neurons had gone missing, along with big chunks of the empathy module" (Atwood 297).

That line that Toby describes, then, is the one between human and monster, subject and other. In the pleeblands, former Painballers were treated like loaded weapons; in Scales and Tails, the erotic activities club, it was understood that Painballer veterans "could go berserk and do a lot of damage. [The dancers] were never allowed to be alone with them: they didn't understand make-believe, they never knew when to stop, and they could break a lot more than the furniture" (Atwood, *Year* 129-130). Indeed, as Toby explains in *Maddaddam*, "anyone who survived Painball more than once had been reduced to the reptilian brain. Sex until you were worn to a fingernail was their mode; after that, you were dinner. They liked the kidneys" (Atwood 9). This breach of the cannibalism taboo – so strong it kept pigoons from being eaten – solidifies the inhuman otherness of the Painballers. Painballers, then, are defined by their willingness to inflict pain and their transcendence of pain language. Pain for them is no longer a warning, but has become a game to win at, a tool to terrorize with: "show a normal person a child in pain and they'd wince, whereas [Painballers] would smirk" (Atwood, *Maddaddam* 297).

So without the basic human elements of co-suffering, the Painballers mark the greatest danger to the community of survivors, humans, pigoons, and Crakers alike.

The relationships between Crakers and other animals (human animals and non-human animals, Painballer and non-Painballer), however, are more complicated, as they are not predicated on historical and cultural division between the human and the animal. The surviving humans are generally uncomfortable with the Crakers, calling them "Frankenpeople" (Atwood, *Maddaddam* 19) and struggling to incorporate their odd behaviors into the new community they are creating. In many ways, the Crakers are a blank slate, existing in a species-wide state of toddlerhood. The Crakers rely on Jimmy to teach them how to understand the world they encounter, but they also see him as separate from them. In the series' first introduction of the Crakers, they are shown asking Jimmy to explain some of the artifacts they have found; when he grows weary of their questioning, he shoos them away "and they scatter, running along the beach. They're still not sure whether to be afraid of him, or how afraid. He hasn't been known to harm a child, but his nature is not fully understood" (Atwood, *Oryx and Crake* 9). He needs to wear clothing, he breaks their greatest taboo (by eating animal protein), and he can communicate (they believe) with the Gods. Thus Crakers are aware that Jimmy, as a human, is a different kind of animal altogether.

Yet even though Jimmy is a strange and unfamiliar creature, the Crakers nevertheless come to treat him as kin. When Jimmy suffers a wound and becomes dangerously ill from infection in *Maddaddam*, the Crakers protect and attend to him; they purr on his wounds to help heal them, using a genetically designed trait that Crake borrowed from cats. They can heal Jimmy's pain because they can hear its voice, listen to

and understand its language, and talk back to it with their purring. Moreover, while he is unconscious, they are able to intuit or envision Jimmy's dreams. In their ability to co-suffer with Jimmy, Crakers are with talents and abilities that betoken a conscious and nuanced form of intercorporeity. Crakers form kinship bonds with the animals, plants, and humans around them because they can feel into the interior experience of these various life forms. The Crakers are thus able to reach through the boundaries of bodies and affect what they find inside: they can alter injury and speak to pain, they can read dreams and understand hidden subconscious truths.

Crakers, designed with neither hierarchies nor scarcity, don't experience enmity with any creature and are therefore naïve about the behavior of other animals. Not needing to eat animal protein to survive, they find the concept of doing so abhorrent and therefore cannot believe that any other being would eat *them*. So naively do they build relationships that they do so even to their own detriment, even when doing so puts them in danger. In *Maddaddam*, the Crakers and human survivors are living together, and Toby understands that the Crakers' naivety has the potential for real consequences; Painballers have threatened the survivors and Toby knows that these dangerous men will be back with force, demanding the encampment's weaponry and food. With the Crakers living among them, this danger is more acute, because "the Crakers would think it was just a matter of sharing" (Atwood, *Maddaddam* 27). This is a failure of communication, of translation from the intercorporeal experience of the human to that of the Craker; Toby muses about how the Crakers would understand human threats, such as the ones posed by the Painballers, thinking:

> How to explain that you can't hand over a murder weapon to a murderer? The Crakers wouldn't understand murder because they're so trusting. They'd never imagine that anyone would rape them – *What is rape?* Or slit their throats – *Oh Toby, why?* Or slash them open and eat their kidneys." (Atwood, *Maddaddam* 27)

Crakers can certainly be wounded and die, but they have no natural predators and physiological traits that protect them from pain. Therefore, without an understanding of danger, the Crakers fundamentally lack an understanding of the human world.

Nevertheless, their lack of fear is a symptom of their equanimity, which is the very feature that helps them transform from other to kin. Through their desire to befriend their human companions, they learn to understand human actions and human pain. During a climactic fight between humans and Painballers, Toby had captured and ties to a tree the three Painballers who have been torturing the human character Amanda. Surveying the scene, the Crakers fail to understand that the Painballers are a threat. Co-suffering with the Painballers, the alarmed Crakers act: "Why is the rope tied to these men? This rope is hurting these ones. We must take it away" (Atwood, *Maddaddam* 13). Worried about the possibility that these men are being harmed, the Crakers free the men, unwittingly putting themselves and their human companions at grave risk. Despite their lack of human perspective, the Crakers' behavior indicates their ability to connect and co-suffer. So though their behavior has negative repercussions for the surviving humans, the Crakers do engage in the kinds of kinship behaviors that build community. Crakers can co-suffer even when it threatens their own safety, even with those beings who the humans reject as kin, and thus they represent the potential for expanded, cross-species kinship.

As we've seen, Craker, pigoon, and human exist together in uneasy relationship, bound by shared genetic destiny and yet separated by their divergent forms. In *Maddaddam*, these differences in physical form and classification are finally put to the test as Craker, pigoon, and human must join together to fight against the threat of the Painballers. In this way, the trilogy shows how kinship bonds form around the shared experience of co-suffering, building communities of co-suffering subject of all kinds and excluding any beings that are not able to co-suffer. United by their shared need to expel the Painballers, the pigoons, humans, and Crakers learn to see each other as kin and build the new models of community that will be necessary for the survival of all three species.

Coming in to this climactic fight, human, Craker, and pigoon are still separate communities. The Crakers are living alongside the human survivors in their encampment, but without being fully accepted as kin. Moreover, both Craker and human view the pigoons with trepidation. Throughout the text, humans have eaten pigoons and pigoons have been a threat to the survivors' delicate new community. Yet it is the pigoons who reach out first to the humans when the Painballers begin threatening the pigs themselves. The encounter occurs like two rival armies meeting in parley: "a pig parade" with at least "fifty adults [including] several sows [with] litters of piglets" approaches the campsite of the survivors, and "in the center of the group, two of the boars are moving side by side" carrying a litter on their backs (Atwood, *Maddaddam* 267). It turns out that this burden is "a dead piglet … with its throat cut. Its front trotters are tied together with rope" (Atwood, *Maddaddam* 269). After proffering this tiny body as a sign of intent, the two boars who had carried the piglet's bier move forward to the border of the encampment; from the human side, the two Crakers Abraham Lincoln and Sojourner Truth step

forward as well. Using language that human ears cannot comprehend, the two groups talk, and the Crakers then relay the situation to the people: the Painballers are killing piglets and the pigoons want help from the humans. From this shared need, a deal is brokered: the pigoons and the humans will work together to kill the Painballers; the pigs "will never again try to eat [the humans'] garden" nor will they eat humans, "even if [they] are dead" (Atwood, *Maddaddam* 270); and the humans will offer the same in return. Co-suffering with the tragedy of a lost child, pigoon and human join together. After this exchange, the humans bury the piglet, determining that eating it would be too much like eating a human baby; the taboo of cannibalism extends, then, to kin of all forms. Through seeing this piglet's pain, they have begun to see the pigoons as more than just protein, and are moving towards a sense of kinship.

Through this shared purpose, each group comes to be united in kinship with the others. Devastating though war is, it offers ample opportunities to witness the pain of others and therefore co-suffering bonds are forged within the crucible of battle. For example, Blackbeard, a young Craker boy, is brought along with the humans and Pigoons to participate in the fight; though Crakers are nonviolent, they are also the translators between Pigoon and human, so Blackbeard becomes a soldier. Worried about how the barefoot child will fare walking through the destroyed pleeblands, Toby provides Blackbeard with sneakers (Atwood, *Maddaddam* 347); this is one of the first times when the physical weaknesses of the Crakers has been evident, and Toby is able to co-suffer with him by feeling how vulnerable his bare feet are. Though Blackbeard had been demonstrating signs of intelligence and curiosity, it is not until Toby recognizes his potential for pain that she begins to value him as kin.

Moreover, it is in these scenes that Atwood's text shifts to reflect the change in status between humans and pigoons: the word "pigoon" begins to be capitalized. Just as Toby begins to co-suffer with Blackbeard and, by extension, all Crakers, so too do the Pigoons learn to co-suffer with humans by witnessing the pain of just one. Jimmy, who is along as a guide even though he is still recovering from an infection in his foot that nearly killed him, is accompanied by an escort of five Pigoons. Toby narrates their changing understanding of Jimmy's body: "Jimmy's five Pigoons are snuffling at him [and] one moves forward to sniff his foot. Now two of them nudge him, one on either arm" (Atwood, *Maddaddam* 349). Blackbeard translates, indicating that the Pigoons have told him that Jimmy "must ride [because] his feet are weak. They will carry him" (Atwood, *Maddaddam* 249). Aware of Jimmy's pain, the Pigoons learn to see the humans as suffering kin and offer up themselves in support, carrying his weak body even though it places their own bodies at risk. In the march to war, then, lines of co-suffering extend in new directions, symbolically originating at the feet: as Toby co-suffers with Blackbeard's vulnerable bare feet and as the Pigoons co-suffer with Jimmy's healing feet, they all together stride forward, united in purpose and in kinship.

In the battle, even Blackbeard learns how to understand pain, something he brings home to his people as a didactic story of kinship. As he tells the story later, seeing the violence affected him physically; when he relays the story of Jimmy's violent death, he says: "I put my hands over my ears because there was so much pain. It hurt me very much" (Atwood, *Maddaddam* 362). Blackbeard, as the representative of the Crakers, learns to speak pain language and feels the pain of his friends inhere within his body. Then, he is able to bring that knowledge home to his fellow Crakers and translate for

them; he takes up the role as leader and teacher, showing his peers how to read pain behavior and hear pain language themselves.

In this war, then, the relationships between humans, Pigoons, and Crakers solidify into kinships. And that kinship extends beyond the living: as the battle ends, the Pigoons carry out the dead, pig and human alike, and all are buried together. Though they are wounded and footsore, the Pigoons take on their backs the weight of dead pigs and humans, shouldering all bodies equally. Building a new community of survivors means valuing one another equally, so the symbolic treatment of the dead betokens a new and shared sense of connection.

This war, however, does not unite the Painballers as kin, even though they are humans and therefore should be easier for other humans to accept. Unable to co-suffer, the Painballers do not earn a place in the community of survivors. When the battle is over, the Painballers are given a trial. During the trial, the humans declare that Painballers are "not people" (Atwood, *Maddaddam* 367). The Pigoons assert that they "will not eat" the Painballers because "they do not want those ones to be part of them" (Atwood, *Maddaddam* 370). Though the pigs do not have a cannibalism taboo, so for the rejection of the Painballers as meat indicates not kinship (as it had when the humans refused to eat the dead piglet), but an unwillingness to bring the other into the self. Pigoons are unwilling to incorporate Painballers into their own bodies, indicating a rejection of the grotesque connections inherent to kin. So abject and othered are the Painballers, the humans are unable to see them as sharing the same species and the Pigoons refuse to even see them as protein. The bodily connections forged between Pigoons, Crakers, and humans do not extend to the Painballers, whose behavior seems to

have permanently defined them as monstrous. The Pigoons, the Crakers, and the humans are connected in co-suffering, but the Painballers remain something else entirely.

The series then demonstrates the profound potential for cross-species kinship and also its necessity. Indeed, the four central human characters of the series – Toby, Ren, Jimmy, and Zeb – are all characters who have had some form of intimate experience with animals, genetically advanced and not. Each of these relationships is grotesque in some way, and therefore the text offers an expanded vision of the intercorporeal connections possible between human and non-human. Though these relationships are presented as either vile or taboo, they can also be seen as hints that an acceptance of grotesque connection predicts the ability to co-suffer broadly.

Some of the characters develop these relationships through their work. In Toby's early life, she lived above a fur store and could smell fumes from the tanning in her bedroom. She could even hear "roaring and bleating as well" (Atwood, *Flood* 31). This living situation leads her to quit her job as a furzooter, someone who "put[s] on fake-fur animal suits with cartoon heads" to advertise for malls and stores (Atwood, *Flood* 31), because she feels that "it was distasteful dressing up as bears and tigers and lions and the other endangered species she could hear being slaughtered on the floor below her" (Atwood, *Flood* 31). Being inside the faux-fur facsimile of the animal is untenable to her after she hears the voice of animal pain rising up from the slaughterhouse, a preview of the kind of co-suffering she will one day experience with Pigoons and Crakers.

Ren likewise works inside a representation of the skin of an animal. As a dancer and sex worker at Scales and Tails, Ren performs in a Biofilm Bodysuit, a sort of full-body prophylaxis that doubled as an elaborate costume, made of a bioengineered cellular

organism. When she wears the suit, she describes herself as a "snake wom[a]n" with "green scales on her face" (Atwood, *Flood* 307). Though her job could be seen as distasteful, she enjoys wearing the suit, saying that, as you put it on, "you could feel the pleasant suction as [its] layers of living cells bonded with your skin, and then the warm, tickly feeling as [the cells] started to breathe" (Atwood, *Flood* 330). Feeling this connection is freeing for Ren, because being inside the biosuit costume of the animal offered her a new bodily space inside a life form that transforms her physical body.

While Toby and Ren enter animal skin, Jimmy and Zeb experience the opposite, bringing the animal into themselves. For Jimmy, during his traumatic childhood, animals become his family when his parents can't. Jimmy's father had been part of the OrganInc project that created the pigoons and often brought Jimmy to look at them. And as Jimmy watches the pigoons, he senses that "they saw him, really saw him" (Atwood, *Oryx* 26), and feels that this understanding goes both ways: he realizes that "the pigoons had no toilets and [defecated] anywhere … [which] caused him a vague sensation of shame" (Atwood, *Oryx* 26). He projects his own desire for physical privacy and autonomy onto the animals. Indeed, when his father warns him that "they'll eat you up in a minute," Jimmy responds, "No they won't," because "I'm their friend" (Atwood, *Oryx* 26).

Zeb, likewise, has to restructure his body to take in the animal. While working in the Alaskan wilderness, Zeb is marooned and forced to hike out through a dangerous landscape of grolars and pizzlies (grizzly bear-polar bear hybrids) without supplies. Near starving, he is attacked by a bear and, miraculously, manages to fell the creature. The bear saves him, becoming his food, clothing, and shelter; wrapped in its hide, he describes himself "porting a meat cargo and a big wad of fat. … It is fuel, and he's

burning it; he can feel the heat of it travelling through his veins" (Atwood, *Maddaddam* 81). With this costume and nourishment, he makes it out of the wilderness. All four of these characters, then, are perhaps predisposed to human-animal kinship, prepared by their experiences to see the Crakers and the Pigoons as subjects.

In all four of these cases, these human bodies build connections based on life and death situations. For Toby, Ren, and Zeb, their engagement with these animals determines their ability to survive in the world. The poverty and danger they live under places them in exigent circumstances: they must work or they will die, and thus their engagement with the animal occurs through a scrim of self-protection. Yet even for Jimmy, while his engagement with the animal lacks some of the drama of the others, he is also young and alone. His parents do not provide him with the nourishment he needs to thrive and thus he can only receive his kinship from his animal kin, a form of cross-species parentage. Thus, all four characters have experienced the grotesquery of bodily connection between trans-species kin. Uniting together against a shared enemy breaks down the species barrier that had separated the humans from the Crakers and the Pigoons.

Through the shared experience of war, the humans and Pigoons learn how to read the pain language of one another and co-suffer as kin. The Painballers are inhuman and other because of their indifference to and pleasure in pain; they have survived the painball arena and become inured to pain's warnings. Therefore, Pigoons, Crakers, and humans have to learn to see themselves as kin in order to join together and fight the Painballers. When they are able to recognize each other's pain and co-suffer with one another, they are therefore able to unite as kin. By the end of the series, not only have they won against the immediate threat of the Painballers, but they have also learned how

to live in a sort of harmony that will they help sustain themselves in the transformed world. This does not mean that threats from other humans and indeed other animals may not be present, but it does mean that they are able to speak one another one another and listen to the voice of pain, which is what brings them together. The series ends with a literal transference of voices; though Toby has narrated most of *Maddaddam*, the final portions are from the voice of Blackbeard. The apocalypse ushered forth a new world, with Crakers and Pigoons and humans living together, and Blackbeard shares a glimpse of this new world, including the Craker-human babies that are being born. The co-suffering kinship formed between these varying animals has been sustained and has fostered wholly new forms of life.

The series thus offers not just examples of kinship created across species lines, but across new limbs of the genetic tree. Co-suffering with a dog, as in "The People of Sand and Slag," requires seeing the non-human animal as part of the same natural world as the human and as capable of experiencing the same pain as a human. When these two kinds of bodies open to each other through co-suffering, they can recognize that the same evolutionary paths brought both beings to their particular Umwelt. This is a profound expansion of the limits of human relationality; yet while it challenges the primacy of the human animal, it does not challenge the *structure* of that animal. The human is still the human: a unique being, a safe and recognizable creature. But when co-suffering connects a human body to a bioengineered body, it creates a wholly new form of kinship. It pushes not only on the structure of human kinship, but also on the structure of the human species itself. Recognizing these alien life forms, brand new in the evolutionary scale and

constituted of both the human and the animal, requires rethinking the very genetic rules that have created and separated all other life on earth.

Crakers are neither human nor animal; Pigoons are neither human nor animal. If such creatures can be both, can even be *more*, then what exactly *is* the human? Developing kinship with such creatures does not merely upend the Great Chain of Being: it burns the ladder to the ground. These animals are a threat to humanity, not just because they are perhaps our intellectual equals. Much of the discussion of bioengineered animals, and Atwood's novels in specific, focuses on the fear of having that which was hunted prey become hunting predator. When the Pigoons go on the offensive, armed with their piggy bodies and their hybrid pig-human intelligence, they are frighteningly skilled predators. But they present much more than just exceptionally clever hunters: they present a new and different version of that which makes the human *human*. Just as artificial intelligence threatens humanity by presenting the possibility that it could outmatch us, essentially performing human intelligence better than we humans can, so too does this form of hybridized, post-evolutionary, post-natural animal-human intelligence threaten to upset humanity's very sense of itself.

What to do, then, with such a rival? It would be easiest to reject the creature entirely, to kill it off and deny its reality. If these bioengineered creatures can be rendered monstrous, then they are no longer human at all and therefore no longer threats to humanity's definitional constraints. In his argument about what to do with such technological advancements, Bruno Latour argues against such a reactionary approach. Using *Frankenstein* as cautionary tale, Latour states that the danger of technology is not the technology itself, but our inability to accept it:

> It is not the case that we have failed to care for Creation, but that we have failed to care for our technological creations. We confuse the monster for its creator and blame our sins against Nature upon our creations. But our sin is not that we created technologies but that we failed to love and care for them. It is as if we decided that we were unable to follow through with the education of our children. (Latour "Love Your Monsters")

Pigoons and Crakers: these are our children. Instead of rejecting our progeny, recognizing these bodies as kin pushes upon the definitional boundaries of the human species and expands the very notion of the human. Co-suffering with bioengineered beings means accepting the possibilities of non-human humans, of animal-human hybrids, and of animal-human equals. And when we can look into the uncanny mirror of science fiction and see reflected back the potential outcomes of our technologies, we can perhaps start to think about the true implications of such bodies.

I Feel Therefore I'm Real: Robot Subjectivity

The preceding sections showed how the intercorporeal relationship between humans and non-human animals, both evolutionary and bioengineered kinds, develop into kinship through co-suffering. When human animals recognize their shared bodily experiences – when they co-suffer with the animal other – that animal becomes kin and the artificial boundaries that divide the human and the animal weaken and break. Such kinship points to greater ecological awareness and intersubjectivity, demanding sustainable systems of living that foster a world friendly to all bodies. So what of non-animal bodies? Can objects, which Merleau-Ponty attests have an Umwelt, also attain subjectivity? Certainly technological beings exist among animal beings; certainly the

technological and the animal exist in interrelated, interwoven worlds. We may even say that technological bodies – these non-animal beings – are intercorporeal with us, making up our Umwelt. So then can these technological bodies become kin, just as animal bodies can? And if so, what new treatment of the technological world does such kinship demand? The 2008 film *Wall-E* models a visions of technological intercorporeity that relies upon mutual co-suffering between human bodies and technological bodies, demonstrating the powerful kinship that can develop between such entities and demanding an expanded definition of consciousness and even life.

Expanding the definition of life into the realm of technological, non-animal bodies is no small task. And, like the comparison between human bodies and animal bodies, comparisons between animal bodies and technological objects have a long, bloody history. If the Great Chain of Being places humans above animals and puts inert machines at the very base of the hierarchy, then the position of animals can easily slip down to that base level. Rene Descartes' views on the divide between body and mind resulted in just such a slippage. According to Descartes, the inability to speak "shows not merely that beasts have less reason than man, but that they have no reason at all" (45). Indeed, their inability to speak and their basic lack of intelligence (according to Descartes) shows that animals "have no intelligence at all, and it is nature which acts in them according to the disposition of their organs. In the same way a clock, consisting only of wheels and springs, can count the hours and measure time more accurately than we can with all our wisdom" (45). Descartes' use of the clock as analogy foreshadows the correlation between animal and machine. Animals lack basic consciousness and are merely bundles of organic impulses, like computers operating on signals from internal

organs that compel action; in contrast, humans have consciousness and will, and our actions result from choice instead of mute biology.

This conception of the animal proceeded naturally from Descartes' beliefs about the difference between the body and the soul. In his understanding, "our soul is of a nature entirely independent of the body" (46). His division between the body and the soul devalued the body, looking towards the soul itself as that which "is immortal" (46) and does not die with the fallen, fleshy form. So if this Cartesian divide valorizes the soul and denigrates the body, then animals, which are all body and no soul, would clearly have no more sense than machines and automatons. This jump in logic encourages humans to view animals as little more than machines and to treat them just the same as machines. The consequences for the bodies of animals – vivisected, ensnared, and beaten throughout history – can hardly be expressed. Any comparison between animal and machine, then, has similar potential negative effects as the comparison between human and animal.

And yet, there is also the possibility of seeing beyond Cartesian dualism and considering machines anew. Again, breaking down the Great Chain of Being narrative frees us from the hierarchical treatment of animals and machines. Instead of lowering our opinion of animals by comparing them to machines, such a comparison can raise the estimation of the potential for consciousness and subjectivity in machines. Given the intimacy of the interactions between many contemporary humans and their machines, can we not consider them companion objects, if not companion animals? And if we do so – if we consider them companions and truly examine our treatment of them – might we not

want to explore those interactions with the same ethical and theoretical precision that we use to explore our relationships with animals?

Indeed, creating kinship with non-animal subjects may be somehow innate, because it seems to happen organically. Our human connections, it seems, may encourage anthropomorphization of non-human objects. Recent research has shown that "the human face poses an evolutionary, highly relevant stimulus configuration that is processed more quickly and with more attention than most other stimuli in the environment," which leads to the "widespread tendency for people to see faces on products" (Landwerh, McGill, and Herrman 132). Such research shows that the human psyche may have evolved to look for signs of itself – signs of humanity – in the environment, leading to anthropomorphized perspectives on common objects. Going further, it seems that many people see not just faces, but facial expressions that accord with culturally specific body language, such as "interpret[ing] an upturned grille on a car not simply as a mouth but more specifically as a smile" (Landwerh, McGill, and Herrman 132). Only brief exploration of car culture reveals examples of this phenomenon; on the webforum *Grassroots Motorsports*, a thread titled "Cars with 'facial expressions'" includes dozens of posts featuring images of cars with captions responding to the facial expression exhibited by that car. Some posters even offer narration for the car, such as "WHAT DID YOU SAY!? YOU WANNA SAY THAT TO MY FACE!?" (GameboyRMH, capitalization in original). Its clear that many users form relationships with and seek out subjectivity within those automotive objects. Finding these hints of subjectivity may even alter consumer behavior: as Landwerh, McGill, and Herrman's research indicates, "cars with such a combination of emotional expressions not only are better liked in our laboratory studies than either neutral or

otherwise emotionalized designs but also sell better in the market" (145). So not only do people prefer cars and other products (such as cellphones) to have features interpretable as a "friendly mouth and aggressive eyes" (Landwerh, McGill, and Herrman 144), but that preference is strong enough to improve the market performance of such objects.

If we have such impulses to humanize and subjectify certain objects with which we intimately relate, then we must consider how certain objects become kin and others resist such classification. How do people sometimes come to treat our cars as kin and refer to our phones by name, yet often lack a physically enmeshed sympathy with, say, the malfunctioning software of our computers' OS? I argue that it is co-suffering through pain that again creates this kind of kinship. Of course, like zombies, "pain" is a complicated way to name behaviors expressed by objects that lack nociceptive neural pathways. Indeed, computers, cars, and robots lack *neurons* entirely. So it is perceptions of pain behavior that schematize these relationships. Cars and robots may exhibit behaviors that correlate with human pain behaviors: a blown tire may cause "limping" behavior, a frayed wire may cause "shielding" behavior. When the "injury" does not correspond with behaviors that humans perceive as pain response, then the corresponding sympathy is not engendered.

But such behaviors can be translated; just as culturally specific pain behaviors can be learned by outsiders, so too can non-organic pain behavior. To those who fear a drained battery, the beeps of a phone running out of power can become the distressed cries of an injured body. While a human body might not have an equivalent to "losing charge" – even losing blood does not entirely correspond, given the relative difficulty and rarity of blood transfusions – nor an equivalent pain response, humans in intimate

relationships with phones can learn to respond to those alarmed beeps as expressions of pain, necessitating care and response equivalent to, say, basic first aid. Therefore, co-suffering with non-animal objects requires a baseline of relationality with the object, yet it forces a kind of translational connection to form between enfleshed and fleshless beings, creating kinships that expand conceptions of sentience and animality. In short, the human subject first maps anthropomorphized pain response onto the object's body, which creates the initial bonds of co-suffering and kinship. This then leads to a greater ability to translate and understand non-anthropomorphized "pain" responses that originate in the object. Together, these two steps result in an acceptance of and kinship with fleshless bodies that confers subjectivity upon the technological body.

This process of co-suffering, translation, and kinship is evident in the 2008 animated Pixar film *Wall-E*. The film opens with a lengthy portion of dialogue-free exposition that focuses on Wall-E the robot as the creature lives and works on an abandoned earth. It starts with the song "Out There" from *Hello, Dolly!* playing over images of outer space. As the camera zooms in on a changed earth, we see that the planet's outer atmosphere is littered with satellites and the air on the planet is a gray, hazy disaster – no organic life, it seems could thrive in such an inhospitable place. The camera pans over a littered dystopian cityscape, through which our protagonist, little Wall-E, zooms. Its job is as a mobile trash compactor, creating tidy trash cubes out of the mountains of mess left behind on the seemingly empty planet. Yet it does more than just engage in this Sisyphean task of trash compacting: Wall-E collects objects that it finds particularly interesting or special, and with its cockroach companion, stores these treasures in its home, seemingly content with its job so long as it has this grander

purpose. But the film also makes clear that Wall-E is lonely and longs for a kind of companionship that even the cockroach can't offer. Wall-E is haunted by the mementos of the earth's abandonment – it rolls over newspapers announcing "Too much trash!!! Earth covered" and past advertisements for its model[4] that announce "Wall-E: Working to dig you out!" It seems that humanity's abandonment of earth is also Wall-E's own abandonment; he is the last Wall-E model left running, so not only is he all alone, but he also he finds the inert husks of other Wall-E models rusting in the trashscape.

While this lengthy dialogue-free scene is running, the audience comes to learn much about Wall-E's personality (or robotality, if you will): Wall-E is capable of curiosity, friendship, fear, and even nostalgia. That last, in particular, is shown in its pursuit of old-earth items, such as the film *Hello, Dolly!*, which it repeatedly watches and even reenacts, holding its two hands together as the characters in the film hold each other's hands. Despite all this personality, despite Wall-E's charm and evocative vocalizations, Wall-E is distinctly and specifically portrayed as inhuman; while it is easy to sympathize with the lonesome robot, Wall-E's behaviors nevertheless trouble human taboos. For instance, when Wall-E comes upon the corpse of another Wall-E unit, the robot's reaction is not co-suffering or mourning; instead, Wall-E measures its treads against those on the defunct device and happily switches them out. This robotic cannibalism shows just how other Wall-E is, despite its human emotive characteristics.

In order for human subjects to begin sympathizing with the embodied experience of this technological being, the film must first offer anthropomorphized pain response. This is shown through a humanized depiction of low battery; at the end of the first day of

[4] Wall-E, we're shown, is an acronym for "Waste Allocation Load Lifter – Earth Class."

the film, Wall-E puts itself to bed, going into sleep mode for the night. The scene fades to black: the robot is asleep. Sleep, of course, is the domain of organic beings, so this is more like dormancy, when battery is conserved. Yet the film depicts it as a night of rest, and when the picture returns, it is with a soundtrack familiar to so many reluctant wakers: beeping, as of an alarm clock. The screen is taken up by an image of Wall-E's breastplate, the computer screen reading "Solar charge level warning." Thus it is not an external alarm waking Wall-E up, but an internal alert system; like a headache breaking through the veil of sleep, Wall-E is stirred by its own bodily alarm. Wall-E's eyes open and it stumbles forth (as much as one can stumble with wheels), making a computerized sound that mimics the groan of someone unwittingly roused from bed before being ready. Wall-E rolls about awkwardly, its limbs hanging down limply and its balance off kilter. Ill-coordinated, Wall-E steps into its treads, like a person fumbling to put on pants, and goes outside to charge its batteries with the light of the sun. In the next shot, Wall-E is sitting with its solar panel open. Once it emits a preprogrammed tone that indicates full charge, Wall-E shakes off the morning doldrums and rolls into action. Here, then, the film begins building the intercorporeal understanding of Wall-E by creating a situation that human subjects can map their own experience on to. Waking up groggy and aching, stumbling out of bed as limbs and brain warm up, and refueling with coffee and breakfast – Wall-E's behavior evokes all these pains and pleasures of a human body such that viewers can begin to see Wall-E not just as a robotic and therefore alien object, but as an anthropomorphic subject.

Yet creating full kinship with Wall-E requires understanding not only robot physicality, but also robot consciousness. While the getting out of bed experience is one

that human subjects can easily anthropomorphize, it is not sufficient for creating kinship between humans and robots. Human pain is simply different than robot pain, and thus there is a limit to the anthropomorphized connection that we can form with robots. There is not an easy equivalence between the human body and the robot body; when Wall-E injures one of its eyes, it is able to simply swap out that part for a spare. While many humans can understand the experience of trading up for a better eyeglass prescription, it is rare to have an innate knowledge of the physical experience of obtaining new eyes. The threats that Wall-E's body faces are, ultimately, no greater than its store of spare parts; human bodies, of course, don't have the same simple luxury of spare parts and therefore the limits of anthropomorphized intercorporeity are easily reached.

There are many depictions in *Wall-E* of robotic pain. In the repair ward on board the spaceship *Axion*, which operates like a robotic hospital, robots are fitted with tracking devices that look like robo-IV pumps and can change their behavior, just as if they were being given drugs. The robots are confined to electronically charged pens, like hospital cots from which they cannot escape, where they all misfire to comedic effect. One such robot is a sort of umbrella-bot, a robotic beach umbrella that detects sun and strategically deploys shade; unlike its "normal" counterparts, this defective umbrella-bot is unable to control its canopy, which snaps violently open and closed at random intervals and even turns inside out (as if trapped by a strong wind). When it snaps open or closed, its robot body reacts with a shudder and then forces its canopy back to the intended position, much as a person might do if a limb convulsed. Another is a kind of robotic vacuum with a squat, rectangular body on hidden rollers, a flexible tubular neck, and a head complete with computer-sensor eye and bristled vacuum-sucker mouth. This robo-vacuum is

situated with its head over the side of its pen, its neck limp and its head hanging as if exhausted. When Wall-E is placed next to it, we see it rear up and then "sneeze" out a burst of dust and lint. It shakes its head after this expulsion, like a person with a cold might do when suffering from a particularly uncomfortable bout of sneezing. These robotic bodies are thus shown experiencing a variety of anthropomorphic pain[5].

The pain experienced by these robots is not only caused by their own bodily dysfunction but also by the "medical" establishment's attempts to cure them. One buffer-bot has its arms bound by the robotic nurses after its buffing limbs begin flailing uncontrollably, and it twitches in its bindings like a person strapped to a bed. The most damaged bot has a body reminiscent of the computers of the early 1990s: off-white plastic casing, chunky square body, rounded edges. While being repaired, it bursts into spontaneous flames and is doused with retardant by a bot-doctor. When the smoke and mist clear, it spits off sparks and its head flops down, limp on its neck as if it has passed out. It looks like a person rendered unconscious. Once Wall-E accidentally breaks the repair shop's computerized imprisonment system, the robotic crips are immediately aligned with Wall-E: it respects their individual programming quirks and they line up behind it, even hoisting Wall-E into the air as their hero.

Though some of these robots leak paint or cannot control their limbs, they are still able to do a great many things; they may use assistive devices or experience physical

[5] One robot even seems to suffer from some form of robotic Obsessive Compulsive Disorder. It performs its floor-scrubbing duties with a single-minded fixation similar to the kind of focus seen in people performing OCD rituals, and it even abandons its regularly programmed duties in order to follow Wall-E and EVE, running through traffic and even diving down a garbage chute to keep scrubbing up after them. Every time it encounters the two, it utters beeps and computerized noises that sound like frustration. Thus not only is physical pain mirrored in these robots but also psychological (even psycho-somatic) distress and discomfort.

impairment, but the film positions them as individuals deserving of respect. Moreover, these robots gain community. Functioning bots all move in regulated, ordered rows, flowing effortlessly through the crowded Axiom passageways without acknowledging other robots. When functioning correctly, their programming allows them to not see or need to see one another as they simply follow the lines painted on the ground and move in pre-designated intervals. In contrast, the cripbots avalanche through the halls in an unruly mob, speeding around corners so that they crash into walls and disrupt the scheduled traffic. As such, they are joined together in shared recognition of each other's difference, a model of the kind of crip communities that bind people with all different kinds of disabilities together in mutual recognition and shared purpose. In this way, it is the crippled robots that gain subjectivity through the individuation of their unique damage.

Yet to create true co-suffering kinship between human and robot, both sides must learn to recognize the other's pain response and translate it into co-suffering knowledge. This requires the robots to learn human pain and the humans to learn robot consciousness. Robot consciousness is, of course, substantially different from human consciousness. The very question of whether or how a robot could be said to have consciousness is itself a complicated philosophical and phenomenological one; as David Gamez says, "philosophers, psychologists and neuroscientists are now working on this area," which has come to be known, variously, as "machine consciousness," "artificial consciousness," and "digital sentience" (887). A system running on software is different from a system that has evolved through millennia of trial and error. Robots have consciousness software that has been expertly designed to enable them to act out their

other programmed duties and not do much else. So as Gamez says, crafting robotic intelligences that "are not just instruments for us, but [also] participants with us in our social existence" will require "caus[ing] conscious machines a considerable amount of confusion and pain" (906). Pain, then, is a necessity to creating genuine consciousness.

The greatest example of this occurs when Wall-E is subjected to a violent shock and is damaged almost beyond the point of repair. This injury causes Wall-E's body to sag and its eyes to droop, and then results in it falling backwards down a garbage chute, seemingly to its destruction, along with its robotic companion, EVE. Wall-E is clearly damaged: its eyes do not open fully, its limbs dangle, its wheels are off their axles, and its solar charge level warning blinks alarmingly. EVE pulls out a fried motherboard from Wall-E's chestplate – it seems that the only cure for Wall-E is a part that the ship does not have. For once, the damage cannot be immediately fixed. EVE races through the ship, carrying Wall-E and planning the ship's return to earth, where perhaps a new motherboard can be found.

The danger of a mortal body is one that human viewers can sympathize with. Thus the rest of the film's action revolves around curing Wall-E's pain. Helping EVE in this task are the crew of "rogue robots," the defective group of robots that Wall-E had previously set free from their repair shop prison. Thus, when Wall-E suffers its greatest damage, the robocrips whom it had previously rescued join together again to save it from the robotic power system. Our heroes come up against a cadre of enforcer robots who lack their subjectivity. Unlike the broken robots who have gained individual personalities and selves, these bots are communal, acting exactly as they are programmed to and showing no signs of will. Tellingly, they exhibit no pain response or co-suffering:

uniform in appearance and behavior, this phalanx of security-bots keeps moving forward even after EVE shoots down one of their own. They roll over the downed robot's body, indifferent to its death and unfeeling of its robotic pain. The battle, then, is clearly between subjective individuality (which is always accompanied by pain) and objective communality (and its lack of pain response).

Thus most severe robotic pain experienced by Wall-E and the other robots occurs when they lose self-identity because their consciousness software is rerouted or turned off in service of their other functions. In these cases, the robots become inert or impersonal, releasing control over their bodily actions and, in some cases, reverting to a communal instead of individual form. No longer are they unique personalities, instead they are mere functionaries that neither register pain nor co-suffering. While this loss of self may seem to do the opposite of creating kinship, a baseline relational connection between human and robot can help this behavior translate across corporeities. When the loss of consciousness occurs, the robot's bodily behaviors change, indicating a kind of injury response; though it does not correspond with human experiences of human bodies, it nevertheless leaves embodied traces that human subjects can read and co-suffer with.

Because Wall-E is a technological body, it is subject to forms of pain that do not have human parallels. When the ship has finally returned to earth and EVE has found a new motherboard to replace Wall-E's damaged one, we see a form of bodily injury that has no human counterpart. After its motherboard has been replaced, Wall-E's battery charges up. Tragically, however, Wall-E's personality circuits have been affected and it has reverted to the communal form. Its body behaves differently: its movements are rigid and lack fluidity, it lacks interest in its former treasures, and it even rolls over its

cockroach in the pursuit of trash to compact. This is not traumatic brain injury. While human bodies can experience dramatic neurological injuries, even ones that alter the personality (the infamous case of Finneas Gage, for example), this form of circuitry damage does not *change* Wall-E's personality, which was always a secondary program. Instead, it seems that this damage has *wiped out* the very technological pathways that deliver Wall-E any sort of personality. Wall-E's personality isn't changed: it is erased. In a human, such damage would be fatal, but in a robot, the body is unharmed.

The dissociative elements of Post Traumatic Stress Disorder or Depression are perhaps the closest equivalent to this circuitry damage. In such conditions, extreme trauma or mental distress can push the psyche of the sufferer to split off from the experience, "separate[ing] out of our memory things that we don't want to or can't deal with" (Brown). While this experience can certainly be a profound disconnect from one's sense of self, it is most often described as "a numbing or a spacy feeling" (Brown). In contrast, what Wall-E experiences does not appear to be a numbing of its selfhood but a genuine loss, a reversion back into the collective, non-individual state of its design. Perhaps, then, memory loss, as in Alzheimer's, is a better corollary[6]. Loss of memory and of the unique elements of one's personality, the reversion back into a childlike state, the lack of recognition of one's self: these aspects of Alzheimer's seem to reflect Wall-E's loss of circuitry. Yet even in Alzheimer's, the loss of self is experienced as a perversion of the normal progress of self: moving horrifically backwards instead of forwards, sinking back into the mud of personal history instead of rising into the future. The difference, then, between dissociation or memory loss and the loss of personality circuitry

[6] The 2012 film *Robot and Frank* explores this very situation by depicting the relationship between a man with Alzheimer's and his robot companion.

is in the purpose: dissociation is a breakdown of psychological function, whereas damage to the circuitry is a return to the normative baseline. Wall-E was not designed to have this personality, this self, and thus its loss is a corrective to a design flaw.

While these behaviors do not have an anthropomorphic equivalence, the baseline relationality viewers have built with Wall-E helps facilitate a translation of robot pain response. The embodied behaviors Wall-E exhibits are robot-specific pain behaviors, responses to the wounding of its motherboard. Human viewers co-suffering with this loss, as the robot characters know to do, have gained a full kinship that honors and values the embodied existence of this technological body. Learning to translate robot pain behavior into human co-suffering builds a genuine bond of kinship that accepts the robot as subject. When Wall-E regains its personality, its physiology again reacts: its eyes refocus, its face shifts expression, it hands once again hold on to EVE's hands. Wall-E is itself again, and can rejoin the family of humans, robots, plants, and insects that are ready to go to work repopulating earth.

Through such co-suffering, robots become kin to the humans and to one another, and so too do the humans relearn a kinship with their own bodies that they had lost, having outsourced it to prosthetic devices that prevented pain and enfleshed experiences. During the seven centuries that the Axiom has been in space, humans have adapted to the conditions aboard the ship. They are soft and fat, their limbs shortened and their mobility altered. This corresponds with the current data on the effects of long-term space flight. Research shows that lengthy stays in space fundamentally alter the human form, leading to "facial fullness and unique puffy appearance of the head coupled with reduced volume in the lower limbs associated with this fluid redistribution" (D. Williams 1317) and

significant “loss of bone density” (D. Williams 1321). Much of this is due to lack of gravity, and though the Axiom clearly has some degree of gravity, the effects of spaceflight on the human species would no doubt be felt during seven hundred years of travel.

And so the Axiom’s passengers are themselves unfamiliar as humans in some ways, taking up physical forms that reference stigmatized obese bodies of today. This is evident in the introduction of the Captain; in a scene that parallels Wall-E waking up on earth, the Captain’s corporeity is divulged as he wakes up in his quarters aboard the Axiom. On the wall behind his bed are the portraits of the previous dozen captains; tracking their faces from the first to the current captain shows a change in physiognomy from realistic to cartoonish. In this way, the film uses the conventions of cartoon art (such as wide faces, small eyes, rounded bodies) to mark the change that the Axiom’s passengers have undergone. The Captain emerges from sleep groggily, similarly in need of a battery recharge (though, unlike Wall-E, a metaphorical one). Half asleep and barely seeming to register the actions of his body nor the robotic attention to it, the Captain is propelled along by his chair and defers responsibilities to the Autopilot. His behavior, then, elicits the opposite reaction that Wall-E’s behavior did; while watching Wall-E sleepily enter the morning humanized its embodied sense of the world and anthropomorphized its pain response, the Captain’s lack of attention to his body and complete lack of need or pain defamiliarizes him and the rest of the Axiom passengers. Indeed, the seven hundred years in space seems enough to render these beings as unfamiliar to viewers as a robot usually might be.

These humans have become dependent upon their cyborgian support systems and have lost their autonomy. While it would be easy to argue that the humans have lost autonomy due to their reliance on their chairs and other prosthetics, such an argument tends towards prejudicial thinking about the use of prosthetic technology; instead of devaluing prosthetics and implying that human subject who use such devices do not do so with autonomy, I argue that the lack of autonomy comes not from use, but from lack of decision making. The humans aboard the Axiom no longer choose to make use of their assistive devices and the devices are in control of the humans' bodies; the chairs are shown conveying around sleeping subjects, delivering them to food, bathing, and clothing without the humans even being aware. The Axiom's passengers could make the choice to use their bodies or the choice to direct their body's treatment, but they have relinquished such control and are therefore reliant upon their robotic devices, indicating a loss of connection with their bodily needs, wants, and even feelings.

However, in the process of the return to earth, the human characters have had to shed their flying chairs and robotic assistants. First, John and Mary, two of the *Axiom*'s passengers, are startled out of their tech-induced reverie by the misbehavior of Wall-E. Individuated from the rest of the passengers even in their appearance – John and Mary are wearing red outfits, even though everyone else has switched to blue at the urging of the computers, who announce "try blue; it's the new red!" – John and Mary find each other and begin to relearn how to be in their bodies. When they both witness Wall-E and EVE courting one another, the two begin to experience themselves as bodies in relation to other bodies: their hands touch, and they speak together unmediated by robotic intrusion. They swim, splashing each other and, eventually, a robotic attendant, which

fritzes out in a burst of sparks. Because these two have begun to re-experience their physicality, they are able to recognize pain in other humans and act as co-suffering kin. During the return to earth, as the Autopilot and the Captain struggle for control, the passengers are jolted out of their chairs by the lilt of the Axiom itself; tumbling and skidding across the deck, humans begin to help each other, protecting one another from injury. John and Mary, in particular, sacrifice their safety to rescue a group of infants. So the humans become human again as they learn how to experience their bodies, and they can only do so by understanding the differences between their fleshy forms and the fleshless forms of their robotic companions.

Moreover, this experience helps the robots recognize the embodied peril of the humans; during this dangerous descent to the earth, EVE stops a large piece of the ship's flotsam from crushing the humans, just as the trash compactor had only moments before nearly crushed Wall-E. Moments later, when Wall-E is actually crushed by a piece of the ship's machinery, EVE and the humans alike gasp and recoil in Wall-E's shared pain. So the embodied knowledge of each other's potential for pain and injury activates the co-suffering capacity of both robots and humans, allowing each group to come to see the other as kin. The robots and humans alike help EVE and Wall-E assure the Axiom's return to earth, together reveling in and suffering the effects of the battle to return home and the return itself. So by first seeing anthropomorphized pain responses that help human subjects being to co-suffer with robots, and then by learning robot consciousness and co-suffering with robotic pain response, human subject can come to view technological bodies as subject and as kin.

"You Become. It Takes a Long Time."

Learning to relate to non-human beings is not, truly, such a hard task for most humans at some stage in their lives. Indeed, anthropomorphized thinking is one of the hallmarks of childhood development. According to Andrew Stanton, director of *Wall-E*, this kind of thinking drives the stories we tell to and for children. In his childhood, Stanton recalls worrying "that my bike was cold in the rain, that fish are lonely in their bowl, that leaves are frightened of heights as they fall" (Friend), a set of anthropomorphized fears that many of us can remember having in our childhoods. Thus perhaps children's literature can best inhabit the thinking necessary to model non-human relationality. Margery Williams Bianco's beloved 1922 picture book *The Velveteen Rabbit* argues that it takes both love and magic to animate the world and make one real. In the story, a velveteen rabbit becomes the cherished toy of a little boy, who loves the rabbit and plays with the rabbit so fully that the rabbit becomes, eventually, real.

But what exactly does it mean to be real? The story imagines three forms of life: human, animal, and inanimate. The humans and animals are each depicted as having subjectivity, but for the inanimate lifeforms, subjectivity has to be earned. As we've seen, non-animal objects and non-human animals can gain subjectivity through co-suffering. But subjectivity is different from "realness" – Wall-E is no less "real" because it lacks flesh and blood; indeed, co-suffering with a non-animal object can deconstruct such a hierarchy of form and help human subjects relate to the built world with new consciousness. In *The Velveteen Rabbit*, then, we can read the transition into "realness" as a representation for the transition into subjectivity. Though the rabbit is always depicted as having a self-knowledge – as being sentient, as having an Umwelt – it does

not gain subjectivity until human, animal, or magical others recognize that sentience. And this recognition comes in the form of co-suffering.

When the story begins, the rabbit has a personality and sense of self, as do the rest of the toys in the playroom. The mechanical clockwork toys are "full of modern ideas" and therefore act as if they "were real" (Bianco 1). The "jointed wooden lion … put on airs and pretended he was connected with the Government" because he was "made by wounded soldiers," which the narrator tells us is disappointing, since his exposure to those soldiers should have give him "broader views" on, presumably, the natural rights of toys (Bianco 2). Yet this sense of self that all the toys exhibit is not sufficient to make them real. No, as the Skin Horse explains, "Real isn't how you are made ... It's a thing that happens to you. When a child loves you for a long, long time, not just to play with, but really loves you, then you become Real" (Bianco 2). So being real means being loved by a child – human love transforms the essence of a toy into whatever it means to be real. In this way, we can see that the process of becoming real is related to the willingness of a human (an already "real" subject) to recognize the other as kin; this, of course, takes place through a process of co-suffering.

What is particularly interesting about this is that the Skin Horse believes himself to have *once* been real, a confusing state of being at odds with the Skin Horse's own assertion that realness is a permanent thing; "The Boy's Uncle made me Real," the Skin Horse explains, "a great many years ago. But once you are Real you can't become unreal again. It lasts for always" (Bianco 3). Yet the Skin Horse is still a toy, an arguably *un*real object. So what is this realness that the toys are so interested in? What is it about these beings that is or is not "real"? As we see, it has to do not only with how the Boy sees

them, but also with something more fundamental than that. Because over the course of their relationship, the Boy comes to love the Rabbit so much that the Rabbit becomes real. After being loved so much that his toy body has become shabby, worn, and ragged, the Boy declares of the Rabbit, "He isn't a toy. He's real!" (Bianco 5). It is the very shabby and worn-down state of the Rabbit's body that causes the Boy to have such a reaction; ragged fur and threadbare fabric are, for the inert stuffed animal, equivalent to pain response in an active being. The Boy's pronouncement brings the Rabbit considerable joy: "When the little Rabbit heard that he was happy, for he knew that what the Skin Horse had said was true at last. The nursery magic had happened to him, and he was a toy no longer. He was Real. The Boy himself had said it" (Bianco 5). Though his realness has been articulated by the boy – called into being by the boy's words – the Rabbit's sense of self doesn't change. He doesn't *feel* himself to be any different, though even Nana begins to see him as something more than just a toy, saying that the rabbit has "got quite a knowing expression" (Bianco 5). This realness, then, seems to be more related to how others (how humans) see the toy than how the toy sees itself.

Moreover, the aura of the real causes the rabbit to interact in a curious fashion with inarguably real rabbits. Left outside by the boy one evening, the rabbit sees "two strange beings creep out of the tall bracken near him" (Bianco 6). Upon seeing these creatures, he immediately knows that "they [are] rabbits like himself," but unlike him, they are "quite furry and brand-new" (Bianco 6). He reads these bodies through his experiential lens, his *Umwelt*, and since he was theretofore unaware that so-called real rabbits even existed, he reads their bodies as toy bodies. The text describes these beings through the Rabbit's free indirect discourse, describing the quality workmanship that

caused “their seams” to not “show at all” (Bianco 6). Yet the Rabbit also understands that they are different from him, that they can move in ways that he cannot because of his construction. He “stared hard to see which side the clockwork stuck out, for he knew that people who jump generally have something to wind them up. But he couldn’t see it” and this causes him to realize that “they were evidently a new kind of rabbit altogether” (Bianco 6). The new rabbits see him, too, as something different, teasing him for being unable to jump or “whirl round and dance” (Bianco 7) as they can; they have a normative vision of the rabbit body that this rabbit does not match. Finally, they decide that he “doesn’t smell right” and “isn’t a rabbit at all” (Bianco 7) – perhaps a form of rabbit-ableism (or at least an interesting corollary to ableism among human animals). Indeed, they declare, “He isn’t real!” (Bianco 7) and go bounding off, unwilling to converse with the Rabbit further; in their *Umwelt*, his inability to move makes him unreal. So though the boy thinks the Rabbit is real and the Rabbit articulates himself as real, these objectively “real” rabbits do not.

It is not, therefore, enough that the nursery magic of the boy’s love defines the Rabbit as real. This makes the Rabbit real to the boy, but does not make him into a real rabbit. No, transubstantiation into realness requires another step: it requires the help of the “nursery magic Fairy” who “take[s] care of all the playthings that the children have loved” (Bianco 11). After the boy becomes sick with scarlet fever, the Rabbit must be burned to get rid of the germs; this recognition of the ability for the Rabbit’s body to cause harm to the Boy’s body is yet another signal of the Rabbit’s developing subjectivity. To summon Realness, the Rabbit, too, must suffer a fever – the burning of the fire akin to the burning of the disease. The Boy, distracted by the excitement of being

taken to the oceanside and given a new rabbit toy, forgets about the Rabbit, leaving him bereft and bemoaning: "Of what use was it to be loved and lose one's beauty and become Real if it all ended like this?" (Bianco 10). Yet in that moment, the Rabbit cries "a real tear" (Bianco 10) and summons, it seems, the fairy. She declares that "when [toys] are old and worn out and the children don't need them any more, then I come and take them away with me and turn them into Real" (Bianco 11). The Rabbit was "'Real to the Boy,' the Fairy said, 'because he loved you. Now you shall be Real to every one'" (Bianco 11). And so through the magic of her kiss, the Rabbit becomes "a Real Rabbit at last, at home with the other rabbits" (Bianco 12). At home with a community of other rabbits that accept him as rabbit kin, the Rabbit transforms from a velveteen body and into a rabbit body, and becomes real.

So what does this transformation from toy to real toy to Real Rabbit mean? The Rabbit has a sense of himself from the start, but requires first the love of a child to become real, and then both the magic of a fairy *and* the recognition of his rabbit community to become Real. Until the rabbit is at home with other rabbits, in a body that not only *looks* like a rabbit's body but can *move* like a rabbit's body, he is not Real. This speaks, perhaps, to a conception of the animal that respects animality in all its pure form. This being must be allowed to be wild in order to be Real, must be allowed to recognize himself in the bodies of other animals and have his body recognized by them in return. The highest goal for this animal, the greatest transcendence it is offered in exchange for its service to the boy, is to be an animal, a Real Rabbit. It is not made human, as humanity (for the rabbit) is not the highest state of being. Being a rabbit *is* – being a rabbit is enough. *The Velveteen Rabbit* rewards the Rabbit with rabbitness, with

animality, with an embodied self that allows the Rabbit to experience "the joy of using [his new] hind legs," a joy that "was so great that he went springing about the turf on them, jumping sideways and whirling round as the others did" (Bianco 12).

The final act of recognition comes when the boy and the Rabbit meet once again. The story ends with the Rabbit, now real and in community with other rabbits, returning to "the wood behind [the boy's] house" (Bianco 13). His physicality is marked, a reminder of the form he began existence in: he "had strange markings under his fur, as though long ago he had been spotted, and the spots still showed through" (Bianco 13). And the boy, in a moment of connection, sees "something familiar" in the Rabbit's "little soft nose and his round black eyes" and remarks "Why, he looks just like my old Bunny that was lost when I had scarlet fever!" (Bianco 13). It is, of course, the very same rabbit. And yet it is not, because as the final sentence states, "it really was his own Bunny, come back to look at the child who had first helped him to be Real" (Bianco 13). The child *helped* this rabbit become real and, in that way, still belongs to the boy. But the Rabbit *is* real now, made so through magic, love, and community.

Thus the notion of "realness" is equivalent, in this case, to the notion of subjectivity. The Rabbit gains subjectivity by not only experiencing itself as real but also by being seen as real by others. This chapter has discussed the way three different kinds of beings can similarly gain subjectivity and "realness," and can be brought into the realm of human kinship and community. For animals, bioengineered beings, and technological bodies, subjectivity is acquired through co-suffering: when human subjects can recognize shared experience within the Umwelt of that body, when they can learn to hear the voice of pain speaking through these different forms of embodiment, and when

they can learn to speak the pain language native to those bodies. In this way, human subjects can come to understand these vastly divergent others as kin, an act with radical implications. Treating animals as kin means reexamining the practices that cause such bodies to suffer, just as recent court cases have begun to consider whether animals have rights under the law[7]. Treating bioengineered beings as kin means reconsidering the ethics of creating life and the effect of human-animal hybridization on the definitions of humanity. Finally, treating technological beings as kin means reevaluating the way technology is used, created, and depended upon; is it ethical to create robotic life forms without considering their autonomous experiences? As the philosopher David Chalmers has asserted, artificial intelligence and its potential for consciousness raises heady "ethical issues about both the ethics of developing intelligent computer systems and the ethics of turning them off." With deeper integration of the technological and the biological, where exactly does life begin and what constitutes its end: is shutting down my phone killing it? These questions require answers as technologies continue to advance and the shared Umwelten of this planet grows ever more diverse.

[7] See, for example, the recent ruling from Argentina that declared an Orangutan a "non-human person" with rights to freedom that the zoo holding it was unlawfully denying it (Lough).

CHAPTER VI

CONCLUSION: WE'VE TAKEN GREAT PAINS TO GET HERE

"I want to write something
so simply
about love
or about pain
that even
as you are reading
you feel it" (Oliver 42)

The Author in Pain

"It's so hard to forget pain, but it's even harder to remember sweetness. We have no scar to show for happiness. We learn so little from peace" (Palahniuk 213).

I wrote this dissertation in pain. Between appointments with doctors, I wrote. Between medical tests, I wrote. While prone on the couch, I wrote. This dissertation is a labor of love, analgesics, heating pads, breathing techniques, therapy, anti-emetics, back rubs, prescription bottles, MRIs, headaches, gastrointestinal scopes, and a regimented diet. While hiking through the overgrown forest of my pain, I discovered rare flora and fauna, the offspring of theoretical concepts and lived reality. Seeing the theories I was reading and inventing erupt within my pain-wracked form, I felt the confusion produced by my pain ease. Of all pain's effects, puzzlement and chaos has always, for me, been the hardest to bear. The not knowing – not knowing why it is happening, when it will subside, what it means, and what it is doing to me – is worse for me than the pain itself. And so as I read and thought and tested and theorized and analyzed and pontificated about pain, my life grew easier. Even though I cannot answer all my questions about the provenance of *my* pain, I understand better the shape, nuance, and timbre of pain in general. I see how it unites, how it binds, how it can divide, and how it creates life. This knowledge, for me, has been a great comfort.

Living with chronic illness places me within that complicated category of "the disabled." As a person with a disability, I recognize that my life is impaired by the formulation of my body and by the construction of my society. Structures exist that restrict my full and unfettered access to the world, and those structures thus disable me. But I am not just impaired by the world: my body itself does not function as I hope it would. This is not a hope for greater skill or ability than the human form is typically designed to achieve; this is a hope for simple function. My body does not process food as I wish it would, does not generate neural responses as I wish it would, does not respond to stimuli as I wish it would. And these bodily processes cause pain, discomfort, fatigue, etc., which impair me just as much as expectations of universal ability do. So I wrote this dissertation about myself, as a way to carve out some understanding of my lived experience in this world.

Moreover, I wrote this dissertation because I am angry. I am angry at my body for failing in its primary duties, but more than that, I am angry at medical science for promising so much and returning so much less. An anecdote: I spent years having constant dysfunction in my gastrointestinal system. Because so much of the human digestive experience is discursively taboo, even abject, I simply never knew that there was anything the matter. Yes, I lived in consistent discomfort and yes, I had to go out of my way to manage that discomfort, but no, I would have said for much of my life, there's nothing wrong with my body. As I grew up and found that my lack of proper digestive function was impairing my career, my education, and my life, I finally began looking for answers. I did research: are my symptoms normal or abnormal? Just what exactly is normal or healthy digestion? But my search for answers stalled as, for years, a procession

of doctors dismissed my experience. Doctor after doctor went through the same series of responses: I'd describe my frequent gastrointestinal distress and constant headaches, the doctor would query my birth control, stress levels, and weight, and then would recommend that I lose ten pounds and try to reduce my stress. "Sleep more" and "take vitamin D" and "start an exercise regimen" and "cut down on coffee" – these were my diagnoses. It was not until my mid-twenties that a doctor took me seriously, ordered a simple blood test, and diagnosed me with a host of food allergies and intolerances. When I removed those items from my diet, my symptoms improved so dramatically that I scarcely recognized my own body. My doctors – a half dozen of them over the years – had interpreted my pain through a thick haze of cultural, gender, and age-based assumptions. My pain behavior did not match what they expected and thus, as far as they knew, I was fine.

Another anecdote: two friends recently brought into our world a daughter whom they love and cherish as fiercely as any parents can. As first time parents, they spent this child's first few days of life marveling at the mysteries of her tiny body, learning her moods and her cycles, translating her cries to requests for food, rocking, changing, burping. So a week into her life, when they noticed that she was not urinating on the schedule their parenting books had taught them to expect, they responded as all good parents would and went to the experts. Her doctors quickly diagnosed her with cancer, a cancer that developed within her in the womb, a cancer that she was born with. Her treatment has, thus far, been successful, but she exists in a grey area of medical research and practice. While there are clear statistics and data regarding the treatment and long-term prognosis of babies, toddlers, and children with this particular kind of cancer, there

is no data regarding its occurrence in newborns. So the doctors experiment, they test, they hope for the best. And these parents have learned what so many crips and their families have learned: to become advocates, to know more about the condition than the doctors do, to trust their expert assessment of the body in front of them.

And yet, my friends express frustration at their treatment by the medical establishment. After three courses of chemotherapy and numerous infections, they have become expertly familiar with their daughter's signs of distress. When she is listless, fussy, and can't sleep, they know she likely has another infection. But when they call in to their doctors, they are told that their daughter's symptoms do not seem to match the expected response of an infant to an infection. If she's not crying, these doctors say, then she is fine. Again, like a fog rolling in from the ocean, assumptions and expectations cloud the doctors' eyes, preventing them from fully believing the parents' knowledge of their daughter's body. These doctors plot this baby on a chart, using averages of other infants to assess her experience. But this baby is not an average, so what can a doctor truly know about the individual physiology of her pain? If pain is the body's alarm system, warning of damage from an intruder, how can we expect this body, born and bred with the danger inside it, to respond? In a child of this young age, pre-language and indeed possibly pre-self, what does a normative pain response look like? How can it be ranked on a chart, matched to a cartoon face?

These two examples are nothing special. Every person with a chronic illness has a story akin to these. Those of us living at the fringes of medicine, those of us whose conditions do not have easy diagnostic markers, or whose conditions are shrouded in stigma or mistrust, or whose conditions are rare or misunderstood, struggle to represent

ourselves to our care providers and to play the role of patient well enough to be actually seen. There are message boards, Tumblr posts, whole online communities of chronically ill people who not only provide support to one another, but who also discuss strategies for getting the best medical treatment possible. Many of us strategically prepare for our doctor's appointments as if we were preparing to perform on stage, considering how to present or respond to a multiplicity of variables. We practice dressing, doing our hair, and putting on makeup that looks clean and presentable enough that we are not dismissed as crazy, but also doesn't looks so good that we are dismissed as not being "sick enough." We write notes and make lists so that we can be sure to present all of our symptoms rationally and in order, which hopefully helps the doctor truly understand our suffering. At the same time, we also carefully work to avoid sounding as if we have already self-diagnosed based on internet searches, which might make the doctor believe we were faking our symptoms. Do we cry? Do we admit to stress and depression? Do we discuss our weight, or diet, or lifestyle? How much impairment do we acknowledge: enough to be taken seriously, but not so much that we are accused of melodramatic malingering? What kind of a person do we attempt to be?

This kind of performance is so mediated and structured that indeed patients may be performing a fictional version of themselves, fictional selves that doctors can safely engage with. To say that this is discriminatory, ableist, and ultimately may even be fatal is not enough. I want to say that it makes me angry, that I am angry about my treatment and about the fact that my knowledge of my body is not enough to assure me access to the medical miracles I see depicted in popular culture every day. In Chapter III, I critiqued the medical faces pain scales, arguing that these texts encourage care providers

to co-suffer with and relate to cartoon images instead of the patient. I argued that this forces patients to perform identificatory self-representation, wherein the patients collapse their three-dimensional bodily experience into a two-dimensional representation of themselves. Here I will go further: the performance I've described above is no different than this cartoon process.

Patients must walk into the doctor's office projecting before them a simulacrum of themselves, a perfect patient with whom this care provider can relate. Co-suffering is about more than just individual pain. Co-suffering speaks to issues of identity in broader and more complex ways. Because pain predominantly falls under the purview of the medical profession, co-suffering thus speaks to the interconnected identities of patients and care providers. I do not think it is a stretch to say, then, that identifying, classifying, and diagnosing pain challenges the very identities of doctors themselves. When patients present with symptoms that fall into the grey area of medicine, doctors must assess and explain these symptoms in order to maintain identity consonance. As Dr. Rob Lamberts puts it, chronic illness sufferers "scare doctors." According to Lamberts, doctors

> want to cure disease, to save lives ... [and when patients] don't get better, and it makes many [doctors] frustrated, and it makes some [doctors] mad ... We don't want to face things we can't fix because it shows our limits. We want the miraculous, and [many patients] deny us that chance.

So these lenses of mistrust and assumption exist not only because of biases, but also because of a doctor's own human fear of the unknown and the unknowable.

I'd stretch Lamberts' argument further: it's not just "chronic unsolvable disease" that threatens doctors, it's also those patients or symptoms who subvert the norm, patients

whose pain response is extreme, whose behavior is non-normative, whose differential diagnoses are a puzzle. Take, for example, the phenomenon known as "diagnostic overshadowing," when a diagnosis of mental illness elides other diagnoses (Garey). So serious is this problem, "At least 14 studies have shown that patients with a serious mental illness receive worse medical care than 'normal' people" (Garey). Indeed, research shows that

> people who suffer from a serious mental illness and use the public health care system die 25 years earlier than those without one. … 60 percent die of preventable or treatable conditions. … Two studies showed that patients with both a mental illness and a cardiovascular condition received about half the number of follow-up interventions… after having a heart attack than did the "normal" cardiac patients. (Garey)

With mental illness, environmental and genetic causes are intimately and confusingly interrelated, medical treatments don't always work, and etiologies are uncertain. For these reasons, the diagnosis of a mental illness is so profoundly challenging to doctors that it indeed challenges their whole identity as doctors, leading them to fail in their primary duty: treating their patients. And this, I believe, should make us all angry. All of this, I believe, should pain us all greatly.

Pain Matter: Thinking Through the Texts (One Last Time)

Throughout this dissertation, I have examined a variety of cultural and textual objects to uncover their insights about pain. Each text falls somewhere in the genres of science fiction and/or speculative fiction. A moment, then, to reconsider such generic distinctions, distinctions that simultaneously speak to the different world views contained

within each kind of text and also represent mere distinction without difference. What I mean to say is that genre is both incredibly helpful to our understanding of a particular text in context and also totally useless to our understanding of the text itself. So to those genres: what is the difference between science fiction, speculative fiction, and other genres that may intersect?

My definition is perhaps at odds with other definitions crowding the literary universe, and I make no assertions of my definition's primacy. I have found it useful, however, as I've thought through these texts, and thus I find it useful to present here. Speculative fiction is the umbrella: fictions that imagine a world that does not (yet?) exist. Science fiction and fantasy both fall under this umbrella (with some exceptions). In both genres, the world being imagined is dependent upon a particular kind of knowledge as its basis: scientific knowledge for sci-fi and magic and/or mysticism for fantasy. Speculative fiction can rely on neither: think of something like Suzanne Collins' blockbuster *Hunger Games* trilogy as an example of a dystopian speculative fiction that is not reliant upon science or magic to exist. Science fiction and fantasy can overlap, as in a text that interweaves magic and science, such as Frank Herbert's classic *Dune* series, or a text that gives scientific explanations to magic, such as in the recent *Magicians* trilogy by Lev Grossman. In a text like Isaac Asimov's *Foundation* trilogy, the world-building is reliant upon science even when characters in that text at times regard the science as magical. In a text like JRR Tolkien's *The Lord of the Rings* trilogy, Middle Earth is a magical world of powers that do not rely upon the physics of our earth to function and thus it is fantasy.

Such distinctions become particularly interesting in overlapping places. Can, for example, there be science fiction that is not speculative? I would argue that *House* and *Grey's Anatomy* are science fictions outside of speculation; both rely upon science (medicine, in both cases) to propel the plot, but both are set in the realistic present day. *House* can be placed in the overlap between non-speculative sci-fi and detective fiction; *Grey's Anatomy*, non-speculative sci-fi and melodrama. So can there be non-speculative fantasy? This is a harder question to consider, because any magic seems to require thinking about a world that does not exist, but perhaps certain kinds of religious fictions could be placed in the non-speculative fantasy category (not, albeit, without potential controversy) as they rely on the "magical" forces of the gods to propel their plots – the distinction would depend, in that case, on belief or disbelief in god. Interesting also are the ways that such distinctions can clarify popular texts: *Star Wars*, for example, is often considered to be a great work of sci-fi, but other than its extra-solar, space-based setting, it does not fit my criteria for sci-fi: its universe, replete with alien life forms and spaceship fights, does not depend on a scientific explanation of how such action came to be and instead uses the mystical justification of the Jedi's "force." The debate about my reclassification would likely be a lengthy and virulent one, given the right combatants, and it might never reach a satisfying conclusion. In this way, these generic definitions are, as I already attested, distinctions without difference. But in teasing apart the subtle differences interwoven into such texts, perhaps some new perspective on their portrayals of bodies can emerge.

Particularly interesting could be the project that maps genre conventions regarding pain; do fantasy texts, relying more on the mystical than the medical, approach

pain with a subtly different internal logic than science fiction texts do? What of non-speculative fiction? Non-fiction in general? Each chapter has been attentive to non-literary forms of narrative, everything from political rhetoric to internet memes to science writing. Exploring these genres in a more sustained fashion may illuminate themes of pain representation embedded within, much as my critique of the faces pain scales did. Such analysis may yield insights that transform cultural, medical, or scientific practices and assumptions about pain, making this a project with implications outside of just the academic realm.

Likewise, there is more to say about scales and spectrums. The pain scale, from no pain to unbearable pain, is but one example of the hierarchical thinking about bodies that is inherent to ableism, sexism, anthropocentricism, racism, and more. Putting pain on the same kind of Möbius spectrum I proposed in Chapter IV might offer different insights into the treatment of pain both socially and medically. Thinking about Möbius spectrums as a model for treating bodies in general may indeed offer new ways of considering health, happiness, and functionality. Hierarchical thinking posits a zero on the pain scale as ideal: lack of pain. But we have seen, in Chapter III, that lack of pain can be quite dangerous; the physical danger that CIP patients live with and the harm done to their bodies because they live with a constant zero is certainly not medically ideal.

So a zero is not always desirable. Moreover, positioning zero as the goal is simply not possible for all bodies, and thus over-emphasis on arriving at a zero may be indicative of a medical model of "curing" impairments instead of accepting bodies. Finally, that zero is so subjective as to be troublingly meaningless; in his blockbuster young adult novel *The Fault in Our Stars*, John Green features a young woman with cancer who

describes saving her ten for a time when she really means it. Her ten is likely vastly different from my ten or anyone else's ten, so determining her pain treatment based on such considerations is foolhardy. A Möbius spectrum of pain treatment would therefore offer individualized assessments that recognized the individual baseline and the individual need. Finding the personal equilibrium for each patient and then making adjustments to care, treatment, and lifestyle to remain within an acceptable range of that equilibrium would be the goal. Hospice care and palliative care systems for the dying and the elderly often use such an approach, treating each patient not to "cure" but to meet the needs of that particular body[1].

Finally, this dissertation poses further inquiry in the fields of animal studies and posthumanism. As robotic and cybernetic technologies increase in effectiveness, efficiency, and marketability, the presence of cyborgian systems in daily life will likewise increase. This posits new ways of engaging with prosthetics and technological bodies of all forms[2]. Contemporary texts such as the 2012 film *Robot and Frank*, the 2013 film *Her*, the 2011 novel *Robopocalypse* (among many, many others) are beginning to ask these questions in a new way, as perhaps has not been done since the heyday of *Blade Runner* (1982), *Total Recall* (1990), and *The Terminator* (1984). These texts all engage with questions of human-technology relationships and push towards new imaginations of the human animal, human communities, and non-human subjectivity. Before robots are as

[1] Mitch Kaminski's March 9, 2015 editorial in *The Washington Post* entitled "A doctor discovers an important question patients should be asked" addresses this approach to medicine. He argues that the appropriate guiding questions for patient care should be "What are your goals for care?" and "How can I help you?" instead of "How can I improve you?".

[2] And lacks of form, as recent interest in body-less or "cloud based" artificial intelligences may offer new ways of thinking about neurotypicality.

ubiquitous in real life as *The Jetsons* thought they would be, such texts offer us a way to think through the way that technological bodies will force a reconsideration of human bodies. Considering the affective power of pain may be crucial in our still-early stages of technological development and social mores; thinking deeply about the potential for kinship between humans and technological bodies may be a way to direct or redirect such research. Isaac Asimov's infamous "Three Laws of Robotics" may need an injection of pain theory to carry us into the cyborgian future[3], and the Turing Test may also benefit from considering how artificial intelligences might be able to co-suffer. Likewise, the anthropocene epoch has already begun its work trimming, pruning, and repotting this planet's tree of life, bringing about drastic changes in the makeup of the non-human animal population. Relationships between human animals and non-human animals are perforce going to continue changing alongside our climate and our technology, so again it is imperative that we begin to learn new ways of developing intercorporeal connections that upset the hierarchical Great Chain of Being.

Pain Matters

So what, then, at the end of this long meditation on the function and power of pain, is pain? Can we arrive finally at a definition or an expression of the thing itself? Can we draw cartoon faces, construct narrative representations, and engage in bodily responses until we *know* what pain is? I argue that the answer is a resounding no. Pain is

[3] George Dvorsky's wonderful article "Why Asimov's Three Laws Of Robotics Can't Protect Us" for the non-academic science fiction website io9 (and the comment thread on that same article) offers a fascinating examination of the ways that these three laws have already begun to fail as moral guideposts in the technological present. Even famed physicist Stephen Hawking has begun to warn against the danger of Artificial Intelligence (see the BBC's article under the doomsaying headline "Stephen Hawking warns artificial intelligence could end mankind" from 2 Dec. 2014 for more).

an empty center, a lack that cannot be filled: it is the Real outside of symbolic representation. We can know pain in its effects in our bodies, in the interior experience of it, and we can know it from the outside when we witness other bodies respond to it. Like dark matter, then, we can only so far study the way it works upon us as individuals and communities without being able to parse what it is made of.

Looking to the effects of pain is then the way we can deepen our understanding of this important, essential aspect of bodily experience. In his *Rabelais and His World*, Mikhail Bakhtin presents one of the most profound definitions of the body in its relation to the world through his conception of the grotesque. The grotesque body, he says, "can outgrow itself and fuse with other objects" (308). Indeed, he elaborates by explaining that the grotesque object "transgresses its own confines, ceases to be itself. The limits between one body and the world are erased, leading to a fusion of the one with the other and with surrounding objects" (310). Bakhtin looks to bodily experiences and even body parts to explain how this happens: he examines textual descriptions of pregnancy and childbirth, of phalluses and vaginas, of anuses and rectums, of the inversion of bodily hierarchies. In all of these examples, Bakhtin focuses on the way that these grotesqueries are expressed in "that which protrudes from the body, all that seeks to go out beyond the body's confines" (316). While this is a powerful and revelatory expression of the interconnections formed between bodies in a grotesque world, it nevertheless retains a reliance upon the body as a discrete entity: while the grotesque body might have its boundaries blurred by its protrusions and connections to other bodies, it is still framed as a separate entity that is being altered.

I therefore want to take Bakhtin a step further and claim that all bodies are grotesque and that narratives about bodies are designed to tirelessly and vigilantly project forth a sense of coherence upon bodies, making them whole and distinct as a discursive rejection of grotesquery. Bodies that cannot be narratively cloaked in this fashion are those that are visibly grotesque: crip bodies, subaltern bodies, marked bodies. Other bodies rely upon these narrative shields in order to retain their status under the bell jar of the normate. Discrete selves, then, are narrative objects, conglomerations of words and stories, put together in cultural and temporal perspective to mean something in the world. Bodies, in contrast, are feeling entities in connection with all that surrounds them.

Such a claim is not without precedent. Cutting-edge neuroscience has begun to pose similar theories for the construction of the self. Take, for example, the neuroscientist Jill Bolte Taylor. After having a stroke that left her with profound loss of language, Taylor describes the understanding she had, at the time, of herself as being an entity that existed only in "the present moment" ("Words"). In her interview for the WYNC radio show *Radiolab*, Taylor explains that, without the "chatter" in her brain that language provides, she did not have thoughts but instead had "joy" and an "experience of 'I'm this collection of these beautiful cells. I am organic. I'm this, this organic entity'" ("Words"). This is a state of being in the body that is distinct from the story we tell about what it means to be a self. And thus, as Taylor says, because she "did not have that portion of [her] language center that tells a story," she also "lost all definition of [her]self in relationship to everything in the external world" ("Words"). She was a grotesque: a body without boundaries.

Without the narrative process of self-creation, the body as a discrete entity dissolves. Neuropsychologist Paul Broks believes that the experience Taylor describes during her stroke is where we would all be without stories. He says that "the extended self, which is what we normally think of when we think about ourselves, is really a story. It's a story of what's happened to that body over time" ("Who Am I?"). And thus because we are a story, we are only what we say we are and what we are seen to be: we are a narrative construction made of stories we tell to ourselves and stories that others tell about us.

But pain slices through this narrative project. It pierces and unites bodies; it pulls apart the individual and reveals the communal. Thus pain is one of the ways to see and re-see the world, to lay bare social formations and hierarchies, to engage with the messiness of flesh and form. I believe, then, that pain is not just a trial to grin and bear and make it through. It is not just a physical wound and an individual problem. It is a voice that, when we listen to it carefully, can help us learn to pull the wool from off our eyes and see the intercorporeity that makes up our bodies and our worlds. Pain is important. When one body witnesses another body in pain, those two bodies can be pulled together and combined, creating kinship and subjectivity that can change the way bodies are treated in the world. Representations of pain are important. When a text features a body in pain and lets the reader witness that pain, the textual body and the physical body are likewise pulled together, creating the potential for whole classes of bodies to become kin and subject. And so I end by asserting: bodies are important, and learning to see the world as only made up by bodies offers the possibility of treating all beings, including our fragile world, with greater reverence, respect, and kinship.

REFERENCES CITED

A Life Without Pain. Dir. Melody Gilbert. Frozen Feet Films, 2005. DVD.

Ahmed, Sara. *The Cultural Politics of Emotion*. New York: Routledge, 2004. Print.

Atwood, Margaret. *Maddaddam*. New York: Nan A. Talese / Doubleday, 2013. Print.

---. *Oryx and Crake*. New York: Anchor Books, 2003. Print.

---. *The Year of the Flood*. New York: Anchor Books, 2009. Print.

Bacigalupi, Paolo. "The People of Sand and Slag." *Wastelands: Stories of the Apocalypse*. Ed. John J. Adams. San Francisco: Nightshade Book, 2008. 39-54. Print.

Baker, Connie Morain. "FACES History." *Wong-Baker FACES Foundation*. N.p., n.d.. Web. 29 Aug. 2014.

Bakhtin, Mikhail. "The Grotesque Image of the Body and Its Sources." *Rabelais and His World*. Trans. Helene Iswolsky. Cambridge: MIT University Press, 1984. 303-367. Print.

Battaglia, Fiorella and Antonio Carnevale. "Epistemological and Moral Problems with Human Enhancement." *Humana.Mente*, 26 (2014): V-XXI. Print.

Bendelow, Gillian, and Simon Williams. "Transcending the Dualisms: Towards a Sociology of Pain." *Sociology of Health & Illness*, 17.2 (1995): 139-165. Web. *Academic Search Premier*. 7 May 2014.

Bianco, Margery W, and William Nicholson. *The Velveteen Rabbit: Or, How Toys Become Real*. 1922. Garden City, NY: Doubleday, 1976. Print.

Bishop, Kyle W. *American Zombie Gothic: The Rise and Fall (and Rise) of the Walking Dead in Popular Culture*. Jefferson, N.C: McFarland & Co, 2010. Print.

Borsook, David and Lino Becerra. "Emotional Pain without Sensory Pain—Dream On?" *Neuron.* 2 (2009): 153-55. Print.

Bourke, Joanna. *The Story of Pain: from Prayer to Painkillers*. Oxford: Oxford University Press, 2014. Print.

Brosh, Allie. "Boyfriend Doesn't Have Ebola. Probably." *Hyperbole and a Half*. Blogspot, 10 Feb. 2010. Web. 29 Aug. 2014.

Brown, Sandra. “Dissociation Isn’t a Life Skill.” *Psychology Today*. Psychology Today Online. 22 Nov 2012. Web. 3 Mar 2015.

Bukatman, Scott. *Terminal Identity: The Virtual Subject in Postmodern Science Fiction*. London: Duke University Press, 1993. Print.

Bynum, Bill. “Drapetomania.” *Lancet*. 356.9241(2000): 1615. Print.

Chalmers, David. “How do you explain consciousness?” *TED Talks*. TED, Mar 2014. Web. 6 Mar 2015.

Children of Men. Dir. Alfonso Cuarón. Perf. Clive Owen, Julianne Moore, and Chiwetel Ejiofor. Universal Pictures, 2006. DVD.

“corporeity, n.”. OED Online. December 2012. Oxford University Press. Web. 11 February 2015.

Cronin, William. “The Trouble with Wilderness; or, Getting Back to the Wrong Nature.” *Uncommon Ground: Rethinking the Human Place in Nature.* New York: W. W. Norton & Co., 1995. 69-90. Web. 23 Mar 2015. <http://www.williamcronon.net/writing/Trouble_with_Wilderness_Main.html>

“Cut and Run.” *Radiolab Shorts*. WNYC. 1 Nov. 2013. *Radiolab Podcast Archive*. Web. 19 Nov. 2014.

Daly, Jim. “Fetal Pain Opens Eyes to Preborn Humanity.” *Daily Focus*. Focus on the Family, 26 Sep. 2013. Web. 21 April 2014.

Davis, Lennard J. “Constructing Normalcy: The Bell Curve, the Novel, and the Invention of the Disabled Body in the Nineteenth Century.” *The Disability Studies Reader*. ed. 2. Ed. Lennard Davis. New York, 2006. 3-16. Print.

Danziger, Nicolas, Isabelle Faillenot, and Roland Peyron. “Can We Share a Pain We Never Felt? Neural Correlates of Empathy in Patients with Congenital Insensitivity to Pain.” *Neuron.* 2 (2009): 203-12. Print.

“Days Gone Bye.” *The Walking Dead*. Creators Frank Darabont and Robert Kirkman. AMC, 2010. *Netflix.com*. Web. Oct 2012.

Descartes, Rene. *Descartes: Selected Philosophical Writings*. Trans. John Cottingham, Robert Stoothoff, and Dugold Murdoch. Cambridge, MA: Cambridge UP, 1988. Print.

“DNA.” *Natural History Museum UK*. N.p., n.d. Web. 5 Mar 2015.

Dreger, Alice Domurat. “Jarring Bodies: Thoughts on the Display of Unusual Anatomies.” *Perspectives in Biology and Medicine*. 43.2 (Winter 2000): 161-172. Print.

Dubow, Sara. *Ourselves Unborn: A History of the Fetus in Modern America*. Oxford: Oxford University Press, 2011. Print.

Epstein, David. *The Sports Gene: Inside the Science of Extraordinary Athletic Performance*. New York City: Penguin, 2013. Print.

“Feel No Pain.” *TV Tropes*. N.p., n.d. Web. 8 Sep. 2014.

Fernandez, John. “Heart Attack Symptoms: Are They Different Between Men and Women?” *Health, Life & Community*. Baptist Health South Florida, 8 Feb. 2013. Web. 24 Feb. 2015.

“Finn Pain Scale.” *Pendleton Ward’s Cartoon Tumblr*. Frederator, 4 Nov 2013. Web. 29 Aug. 2014.

Friend, Tad. “Second-Act Twist.” *The New Yorker*. N.p., 17 Oct 2011. Web. 1 Apr 2015.

Fristoe, Travis. “I, too, was a Teenage Marvel Zombie: Review of *Give our Regards to the Atomsmashers!: Writers on Comics*, Ed. Sean Howe.” *ImageTexT: Interdisciplinary Comics Studies*. 2.1 (2005): n. pag. Web. 10 Jun 2013.

GameboyRMH. (June 11, 2008 9:11 a.m.). Message posted to “Cars with ‘facial expressions’.” *Grassroots Motorsports*. Grassrootsmotorsports.com. Web. 29 Jan 2015.

Gamez, David. “Progress in Machine Consciousness.” *Consciousness & Cognition*, 17.3 (2008): 887-910. Print.

Garey, Juliann. “When Doctors Discriminate.” *Sunday Review: Opinion*. New York Times online. 10 Aug 2013. Web. 3 Mar 2015.

Garland-Thomson, Rosemarie. “Elegy for Oscar Pistorius.” *Aljazeera*. Aljazeera.com. 14 Mar 2013. Web. 10 Nov 2014.

---. “The Beauty and the Freak.” *Disability, Art, and Culture*. 37.3 (Summer 1998): 459-74. Web. 12 Sep. 2014.

---. *Extraordinary Bodies: Figuring Physical Disability in American Culture and Literature*. New York City: Columbia UP, 1997. Print.

---. “Misfits: A Feminist Materialist Disability Concept.” *Hypatia*. 26.3 (Summer 2011): 591-609. Print.

Gilmore, Leigh. “Agency without Mastery: Chronic Pain and Posthuman Life Writing.” *Biography* 35.1 (2012): 83-98. Web. 13 Jan 2014.

Halva-Neubauer, Glen A. and Sara L. Zeigler. “Promoting Fetal Personhood: The Rhetorical and Legislative Strategies of the Pro-Life Movement after *Planned Parenthood v. Casey*.” *Feminist Formations* 22.2 (2010): 101-123. *Project MUSE*. Web. 11 Apr. 2014.

Haraway, Donna. “Encounters with Companion Species: Entangling Dogs, Baboons, Philosophers, and Biologists.” *Configurations*. 14.1 (2006): 97-114. Web. *Project Muse*. 20 Feb 2013.

Hatfield, Charles. *Hand of Fire: The Comics Art of Jack Kirby*. Jackson, MS: University Press of Mississippi, 2012. Print.

Heckert, Justin. “The Hazards of Growing Up Painlessly.” *The New York Times*. NYTimes.com, 15 Nov. 2012. Web. 14 Jan. 2014.

“Hereditary sensory and autonomic neuropathy type 4.” *Orphanet*. N.p., Nov. 2007. Web. 3 Sep. 2014.

Herzog, Hal. *Some We Love, Some We Hate, Some We Eat: Why It's so Hard to Think Straight About Animals*. New York, NY: Harper, 2010. Print.

“The History of Psychiatry & Homosexuality.” *LGBT Mental Health Syllabus*. Association of Gay & Lesbian Psychiatrists. N.p., 2012. Web. 27 Feb. 2015.

Honkasalo, Marja-Liisa. “Space and Embodied Experience: Rethinking the Body in Pain.” *Body and Society*, 4(2): 35-57. Print.

“Insensitive.” *House, M.D.*. Fox Broadcasting Company, 2007. *Netflix*. Web. 8 Sep. 2014.

Jen. “Photo of the Day: Your excuse is invalid.” *Youth Are Awesome*. N.p., 31 Jan 2012. Web. 23 Mar 2015.

Karis-Nix, Benjamin. “The Silky, Milky, Totally Strange Saga of the Spider Goat.” *Modern Farmer*. 16 Sep 2013. Web. 5 Mar 2015.

Kaul, Padma, Wei-Ching Chang, Cynthia M. Westerhout, Michelle M. Graham, and Paul W. Armstrong. “Differences in admission rates and outcomes between men and women presenting to emergency departments with coronary syndromes.” *CMAJ: Canadian Medical Association Journal = Journal De L'Association Medicale Canadienne*, 177(10): 2007. 1193-1199. Print.

Kermode, Frank. *The Sense of an Ending: Studies in the Theory of Fiction*. New York: Oxford University Press, 1967. Print.

Kirby, Jack. *The Eternals*. Eds. Mark D. Beazley and Cory Sedlmeier. New York: Marvel Publishing, 2006. Print.

Korte, Barbara. "The Semantics of Physical Pain in Science Fiction." *English Studies*. 90.3 (2009): 294-304. Print.

Kristeva, Julia. *Powers of Horror: An Essay on Abjection*. Trans. Leon S. Roudiez. New York: Columbia University Press, 1982. Print.

Lamberts, Rob. "A Letter to Patients With Chronic Disease." *Musings of a Distractible Mind*. 14 July 2010. Web. 3 Mar 2015.

Landwehr, Jan R, Ann L McGill, and Andreas Herrmann. "It's Got The Look: The Effect Of Friendly And Aggressive 'Facial' Expressions On Product Liking And Sales." *Journal Of Marketing* 75.3 (2011): 132-146. *Communication & Mass Media Complete*. Web. 29 Jan 2015.

Latour, Bruno. "Love Your Monsters: Why We Must Care for Our Technologies As We Do Our Children." *The Breakthrough*. Winter 2012. Web. 7 Mar 2015.

---. and Steve Woolgar. *Laboratory life: The construction of scientific facts*. New York: Sage Publications, 1979. Print.

Lee, Susan J., et al. "Fetal Pain**:** A Systematic Multidisciplinary Review of the Evidence." *JAMA* 294.8 (August 2005): 947-954. *The JAMA Network*. Web. 11 Apr. 2014.

Lincoln, Kevin. "Now-Tragically-Ironic Oscar Pistorius "Bullet" Nike Ad Campaign Removed From His Website." *Buzzfeed Sports*. Buzzfeed, 14 Feb 2014. Web. 23 Mar 2015.

Lorde, Audre. *Conversations with Audre Lorde*. Ed. Joan Wylie Hall. Jackson, MS: University of Mississippi Press, 2004. Print.

Lough, Richard. "Captive orangutan has human right to freedom, Argentine court rules." *Reuters*. 21 Dec 2014. Web 6 Mar 2015.

MacLeod, Duncan. "Oscar Pistorius Runs for Nike." *Inspiration Room*. N.p., 14 Aug 2008. Web. 23 Mar 2015.

McCaffery, Margo. "Choosing a faces pain scale." *Nursing*. 32.5 (2002): 68. Print

McCarthy, Cormac. *The Road*. New York: Vintage Books, 2006. Print.

McCloud, Scott. *Understanding Comics: The Invisible Art*. New York: HaperCollins, 1994. Print.

Meldrum, Ml. "A Capsule History of Pain Management." *Journal Of The American Medical Association*, 18 (2003): 2470-475. *Jstor*. Web. 18. Feb 2015.

Melzack, Ronald. "The McGill Pain Questionnaire: Major properties and scoring methods." *Pain*. 1.3 (Sep 1975): 277-299. Print.

Merleau-Ponty, Maurice. *Nature: Course Notes from the Collège de France*. Trans. Robert Vallier. Evanston, Illinois: Northwestern UP, 2003. Print.

Merskey, H. "Logic, Truth and Language in Concepts of Pain." *Quality of Life Research*, 3 (1994): S69-S76. *Jstor*. Web. 10. Nov 2012.

Miller, Frank, Klaus Janson, and Lynn Varley. *Batman: The Dark Knight Returns*. New York City: DC Comics, 1986. Print.

Miller, Gerald A. *Exploring the Limits of the Human Through Science Fiction*. New York: Palgrave MacMillan, 2012. Print.

Mitchell, David T, and Sharon L. Snyder. *Narrative Prosthesis: Disability and the Dependencies of Discourse*. Ann Arbor: University of Michigan Press, 2001. Print.

---. "Narrative Prosthesis." *The Disability Studies Reader*. Ed. Lennard J. Davis. 4th ed. New York: Routledge, 2013. 222-235. Print.

Morris, David B. *Illness and Culture in the Postmodern Age.* Berkeley: University of California Press, 1998. Print.

Morrison, Grant and Frank Quitely. *All-Star Superman*. New York City: DC Comics, 2011. Print.

National Institute of Clinical Studies. *Emergency Care Acute Pain Management Manual* National Health and Medical Research Council. Canberra, AU. 2011. Web. 23 Mar 2015.

National Institutes of Health. "NIH Human Microbiome Project defines normal bacterial makeup of the body." *NIH News*. National Human Genome Research Institute, 31 July 2012. Web. 1 July 2014.

Nolan, Rachel. "Behind the Cover Story: Justin Heckert on Learning About Pain From a Girl Who Feels None." *The New York Times.* NYTimes.com, 19 Nov. 2012. Web. 16 Sep. 2014.

---. “Behind the Cover Story: Michael Sokolove on Oscar Pistorius.” The 6th Floor. *The New York Times Magazine Online*. NYTimes.com, 23 Jan 2012. Web. 11 Dec 2014.

Oakley, Ann. *The Captured Womb*. Oxford, UK: Basil Blackwell Publisher, 1984. Print.

Oliver, Mary. *Evidence: Poems*. Boston: Beacon Press, 2009. Print.

Palahniuk, Chuck. *Diary*. New York: Anchor Books, 2003. Print.

Pain of the Unborn: Hearing Before the Subcommittee on the Constitution of the Committee on the Judiciary, House of Representatives, One Hundred Ninth Congress, First Session, November 1, 2005. Washington: U.S. G.P.O, 2005. Print.

Paterson, Kevin and Bill Hughes. “Disability Studies and Phenomenology: the carnal politics of everyday life.” *Disability and Society*. 14.5 (1999): 597-610. Print.

Pernick, Martin S. *A Calculus of Suffering: Pain, Professionalism, and Anesthesia in Nineteenth-Century America*. New York: Columbia UP, 1985. Print.

Perry, Alex. “Pistorius and South Africa’s Culture of Violence.” *History / Crime*. *Time Magazine Online*, 11 Mar 2013. Web. 23 Mar 2015.

Pollack, Andrew. “Scientists Add Letters to DNA’s Alphabet, Raising Hope and Fear.” *Business Day*. New York Times, 7 May 2014. Web. 5 Mar 2015.

Prolifeinformation. “2013 05/23 Jill Stanek Testimony.” Online video clip. *YouTube*. YouTube, 23 May 2013. Web. 11 April 2014.

Reagan, Leslie J. *When Abortion Was a Crime.* Berkeley, CA: University of California Press, 1997. Print.

Rincon, Paul. “Is the World Ready for GM Animals?” *BBC Science and Environment News*. BBC Online, 25 Feb 2015. Web. 5 Mar 2015.

Rollin, Bernard E. *The Unheeded Cry: Animal Consciousness, Animal Pain, and Science*. Oxford: Oxford University Press, 1989. Print.

Scarry, Elaine. *The Body in Pain: The Making and Unmaking of the World*. New York: Oxford UP, 1985. Print.

Shepard, Paul. *The Others: How Animals Made Us Human*. Washington, D.C: Island Press, 1996. Print.

Siebers, Tobin. *Disability Theory*. Ann Arbor: University of Michigan Press, 2008. Print.

---. “Body Theory: From Social Constructionism to the New Realism of the Body.” *The Disability Studies Reader*. 2nd ed. Ed Lennard J. Davis. New York: Routledge, 2006. 173-184. Print.

Silva, Carla Filomena, and P. David Howe. “The (In)validity of Supercrip Representation of Paralympian Athletes.” *Journal Of Sport & Social Issues*. 36.2 (2012): 174-94. Web. 25 Oct. 2014.

Singh, Maanvi. “Younger Women Hesitate To Say They're Having A Heart Attack.” *Shots: Health News from NPR*. NPR.org, 24 Feb. 2015. Web. 24 Feb. 2015.

Sokolove, Michael. “The Fast Life of Oscar Pistorius.” *The New York Times Magazine Online.* Nytimes.com, 18 Jan 2012. Web. 20 Oct. 2014.

Solinger, Rickie. *Reproductive Politics: What Everyone Needs to Know*. Oxford: Oxford University Press, 2013. Print.

“Sometimes a Fantasy.” *Grey’s Anatomy*. American Broadcasting Company, 2006. *Netflix*. Web. 8 Sep. 2014.

Sontag, Susan. *Illness as Metaphor*. New York: Farrar, Straus and Giroux, 1978. Print.

Spelman, Elizabeth V. *Fruits of Sorrow: Framing Our Attention to Suffering*. Boston: Beacon Press, 1997. Print.

Stanek, Jill. “Testimony Transcript.” Hearing: H.R. 1797, the “District of Columbia Pain-Capable Unborn Child Protection Act,” 23 May 2013. Web. June 2014.

Taylor, Sunaura. “Beasts of Burden: Disability Studies and Animal Rights.” *Qui Parle: Critical Humanities and Social Sciences*. 19.2 (Spring/Summer 2011): 191-222. Web. *Project Muse*. 20 Jan 2015.

“Three Stories.” *House, M.D.*. Fox Broadcasting Company, 2005. *Netflix*. Web. 8 Sep. 2014.

Trigg, Roger. *Pain and Emotion*. Oxford: Oxford University Press, 1970. Print.

Verstynen, Timothy and Bradley Voytek. *Do Zombies Dream of Undead Sheep?: A Neuroscientific View of the Zombie Brain*. Princeton, NJ: Princeton UP, 2014. Print.

Wagner, David. “What Does It Mean That Adam Lanza Might Not Have Been Able to Feel Pain?” *The Wire*. Thewire.com, 17 Dec. 2012. Web. 16 Sep. 2014.

WALL-E. Dir. Andrew Stanton. Burbank, CA: Walt Disney Home Entertainment, 2008. DVD.

"Who Am I?" *Radiolab*. WNYC. 9 Aug. 2010. *Radiolab Archive*. Web. 13 Mar. 2015.

Williams, David. "Acclimation during Space Flight: Effects on Human Physiology." *Canadian Medical Association Journal.* 180.13 (2009): 1317-1323. Print.

Williams, Nigel. "Death of Dolly Marks Cloning Milestone." *Current Biology.* 6 (2003): R209-R210. Print.

Wojcik, Daniel. *The End of the World As We Know It: Faith, Fatalism, and Apocalypse in America*. New York: New York UP, 1997. Print.

Woolf, Virginia. *On Being Ill*. 1930. Ashfield, MA: Paris Press, 2012. Print.

"Words" *Radiolab*. WNYC. 4 Feb. 2005. *Radiolab Archive*. Web. 13 Mar. 2015.

Wylde, Vikki, et al. "The Colour of Pain: Can Patients Use Colour to Describe Osteoarthritis Pain?" *Musculoskeletal Care*. 12 (2014): 34-46. Print.

Young, Robert M. "Racist Society, Racist Science." *The Human Nature Review*. N.p. 28 May 2005. Web. 27 Feb. 2015.