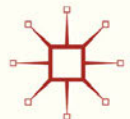
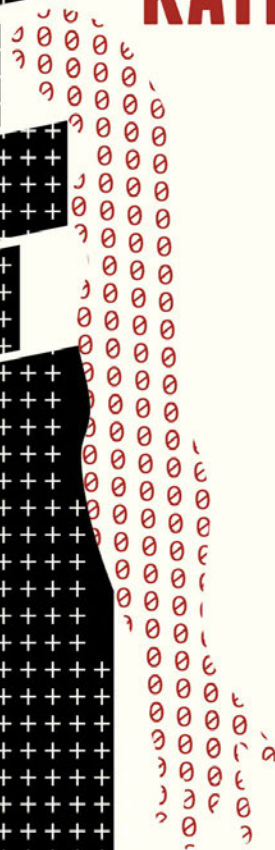
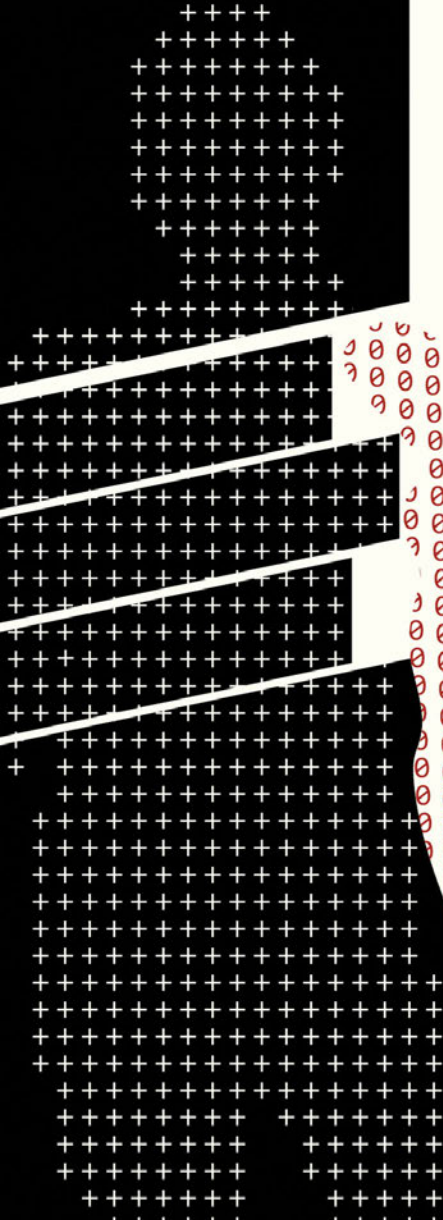


# DISABILITY IN SCIENCE FICTION

REPRESENTATIONS OF  
TECHNOLOGY AS CURE

KATHRYN ALLAN



# Disability in Science Fiction

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Disability in  
Science Fiction  
*Representations of  
Technology as Cure*

Edited by Kathryn Allan

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# Contents

Acknowledgments	vii
Introduction: Reading Disability in Science Fiction <i>Kathryn Allan</i>	1
<b>Theorizing Disability in Science Fiction</b>	
1 Tools to Help You Think: Intersections between Disability Studies and the Writings of Samuel R. Delany <i>Joanne Woiak and Hioni Karamanos</i>	19
2 Freaks and Extraordinary Bodies: Disability as Generic Marker in John Varley's "Tango Charlie and Foxtrot Romeo" <i>Ria Cheyne</i>	35
3 The Many Voices of Charlie Gordon: On the Representation of Intellectual Disability in Daniel Keyes's <i>Flowers for Algernon</i> <i>Howard Sklar</i>	47
4 The Metamorphic Body in Science Fiction: From Prosthetic Correction to Utopian Enhancement <i>António Fernando Cascais</i>	61
<b>Human Boundaries and Prosthetic Bodies</b>	
5 Prosthetic Bodies: The Convergence of Disability, Technology, and Capital in Peter Watts's <i>Blindsight</i> and Ian McDonald's <i>River of Gods</i> <i>Netty Mattar</i>	75
6 <i>The Bionic Woman</i> : Machine or Human? <i>Donna Binns</i>	89
7 <i>Star Wars</i> , Limb Loss, and What It Means to Be Human <i>Ralph Covino</i>	103

8	Animal and Alien Bodies as Protheses: Reframing Disability in <i>Avatar</i> and <i>How to Train Your Dragon</i> <i>Leigha McReynolds</i>	115
---	---	-----

**Cure Narratives for the (Post)human Future**

9	“Great Clumsy Dinosaurs”: The Disabled Body in the Posthuman World <i>Brent Walter Cline</i>	131
---	---	-----

10	Disabled Hero, Sick Society: Sophocles’s <i>Philoctetes</i> and Robert Silverberg’s <i>The Man in the Maze</i> <i>Robert W. Cape Jr.</i>	143
----	---	-----

11	“Everything Is Always Changing”: Autism, Normalcy, and Progress in Elizabeth Moon’s <i>The Speed of Dark</i> and Nancy Fulda’s “Movement” <i>Christy Tidwell</i>	153
----	---	-----

12	Life without Hope? Huntington’s Disease and Genetic Futurity <i>Gerry Canavan</i>	169
----	--	-----

	List of Contributors	189
--	----------------------	-----

	Works Cited	193
--	-------------	-----

	Index	213
--	-------	-----

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## INTRODUCTION

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# Reading Disability in Science Fiction

*Kathryn Allan*

The Sixty-Seventh World Science Fiction Convention (WorldCon) in August 2009 featured a panel titled “Death, Illness and Disability in Fantasy and Science Fiction.” The session was absolutely packed with fans, many of whom identified as persons with disabilities. Throughout the too-brief hour, people shared stories of identifying with specific disabled (or bodily limited) characters and insightfully critiqued the technologies imagined within various science fiction (SF) scenarios. At the time, as a newcomer to the unique world of SF fandom, I was struck by the communal desire to discuss disability as it is represented in SF. Once the panel was finished and we were politely reminded to vacate the room, I knew that I wanted to keep the conversation going. Since then, I have repeatedly encountered a SF community—both academic and fan<sup>1</sup>—eager to engage with questions of dis/ability, as well as embodiment and identity, for people with disabilities.

From the latest 2005 evocation of BBC’s *Doctor Who* to the futuristic-inspired albums of Janelle Monáe, there has been a marked interest in SF over the past decade as SF-inspired television shows, movies, comics, and even pop music capture the attention of both casual fans and scholars. SF has always mirrored the present; it is a genre that criticizes the politics and ideologies of the current day, as its writers imagine the possibilities of future worlds, both utopian and dystopian. As SF narratives gain prominence in the popular culture arena, many of them feature disabled characters—think of 2011-blockbuster *Source Code*’s severely maimed hero, Colter Stevens (played by Jake Gyllenhaal), or the beautiful but abused genetically engineered Emiko in Paolo Bacigalupi’s Hugo and Nebula Award-winning *The Windup Girl* (2009). The need to address issues of disability and the disabled body as depicted in these stories about the possible futures of humanity is pressing for those of us who desire to move

forward as an inclusive human community. SF narratives involving people with disabilities inevitably also feature technology as either curing or attempting to contain their unruly bodies; in *Source Code*, for example, Colter Stevens's body is sustained by a high-tech life-support system while his mind is hooked up to a computer, enabling him to inhabit an alternate reality. In another turn on the theme, where the disabled body cannot be contained, *Iron Man 3* (2013) pits the technologically empowered Tony Stark against a league of "cured" disabled war veterans who have been literally—and problematically—turned into weapons of destruction. As the pace of advancements in prosthetic and other computerized assisted-living technologies quickens, we find ourselves faced with new possibilities, both mundane and transformative, for disabled bodies and embodiments. This collection seeks to begin the conversation between disability studies and science fiction, and to map out the many diverse trails that we can travel—whether we walk, wheel, or transcend ourselves along those paths of inquiry—to discover not only the ways in which disability is socially constructed today but how we might approach conceiving disabled embodiments in the future.

SF has long explored deviant and disabled bodies: from Mary Shelley's Frankenstein's monster to James Cameron's wheelchair-bound hero, Jake Sully (played by the able-bodied Sam Worthington), in *Avatar* (2009), SF is inhabited by people (and aliens) whose embodiments are situated along the entire spectrum of ability. Considering the diverse range of the representations of persons with disabilities in SF, it is surprising that there has not been more sustained critical work in the area. While more scholars are directing their attention to SF, the number of people interested in both SF and disability remains small. *Disability in Science Fiction* seeks to address this gap by bringing together 12 interdisciplinary readings of disability in SF, with a specific focus on technology as (failed) cure. In my opinion, no other literary genre comes close to articulating the anxieties and preoccupations of the present day as clearly and critically as SF, making it a vital source for understanding advances in technology and its impact on newly emerging embodiments and subjectivities, particularly for people with disabilities.

### **Whose SF Are We Talking About?**

There are many books and articles devoted to the generic definitions of SF, each with its own particular thematic or conventional distinctions. For the purpose of this collection, the parameters for what counts as SF are intentionally broad, for two reasons: first, in order to demonstrate the range of productive critiques that arise from introducing a disability studies (DS) lens into SF studies, I believe it best to provide a variety of textual examples; second, a generous take

on what constitutes SF makes the material more accessible to a larger readership by offering discussions of texts that will be familiar to a popular reading and viewing audience. Due to a necessity to impose some sort of limit on the scope of the project, the essays in this collection take up the most readily consumed SF in the form of short stories, novels, film, and television (excluding conversations about SF in comics, graphic novels, and music).

In terms of the actual definition of *science fiction*, I let respected scholars and writers of SF guide me. Perhaps the most oft-quoted definition of SF comes from Darko Suvin's seminal work, "Estrangement and Cognition" (in *Metamorphoses of Science Fiction* published in 1979): "Science fiction in general—through its long history in different contexts—can be defined as 'a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment'" (qtd. in Bould 238). While this popular definition expresses the dominant characteristic of much SF as an alternative imaginative framework, critics such as Marleen Barr have argued that in some SF subgenres, especially those that explicitly interrogate social structures and identities (like feminist SF), the technologies and politics envisioned in the narratives do in fact "reflect existing conditions in the author's empirical environments" (82).<sup>2</sup> I suggest that this same contention applies to the ways in which disability is represented in SF narratives. While the settings and temporal framework of SF may differ dramatically from our own current reality, the way in which disability and people with disabilities are represented—as well as the technology that is used to contain or cure them—often directly reflects present-day biases and stereotypes. Considering the predilection of many SF authors to write directly out of their known environments for sociopolitical commentary, I prefer to approach the definition of SF as author Nalo Hopkinson does: "When people ask me to define science fiction and fantasy I say they are the literatures that explore the fact that we are tool-makers and users, and are always changing our environment" (144–45).

SF narratives that imagine the future possibilities of the human and human being are the central focus of this collection. Joanna Russ articulates the importance of SF's yet-to-be-realized futures, as SF "writes about what is neither impossible *nor possible*; the fact is that, when the question of possibility comes up in science fiction, the author can only reply that nobody knows. We haven't been there yet. We haven't discovered that yet. Science fiction *hasn't happened*" (22). Russ's definition speaks to the ability of SF to act as an early warning system: what are the possible futures, both positive and negative, that can arise out of our current potentialities? In this way, SF, as a genre, performs as a uniquely productive site wherein to discuss the future ways of constructing disability. In order to take an effective survey of those possibilities, this collection encompasses

the many subgenres of SF. “Due to the negotiated exchanges between different segments of culture,” Brian Attebery explains, “there are so many options: hard or soft, eco-feminist and libertarian-militaristic, North American and Everywhere Elsian, SF on the page and SF on the screen” (170). Due to this expansiveness of vision, topics, temporality, and subgenre, I agree with Paul Kincaid’s assessment that “science fiction is defined not by something intrinsic to the genre, but rather it is in the eye of the beholder” (44); in other words, we know it when we see it. SF, in the context of this collection then, is a genre that performs the critical work of imagining a future that is yet to come and, as James Gunn notes, a genre that when we read it, “we recognize that it applies to the real world, and we ask it real questions” (9).

### Defining Disability

Before I delve deeper into the connections between SF and disability that this book seeks to address, I need to first define disability. Disability studies (DS) scholars are careful to distinguish the difference between physical impairment and the social construction of disability. In *Bending Over Backwards*, Lennard Davis explains that “[i]mpairment is the physical fact of lacking an arm or leg. Disability is the social process that turns an impairment into a negative by creating barriers to access” (12). This distinction between impairment and social process is central to DS because, as a field of inquiry, it seeks to expose the ways in which disabled bodies are construed as other, deviant, and nonnormative, when, in fact, human bodies exist along a spectrum of difference. Tobin Siebers articulates this key focus of DS scholarship as such:

Unlike the medical approach, the emerging field of disability studies defines disability not as an individual defect but as the product of social injustice, one that requires not the cure or elimination of the defective person but significant changes in the social and built environment. Disability studies does not treat disease or disability, hoping to cure or avoid them; it studies the social meanings, symbols, and stigmas attached to disability identity and asks how they relate to enforced systems of exclusion and oppression, attacking the widespread belief that having an able body and mind determines whether one is a quality human being. (3–4)

The field of DS is also inherently advocative, as Sharon Snyder and David Mitchell state that “disability draws the attentions of fields that seek to cure, fix, repair, or deny its existence. *Disability is a difference that exists only to be undone*” (190; emphasis in original). Since the disabled body has been long an object primarily defined and studied by the medical and therapeutic fields, DS strives to articulate disability as a social ideology of a particular form of human

embodiment. By contesting the medical frame in which disability has historical been placed, DS seeks to remove the socially constructed aura of deficiency and deviancy from the disabled body. Margrit Shildrick notes that, all too often, “[i]nstead of triumphant transcendence, the compromised body may invite the assumption of intellectual insufficiency [ . . . ] or alternatively the outward appearance of an ailing body may be taken as the sign of an inner deficiency of will, or prior moral dereliction” (72). DS seeks to remove this veil of dereliction from disability, insisting on the natural variation of human bodies and exposing the illusions of inviolability and self-mastery over the body.

Through the reframing—or, perhaps more accurately, the *deframing*—of disability, there are two key modes of engagement within disability studies: the first is to expose and rewrite existing narratives of disability, using the lens of disability to produce new ways of thinking of the body; the second is to use DS as a site of advocacy for the rights of people with disabilities. As Jean Moore and Mary Kosut observe in their introduction to *The Body Reader*, “Even though 15 percent of the population is made up of people with disabilities, these bodies are rendered invisible in social spaces, political arenas, and intellectual endeavors” (5). DS aims to raise disability from the level of the individual to the level of the community (which, as my experience at the sixty-seventh WorldCon demonstrates, is a welcomed shift in discourse). This political project resonates throughout this collection: not only are negative images of disability unpacked, but the writers suggest ways in which their readings of disability in SF can be productive in forming an inclusive community of human belonging.

Also relevant to the focus of this book, DS seeks to undo the moral imperative able-bodied people claim when containing and attempting to “cure” or “rehabilitate” the disabled body to normative standards: “Regardless of ethical intent, those on the receiving end of (limited) beneficence are never able to claim equal agency while their vulnerability remains. Vulnerability is positioned, then, as that which impairs agency in the ‘damaged’ other while inspiring moral action on the part of the secure self to make good the perceived lack” (Shildrick 77). By reclaiming a central, active position for the disabled body, DS dramatically shifts the way in which we conceive of the body and its attending social constructions and debates, such as abortion, assisted suicide, and genetic research (Siebers 4). This framework reflects the long-standing tradition of SF as a genre that explores the future potentialities of human bodies from a variety of perspectives (some ableist and some not) and, in turn, makes SF narratives particularly productive sites of critical interrogation of the disabled body. Whether the body in question is human or alien, a DS approach has the potential to reframe long-reproduced SF narratives about physical difference, body modification, environmental adaptations, medical research, and technological transcendence.

### Reading Disability in SF

In many ways, SF has been patiently waiting for disability scholars to notice it. The language of futurity is evident throughout DS's central theoretical canon, as it situates the disabled body in its various temporal locations through the historical treatment of disability, and in the "radical promise" (Snyder and Mitchell 203) DS offers in terms of awareness and advocacy for the rights of disabled peoples. Snyder and Mitchell argue the discourse around disability is one that simultaneously looks backward and forward: "In a culture that endlessly reassures itself that it is on the verge of conquering Nature once and for all, along with its own 'primitive' instincts and the persistent domain of the have-nots, disability is referenced with respect to these idealized visions. As a vector of human variability, disabled bodies both represent a throwback to a human prehistory and serve as the barometer of a future without 'deviancy'" (32).

Siebers also evokes the future when he articulates the care that must be taken in ensuring that the body is not reduced to mere a tool that we wield without reservation: "It is easier to imagine the body as a garment, vehicle, or burden than as a complex system that defines our humanity, any knowledge that we might possess, and our individual and collective futures" (26). In addition to serving as a bodily barometer of future perfection, as Susan Wendell explores, the suffering body experiences a different temporal embodiment. With persistent sensations of suffering (such as pain, nausea, and exhaustion), time ceases to be experienced in a constant linear fashion. For those who suffer, time does not fly, but "the difficulty of living moment to moment with unpredictable, debilitating symptoms can be alleviated by having a strong sense of self that negotiates its ability to carry out its projects with the sick body" (176). The disabled body, in SF narrative representations of disability, can be a powerful site of reimagining the temporal possibilities of embodiment and even transcendence from the body.

Writing from outside of the field, Elaine Graham recognizes the natural affinity between SF and the kind of ontological investigation (i.e., the study of the nature of being or existence) present in DS: "Fantastic, utopian and speculative forms of fiction—epitomized by science fiction—shock our assumptions and incite our critical faculties. As refractions of the same, as evidence for the ascribed and not essential nature of human nature, monsters, aliens and others provide clues for the moral economy or 'ontological hygiene' by which future categories of the human/posthuman/non-human might be decided" (13). Along the human spectrum—extended even further here by Graham's evocation of both the posthuman and the nonhuman—there are infinite variations of embodiment. Because of SF's unique ability to refract both "the ascribed and not essential" natures of bodies, it is a particularly productive genre for

critiquing disability. While it is not fair to say that existing DS scholarship has completely left SF in the corner, the field's engagement with the genre is still in its introductory stages. Taking up Hollywood film, Snyder and Mitchell identify a shared disability script across many genres where "bodies are subjugated to their worst fears of vulnerability, and/or the already disabled is scripted out of control" (163) but only briefly engage with SF titles. When they do, however, it is worth nothing that they praise the genre for its "counter discursive forays" into the presentation of disability in such SF films as *Gattaca*, *Unbreakable*, *X-Men*, and *X2* (167). Unlike the typical non-SF flick, where viewers watch a set of freak encounters being played out, Snyder and Mitchell argue that in SF, disability is often central to the plot.<sup>3</sup>

While engagement with disability in SF film is limited, there has been greater attention paid to representations of disability within literature. Addressing the various "frames"<sup>4</sup> of disability in literature, Ato Quayson in *Aesthetic Nervousness* argues, "It is important to bear in mind that attitudes to people with disabilities at any historical conjuncture are often multifarious, even in contexts that appear more enlightened and progressive. It is literature more than anything else that helps refract these multivalent attitudes towards disability" (36). While I appreciate Quayson's attention to literature, his focus on "high culture" literature (all the texts in his analysis are Nobel prize winners), I believe that is through the genre of SF, regardless of its media form, where popular audiences most widely encounter representations of disability, both positive and negative. Since the genre's inception, disabled characters have been visible in SF: in short stories, such as Robert A. Heinlein's "Waldo" (published 1942), where the "crippled" lead is both misanthropic and brilliant; and in long-running and award-winning series like Lois McMaster Bujold's *Vorkosigan* saga (started in 1986, with the latest work, *Cyroburn*, published in 2010), which features Miles Vorkosigan, a man with brittle bones. While SF writers have not always created fair or positive depictions of people with disabilities, SF is nevertheless a genre rife with deviant and impaired bodies.

Despite his omission of SF texts in his study, Quayson nevertheless importantly reminds us that "[t]o say that the literary model [of disability] provides an analogue to reality does not mean that it is the same as that reality" (30). Disability in early literary texts, like Shelley's *Frankenstein*, is often equated with monstrosity, of both the physical and cultural kind. SF has been home to these "monsters" since the inception of the genre, and often the disabled body stood in for a whole of host of socially constructed and marginalized otherness—sexual deviance, criminality, moral and intellectual deficiency, ethnic and racial difference, and so on.<sup>5</sup> As SF stories kept pace with technological and social progress, however, disability began to be represented as a modifiable condition that offers opportunity for the enhancement of the human body through SF



figures such as the cyborg (depicted in smash-hit films like *Robocop* and *Terminator*). Disability is now often characterized as a physical or mental impairment that is supplanted through the application of technology, transforming the disabled body into a figure of prosthetic awe and medicalized prowess (e.g., Marvel's Professor X, leader of the X-Men, uses a specialized wheelchair and other high-tech devices to both "overcome" his disability and enhance his mutation). With DS emphasizing the importance for people with disabilities to be included in public forums, SF offers a unique site to seek out and reframe these excessive representations of disabled bodies. As Attebery notes, "By using images of the future to describe the present, the popular media invite us to use futuristic scenarios as tests of viability. Any group that cannot negotiate a place for itself in the imagined future is already obsolete" (192). Given that the disabled body has historically been seen as inherently monstrous and is still undergoing attempts of containment and erasure, establishing a strong and positive presence of people with disabilities in SF scenarios can be one way to ensure their collective, and ideally better, future.

Regardless of ability, DS reminds us that all bodies are transforming bodies. Whether it is through genetics, accident, or the inevitable change from able-bodied to disabled through the process of aging,<sup>6</sup> the human body is not a static one. The human body is always changing, sometimes in surprising and unfamiliar ways, and this causes anxiety for those who wish to enforce a normative definition of embodiment (i.e., "this is what a normal human looks/acts like"). As Rosemarie Garland-Thomson writes, "Medical science's influential preference for normality and prejudice against abnormality can render novelty in human form repugnant to us" (32). SF, however, often takes the abnormal body, the novel form, and reimagines its usefulness. Instead of viewing bodily variation as deviancy, many SF texts reframe the disabled body as not only monstrous but also adaptive and subversive. "When bodies begin to malfunction or look unexpected, we become aware of them," continues Garland-Thomson, "they expose themselves by becoming bodies rather than tools of our intentionality" (37). Since much SF takes up issues of technology, the notion of the body as tool becomes repositioned or reframed through the lens of disability studies. While SF undoubtedly recuperates stereotypical and biased views of the disabled body, the potential for reading—and imagining—alternative human bodies as transformative in the genre is worthy of sustained critical attention.

### **"Curing" the Disabled Body**

Throughout both fictional and lived experiences of disability, the disabled body is treated as contaminated or unruly and therefore in need of control by others (Shildrick 73). And more often than not, whenever there is disability in a SF

narrative, there is the parallel trope of “cure.” So dominant is the concept of curing any instance of perceived disability, DS theorists return to it repeatedly, giving *cure* a twofold meaning. The first evocation of cure is the most obvious, common in both medical discourse and fiction, as in “curing” or “fixing” the disabled body of its perceived lack of normality and health. The second use of *cure* reframes the discussion of disability in SF texts by moving away from a simple determination of whether a disability is being represented as in need of cure to a more expansive and critical consideration of *how* the cure narrative is performing in that text. In other words, what does it mean to cure the disabled body, what are the cure’s outcomes, and are they desirable?

The medical characterization of the disabled body as requiring cure—in order to become “normal”—has become part of our larger cultural construction of disability. There is a great deal of pressure to rehabilitate, or to “make normal,” the disabled person or otherwise risk condemnation from both the medical and social communities. The ideology of the perfect body—and our ability to make imperfect bodies perfect through medical intervention—is woven throughout our various social discourses, and the onus to be a perfect body rests on both the abled and disabled alike. Quite simply, as Moore and Kosut state, “The larger message conveyed in the media is clear. If you have the means and the desire, your body can be potentially made more perfect than its natural or embryonic state” (6). Of course, the perfect body is an illusion that no one is capable of maintaining (as all bodies inevitably become ill and die at some point). Nevertheless, the idea of curing the body of its infirmities is a powerful trope repeated throughout the entire history of the SF genre. From utopian SF that sees an end to disability (like the alternative feminist future world in Marge Piercy’s *Woman on the Edge of Time*) to dystopian SF scenarios of failed cures (seen in Rupert Wyatt’s recent *Rise of the Planet of the Apes*) or cures that are only available to the wealthy few (a la Andrew Niccol’s *Gattaca*), SF is quite an experienced practitioner in reflecting the ideology of the “perfect body.”

We can see an evolution of the representations of “cures” or “fixes” for disability on the SF screen, for instance, with the example of *Star Trek*’s Captain Pike. In the *Star Trek: The Original Series* episode “The Menagerie” (1966), Pike (played by Jeffery Hunter) is severely injured during battle, leaving him confined and dependent on a wheelchair unit (operated by his brain waves) that encases his body, leaving only his badly burn-scarred face visible. To communicate, Pike’s chair is equipped with one large light that blinks once for *yes* and twice for *no*. This *Original Series* Captain Pike is pitiable, and Captain Kirk—the very embodiment of masculine health and vitality as played by William Shatner—struggles to gaze on Spock’s old mentor. Fast forward to 2009, when director J. J. Abram’s glinting reboot of the *Star Trek* franchise hit the screens and reimagined the iconic disabled figure of Pike (now played by Bruce

Greenwood). While still injured in battle, Pike clearly earns his wounds as a hero and is shown in the final scenes of the movie in a simple wheelchair, smiling, and fully functioning aside from his inability to walk. The 2009 Captain Pike is a far cry from the 1966 version—the representation of his character’s disability demonstrates the change in cultural attitudes toward people with disabilities (i.e., less monstrous, more heroic), as well as highlighting the advancement of the technological “fixes” for disability to be less visible. Despite the gains we see through the figure of Captain Pike, the desire to cure his injuries and return him to—or get him closest to—the idealized vision of the perfect/normal body remains (and, it should be noted, in *Star Trek: Into Darkness* [2013], Pike has traded his wheelchair for a simple cane and has no visible disabling injuries).

From reproductive technologies that further eradicate and limit the reproduction of disabled people to prosthetics that replace missing limbs and extend the function of the body, technology is an essential component in cure narratives. As the Captain Pike example illustrates, technology is often the “fix-all” for whatever ails or deforms the body (whether it be a visible absence of an arm or the hidden vagaries of an “errant” gene). In utopian visions, when integrated into the able body, technology makes the human body better—an idealized version of itself. When technology is applied to the disabled body, however, all too often it is in an attempt to cure or normalize what is deemed “wrong” with the body. Take the technology away and the disabled body’s supposed lack remains.

### Prosthesis and the Posthuman

*Disability in Science Fiction* is particularly interested in unpacking the ways in which prosthesis and the posthuman figure in SF representations of disability. In terms of its technology and function, prosthesis has significant resonance for both DS and SF studies. A prosthetic is most often a visible marker, filling in something that is “supposed” to be there, a tool that corrects an impairment. Siebers points out that while no one questions able-bodied people using tools, such as lawn mowers, stairs, and so forth, to make their physical lives easier, “[t]he moment that individuals are marked as disabled or diseased, however, the expectation is that they will maintain the maximum standard of physical performance at every moment, and the technologies designed to make their life easier are viewed as expensive additions, unnecessary accommodations, and a burden on society” (30). Prosthetics, then, are heavily weighted with social meanings that go beyond their mere function as tools; they can represent the beneficence—as well as the distaste—of the able-bodied to make the disabled less deficient and more “normal.” When analyzing prosthesis in SF, it is important to go beyond what is visible—the prosthetic—to interrogate the relationship that exists between prosthesis, the (dis)abled user, environment,

and culture. The body, therefore, remains the focus of analysis, as prosthesis is another (narrative) tool in the representation of disability and an element that speaks to the way in which disabled bodies are contained, controlled, or transformed through technology.

Technology is often positioned as a solution to overcome the physical or mental limitations of the human body, but the quest to transcend the body ignores the lived realities of laboring, feeling, and suffering bodies, and is “generally a luxury of the healthy and able-bodied” (Wendell 173). By problematizing transcendence from the dis/abled body, we open up the space to challenge the so-called benefits of merging the body with the technology. In Western culture, as Siebers notes, “We are capable of believing at once that the body does not matter and that it should be perfected” (8). Of course, the body does matter, and the cultural impetus to perfect it places strain on imperfect able-bodies and marginalizes and medicalizes disabled bodies. The journey toward posthumanism then, through the lens of disability, is not a clear cut case of inevitable human progress. Uncritical posthumanism, both within and outside of SF narratives, promotes a transcendence that disregards the lived inequalities and suffering of human beings in the present: “While many visions of the posthuman desire to transcend the limitations of the human body through technology or genetic redesign, I argue that is important to return to a notion of embodied subjectivity in order to articulate the ethical implications of technologies of bodily modification. Technological visions of a post-embodied future are merely fantasies about transcending the material realm of social responsibility” (Vint 8). In many ways, DS is about grounding the fantasies of able-bodied transcendence—a freeing of the body that is done either at the expense of or with disregard to the disabled body.

When it comes to exploring the posthuman, SF has long been lauded as an exemplar genre for this discussion by many posthuman theorists (just note the resounding success of the Wachowski brothers’ *Matrix* trilogy or the enduring debate over Vernor Vinge’s notion of the Singularity). Sherryl Vint proposes that SF is “a space in which models of possible future selves are put forward as possible sites for identification on the part of readers” (20). I believe that is it crucial that we begin looking at those “future possible selves” of people with disabilities in earnest and try to imagine a future where the full spectrum of human variation is on display. Unfettered posthumanism is in danger of eradicating those bodies of visible difference, and the impulse to imagine our future selves as posthuman paragons ignores the lived realities of the various bodies that rely on prosthetic technology today in ways that are mundane, visceral, and difficult.<sup>7</sup> Even though many people with disabilities require access to and rely on technologies to live out their lives as independently as possible, to hold them up as posthuman exemplars ignores their struggles with institutionalized marginalization and

medicalized constraint. These so-called already posthuman bodies are not given the agency to define embodiment for themselves and must struggle against the myriad barriers, both physical and cultural, that they encounter in their daily lives. Therefore, care must be given to reading the disabled body as first and foremost human, before suggesting the ways in which it might transcend or go beyond “normal” human embodiment.

### The Collection

In the first section, “Theorizing Disability in Science Fiction,” the focus is on the ways in which disability as a social and discursive construction functions in SF narratives. Each essay in this part addresses the possibilities of SF to reconceptualize and reshape how we approach disability and disabled embodiments. Bringing together DS work on representation and identity, Joanne Woiak and Hioni Karamanos, in “Tools to Help You Think: Intersections between Disability Studies and the Writings of Samuel R. Delany,” read Delany’s 1967 novel *The Einstein Intersection* and explore the writer’s exploration of “difference.” Woiak and Karamanos contend that Delany’s SF provides a rich site for critiquing disability as a socially constructed identity. Ria Cheyne proposes that disability can function as a generic marker, aiding in the distinction of genres such as SF and crime fiction, in her contribution, “Freaks and Extraordinary Bodies: Disability as Generic Marker in John Varley’s ‘Tango Charlie and Foxtrot Romeo.’” Analyzing the representation of disabled bodies in Varley’s story, Cheyne highlights the use of medical science and eugenic motifs as a way to encourage readers to think about the social construction of disability. In Howard Sklar’s “The Many Voices of Charlie Gordon: On the Representation of Intellectual Disability in Daniel Keyes’s *Flowers for Algernon*,” he examines the framing of intellectual disability. Sklar’s reading suggests that Keyes struggles with both conventions of genre—in terms of recuperating SF dystopian generic tropes—and representing the technologically mediated disabled protagonist, Charlie, through difference in narrative voice. In “The Metamorphic Body in Science Fiction: From Prosthetic Correction to Utopian Enhancement,” António Fernando Cascais theorizes the disabled body as a metamorphic one, paying specific attention to the integration of technology into its construction as he traces its history and many reiterations within SF narratives from the 1940s to 1970s. Cascais ends his discussion by outlining the most common “shape-shifting” themes in SF (with an emphasis on short fiction).

The second section of the collection, “Human Boundaries and Prosthetic Bodies,” places analytical emphasis on the connections between disability, prosthesis, and human being. Each essay is interested in the ways dis/abled bodies use prosthetics to challenge normative discourses of ability and generate novel

space of embodiment. Netty Mattar's "Prosthetic Bodies: The Convergence of Disability, Technology, and Capital in Peter Watts's *Blindsight* and Ian McDonald's *River of Gods*" starts the discussion through her examination of the prosthetic body as it is linked to capitalism and technology. Mattar argues that both Watts and McDonald portray prostheticization as a voluntary—and, nevertheless, exploitive—act, rather than as a means to reestablish the disabled body as a normative one. Problematizing the figure of the cyborg, Donna Binns analyzes the technologically reformed (disabled) body of the character Jaime Sommers (played and influenced by the actress Lindsay Wagner) in "*The Bionic Woman: Machine or Human?*" Drawing on feminist and DS criticism, Binns articulates the complex relationship that develops between Jaime's reliance on "bionic" prosthetics and her sense of humanity. Addressing the use of prosthetics from a classical viewpoint, Ralph Covino unpacks the cultural constructions of disability and amputation in "*Star Wars, Limb Loss, and What It Means to Be Human.*" Taking up the in-world binary of the dark side versus the light side of "the force," Covino discusses the representation of the disabled body in *Star Wars* as a hybrid one, where technological prosthetics threaten the ability of an individual to claim "good" human status. Closing this second area of investigation, Leigha McReynolds's essay, "Animal and Alien Bodies as Prostheses: Reframing Disability in *Avatar* and *How to Train Your Dragon*," puts forward a reading of "prosthetic relationships" in two recent fantastical films. McReynolds argues that Joan Gordon's theorization of the "amborg" (an "ambiguous hybrid" creature) has the potential to restructure normative notions of agency, disability, and prosthesis.

Lastly, a consideration of SF narratives' ability to proliferate new understandings of what constitutes "cure" for (post)human bodies is central to the essays in the third and final section, "Cure Narratives for the (Post)human Future." Reading Olaf Stapledon's *Star Maker* and Greg Bear's *Blood Music*, Brent Walter Cline challenges the texts' implicit ideologies of human identity and consciousness in "'Great Clumsy Dinosaurs': The Disabled Body in the Posthuman World." Cline's essay speaks to the influence of posthumanism on the (rhetorically opposed) construction of the disabled body. Bringing together the works of Sophocles and Robert Silverberg, Robert W. Cape Jr. performs a reading of the texts' engagement with illness, disability, and human being in his essay, "Disabled Hero, Sick Society: Sophocles's *Philoctetes* and Robert Silverberg's *The Man in the Maze*." Cape focuses on the role disability plays in *The Man in the Maze* to show how Silverberg treats the disabled hero as a reflection of society's framing of "illness" and difference. In "'Everything Is Always Changing': Autism, Normalcy, and Progress in Elizabeth Moon's *The Speed of Dark* and Nancy Fulda's 'Movement,'" Christy Tidwell compares the different approaches to living with autism and what constitutes human progress as

presented by Moon and Fulda. Tidwell proposes that unlike Moon's reliance on technological solutions, Fulda creates a future wherein difference is embraced through understanding, acceptance, and even celebration. "Life without Hope? Huntington's Disease and Genetic Futurity" by Gerry Canavan ends the collection with a reflection on the concept of "prospective disability," cure, and hope in SF narratives. Using Huntington's disease as the focal point, Canavan addresses the inherited disease's genetic futurity in a selection of SF works such as Octavia Butler's "The Evening, the Morning, and the Night," Kurt Vonnegut's *Galapagos*, Robert Sawyer's *Frame-Shift*, and Ian McEwan's *Saturday*.

In each of these chapters, disability is unpacked and exposed as a (particularly Western) medical model of impairment. Whether SF scenarios of disability play out across the big screen or within the lines of a short story, the presence of—and seeming need for—the trope of "technology as cure" is ubiquitous. *Disability in Science Fiction* is only at the start of this exciting interdisciplinary conversation between disability studies and science fiction. The hope is that this collection inspires more scholars and fans of the SF genre to critically discuss the representations of disability and peoples with disabilities in our favorite films, television shows, and books. Too often, disability is cast in a negative light in SF narratives; the use of a prosthesis signals a loss of humanity, or a perceived cognitive impairment necessitates technological "enhancement." When we imagine a future world without disability, we end up erasing a significant group of people from our ideal vision of a collective human identity and history. It is important that we interrogate these outdated cultural frames of disability and seek new ways of reading and writing the disabled body so that we, as a human community, might move forward into the future together.

## Notes

1. It is worth noting that, unlike other fields of academic study, SF is subject to the strong influence of "the industrious science fiction community consisting of dedicated readers who embody and maintain the traditions of the genre, carry on their own painstaking research, and express their own views concerning the quality and stature of its authors" (Westfahl 2). Since I wanted to make this book accessible for the many nonacademic SF fans interested in this line of critical inquiry, it is necessary to present our academic voices clearly. This does not mean that there is a neglect, discounting, or "dumbing down" of the theoretical engagement and critical rigor of this collection, but that I have strived to ensure that the language is accessible to as many as possible. As William Peace has articulated, "People with disabilities have embraced the internet with gusto and have formed a vibrant cyber community. Disability studies scholars have also embraced the Internet, but their communication and scholarship is restricted and exclusionary. This is a significant problem" ("Slippery Slopes" 343).

2. Barr argues, “Discussions of pregnancy and power in feminist science fiction do not adhere to Darko Suvin’s well-known definition of science fiction as ‘a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the authors’ empirical environment’ (Suvin, 7–8). The depictions of reproductive technology in feminist science fiction reflect existing conditions in the authors’ empirical environments” (82).
3. As well, due to the brevity of their engagement with SF, Snyder and Mitchell’s conclusion is also relatively narrow: “All these films foresee a dystopic future where various incarnations of the gene police provide evidence of a new eugenics on the near horizon of our social context” (167).
4. Quayson argues that “the intervention of the literary representation is an intervention into a world that already situates disability within insistent framings and interpretations. The literary domain rather helps us to understand the complex *processes* of such framings and the ethical implications that derive from such processes” (24). He then goes on to identify nine main categories of disability representation in literature:
  1. Disability as null set and/or moral test
  2. Disability as interface with otherness (race, class, and social identity)
  3. Disability as articulation of disjuncture between thematic and narrative vectors
  4. Disability as bearer of moral deficit/evil
  5. Disability as epiphany
  6. Disability as signifier of ritual insight
  7. Disability as inarticulable and enigmatic tragic insight
  8. Disability as hermeneutical impasse
  9. Disability as normality. (52)
5. See Shildrick: “That which is different must be located outside the boundaries of the proper, in black people, in foreigners, in animals, in the congenitally disabled, and in women; in short in all those who might be seen as monstrous. At the least contentious level, monsters—whether those already cited, or those of disordered maternal impressions, of science-fiction literature, or of the becoming-cyborg—evoke opposition to the paradigms of a humanity that is marked by self-possession. Moreover, what is at stake in a politics of identity and difference is the security of borders that mark out the places which are safe and which are unsafe, and who is due moral consideration and who is not” (5). See also Angela M. Smith’s *Hideous Progeny* for an excellent discussion of disability and eugenics in classic horror film.
6. Siebers, among other DS critics, argues, “For better or worse, disability often comes to stand for the precariousness of the human condition, for the fact that individual human beings are susceptible to change, decline over time, and die” (5).
7. Smith criticizes the philosophers of technology who “[t]end to indulge in a metaphorical poetics of technologization at the expense of the more mundane reality of material lives that are lived through technology and the body *as it is experienced* through the technology that it must employ—to the extent, for instance, that the figure of the disabled body has for them become a living, shining embodiment of posthuman existence in prosthetic times” (“The Vulnerable Articulate” 46).



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*Theorizing Disability in Science Fiction*

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## CHAPTER 1

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# Tools to Help You Think

## Intersections between Disability Studies and the Writings of Samuel R. Delany

*Joanne Woiak and Hioni Karamanos*

### **“Between the Real and—the Rest”**

Disability as a form of human difference is a theme woven throughout the genre of science fiction (SF). Characters who have disabilities, or who encounter disability communities, often cast much-needed light on the social and cultural forces at work in creating disability oppression and liberation (Verlager). Samuel R. Delany ranks among the foremost practitioners and critics of socially conscious SF, and his writing refutes the stereotypical view that SF is inferior in aesthetic and social value to “realistic” fiction. He characterizes SF in terms of its unique ability to create “unreal worlds, [in which] chords are sounded in total sympathy with the real” (“About 5,750 Words” 29). According to Delany, quality SF writing entails a “significant distortion of the present that sets up a rich and complex dialogue with the reader’s here and now” (“*Dichtung und Science Fiction*” 176).

Delany’s 1967 novel *The Einstein Intersection* distorts meanings of “disability” by employing genre conventions explicated in his essays and interviews. The novel’s structure also disrupts generic boundaries as a challenge to dominant cultural narratives. Delany and his characters fabricate realities that grant human variations new meanings outside the current regimes of enforced normalcy. Our disability studies (DS) reading of *The Einstein Intersection* reveals a text that focuses a critical lens on contemporary disability justice issues. Although much of Delany’s writing merits DS analysis, we focus specifically on *The Einstein Intersection* because it is thematically inclusive of disability despite being written before the advent of the modern disability rights movement. Through representations of the indeterminate nature of human diversity

and social transformation, the novel converges with DS critiques of biomedical understandings of disability and essentialist identity politics, offering readers a chance to transcend existing visions of discrimination and inclusion.

As Rosemarie Garland-Thomson argues, the disabled figure throughout culture and literature is vitally important, because it “informs the identity—and often the fate—of real people with extraordinary bodies” (15). The real people whose experiences are frequently reflected—and potentially shaped—by Delany’s fiction encompass those with nonnormative bodies marked by race, sexuality, and disability. Delany himself identifies as “other” in terms of being black, gay, dyslexic, and a SF author. Jeffrey Allen Tucker notes in *A Sense of Wonder: Samuel R. Delany, Race, Identity, and Difference* that some critics have labeled Delany an “anti-race race man,” because he claims personal investment in racial justice even though his fiction seemingly depicts postracialized worlds (27). Likewise, we might consider *The Einstein Intersection* an “anti-disability disability novel.” The story examines notions of bodies that are “different,” but it does not signal that difference according to any single, familiar category. It does not resolve questions about what paths social liberation and transformation should follow. As an exploration of norms and constructs of identity, it provides a lens through which to reconsider the past, present, and future of disability.

Delany presents futuristic mythologies that incorporate diversity on multiple—and ambiguous—levels. *The Einstein Intersection* portrays an utterly unrecognizable society with an indefinitely “outsider” protagonist. In his critical writing about the techniques and functions of SF, Delany theorizes that ambiguity and indeterminacy are hallmarks of the genre: “[Science fiction] is a tool to *help* you think about the present—a present that is always changing, a present in which change itself assures there is always a range of options for actions, actions presupposing different commitments, different beliefs, different efforts [ . . . ] It presents alternative possible images of futures, and presents them in a way that allows you to question them as you read along in an interesting, moving, and exciting story” (“The Necessity of Tomorrows” 34). Delany’s writing recognizes “the interplay between the text itself and readers’ expectations about life and literature” (Samuelson, “Necessary Constraints” 112). In “The Possibility of Possibilities,” he describes SF as a “heated dialog,” in which story and audience engage with each other’s “plural, fragmentary, and alive” visions (Beam 14). *The Einstein Intersection* exemplifies Delany’s principle that SF should help you think critically about future possibilities—but not tell you *how* or *what* to think. The novel examines, models, and invites the reader to participate in the process of generating new cultural scripts about the lived experience of difference. Delany refuses to employ genre conventions merely to appease calls for utopian futures. Rather, he illustrates how interpretations of disability—like interpretations of science fiction texts—are always open to questioning.

### Enforcing and Resisting Normalcy

The transformative potential of Delany's work—encompassing science fiction, literary criticism, memoir, and teaching—is achieved by “observ[ing] and analyz[ing] the center” to expose and decenter hegemonic narratives (Tucker 38). His fiction is an especially fruitful “contested terrain” for a variety of readers, who “‘invent’ different Delanys, or conceptions of the author that conform to their own desires, agendas, and politics” (5). We choose to invent a Delany invested in critically analyzing disability in relation to representation, identity, and empowerment. In the spirit of Delany's frequent references to a jewel's refracted light—a metaphor for the value of pluralistic perspectives—we argue that a disability reading illuminates the value of *The Einstein Intersection* as a critique of social norms and a means of “imagining a radical other to what is” (Tucker 42–43). Disability remains a neglected dimension of what Tucker calls Delany's “investment in the politics of difference” (40). Interpreted within the frameworks of Delany's analysis of the language of science fiction and of disability studies scholarship, *The Einstein Intersection* offers powerful tools for appreciating human diversity and creating change by and for real people.

*The Einstein Intersection* is set on Earth in the far future. The protagonist and narrator, Lo Lobey, embarks on a quest to find and kill Kid Death, the murderer of Lobey's friend and lover, La Friza. The roughly structured storyline mirrors, among other Western cultural patterns, the ancient heroic myths of Theseus and Orpheus, and references the contemporary artistic legends of the Beatles and Elvis. Delany denies the reader clues about normative physicality and psychology in this place and time. Many characters tell Lobey that he is “different,” but just how much, or in relation to whom, is unclear.

Lobey's description of himself emphasizes his musical talents and physical attributes: he is “ugly” with a body shape resembling “hermaphrodites” and a “small brown face” (1). Readers seem invited to envision him as a person of color (Peter Nicholls in the *Encyclopedia of Science Fiction* describes him as a “black musician”). Additionally, Lobey and several minor characters possess physical characteristics reminiscent of nonhuman animal species. Extraordinary abilities signal the most dramatic forms of “difference.” In particular, several main characters exhibit telepathy and telekinesis, while other notable traits include Friza's muteness, the “special training” required by some individuals in order to participate in society (42), and the “simple” mentality of some of Lobey's friends (3). Individuals considered functionally impaired from birth face compulsory institutionalization, including those labeled “idiots, mongoloids, and cretins” (2). This broad range of representation demonstrates the novel's interest in destabilizing assumptions about disability, normalcy, and identity.

Throughout *The Einstein Intersection*, characters refer to genetic mutations and controlled breeding as sources of physical and mental variations in their populations. The story engages with difference on individual and biological levels, but it also considers difference in social relational terms. “How different Lobey is, and why, depends, of course, on the others in his environment and on what this environment is all about” (von Glahn 111). Revelations of what constitutes the “norm,” and how its boundaries are enforced, become apparent only as Lobey ventures through distinct social and cultural milieus: his close-knit forest village, the nomadic group living in the harsh desert, and an urban center characterized by class stratification. He encounters different social constructions of and attitudes toward disability, providing tools for readers to think about patterns of exclusion and inclusion.

Readers eventually discover that Lobey and the other inhabitants of Earth are members of an alien race living among the abandoned artifacts of human (contemporary Western) civilization. The aliens seek to replicate the norms of human corporeality, behaviors, and culture, by genetic manipulation and by learning and reenacting the “irrational”—namely, ancient and modern myths (11). Among the artifacts is a supercomputer with the mythological name PHAEDRA, which Lobey faces once he has navigated a subterranean maze of ruins and slain a mutant bull. PHAEDRA provides most of the background information guiding the hero and the reader:

“It must be rather difficult, walking through their hills, their jungles, battling the mutated shadows of their flora and fauna, haunted by their million-year-old fantasies.”

“We try,” I said.

“You’re basically not equipped for it,” PHAEDRA went on. “But I suppose you have to exhaust the old mazes before you can move into the new ones. It’s hard.” (30)

Tension between old and new, stasis and change, propels the plot. The alien species has already altered its original form to appear more human. Lobey’s society is debating whether further genetic and cultural change will precipitate their extinction—“the beginning of the end”—or the next phase of their development—“the end of the beginning” (5).

Seeking to understand the form and function of social norms, Lobey discusses, with his mentor Spider, the significance of mythology:

“The stories give you a law to follow—”

“—that you can either break or obey.”

“They set you a goal—”

“—and you can either fail that goal, succeed, or surpass it.”  
 “Why?” I demanded. “Why can’t you just ignore the old stories?” [ . . . ]  
 “You’re living in the real world now,” Spider said sadly. “It’s come from some-  
 thing, it’s going to something.” (114–15)

Spider, the novelist’s spokesperson, doesn’t tell Lobey what to expect or how to confront the next challenge, leaving him (and the reader) with more questions than answers. By learning about the “real world” and then seeking “something” as yet unknown, Lobey exposes and resists taken-for-granted categories and identities. He discovers that it is possible to choose between following established patterns and developing new ones. Lobey’s quest for self-discovery—“how am I different?” (34)—disrupts the concept of normal and encompasses multiple commitments and theories of difference.

### Writing from the Margins

Delany’s epigraphs to the first chapter, taken from *Finnegans Wake* and *In Praise of Folly*, signal some key techniques and concerns: unconventional literary style, cultural allusions, the contrast between cyclical recurrence and revolution, and the meanings of embodied difference. Damien Broderick asserts that the novel is notable for “postulating excessive ambiguities, differences, hints of genuine aporia,” beginning with these epigraphic references to madness and paradox (118–19). Broderick’s analysis of postmodern SF posits that the book is an “allegory of reading.” Just as Delany’s characters try to decode the cultural and literary myths by which they have learned to guide their lives, so must his readers decode the conventions of the SF genre. In our analysis, *The Einstein Intersection* is also an allegory of writing. It is both an examination and example of storytelling from the margins. The novel’s “genuine aporia” centers on doubts expressed by its author and protagonist regarding how this story will end and its relationship to dominant narratives about marginalized identities.

*The Einstein Intersection* deploys the techniques of SF as well as the device of overlapping narrative voices to illustrate the social uses of stories. Lobey is well aware of his role as chronicler, occasionally addressing his audience directly (2). Like many of Delany’s protagonists, he is an “outsider” in dual fashion: both warrior and artist, he exhibits remarkable martial and musical skills with his flute-machete (Weedman, *Delany* 23). A character in Delany’s previous novel, *Empire Star*, defined the power of these identities: “The only important elements in any society are the artistic and the criminal, because they alone, by questioning the society’s values, can force it to change” (103). Ultimately, Lobey “accepts living as a continual meeting with change and the unknown” (Barbour 32). He chooses to question and “rewrite” the myths that have



controlled his life and enforced his society's norms of conduct and appearance. Delany also introduces a second artist into *The Einstein Intersection*, who speaks through the "Writer's Journal." The journal purports to record Delany's actions and thoughts while composing the book during a trip to Europe in 1965, where he exhilarated in cultural differences. These parts of the text explicitly refer to the interplay between art and reality: they tell a story of telling this story.

Unlike realist literature, Delany's SF offers a choice between accepting "the real" and turning instead to "the rest," where the latter is undefined and unpredictable. George Slusser critiques *The Einstein Intersection* as a "novel of potentiality" that deconstructs literary codes without remaking anything (52–53). We argue that potentiality is exactly the novelist's point. Delany's themes and techniques illustrate how meanings of "difference" and "change" are variable and context-dependent, as well as unlimited and unknowable. Bringing Delany's work into conversation with disability studies demonstrates the intersecting political implications of SF written "from the margins" and scholarship in this relatively marginalized academic field. Both enterprises are about social action. Through alternative stories and models of human diversity, writers and readers become agents of change for "real people" with diverse bodies and minds. SF and DS become "tools to *help* you think"—without telling you what to think about the "range of options" for people with disabilities.

### **What Has Not Happened: SF and DS as "Machines for Making Choices"**

In his critical genre theory, Delany accounts for the transformative power of his fiction by analyzing how literature makes readers work at "locating the play in the interpretive space [of a text], rather than positing a unitary or hierarchical explanation" ("Science Fiction and 'Literature'" 111). Any text is open to multiple interpretations by different readers, and those interpretations in turn constitute reality (Lukin 89). One of the epigraphs from *The Einstein Intersection* is especially apt: "A poem is a machine for making choices" (53). SF is an especially powerful tool, "richer than the enterprise of mundane fiction" (Delany, "Shadows" 81), because it is not burdened by accurate representation. Despite a reputation as "second-class fiction," SF can accomplish more than other genres because it "overcomes the problem of representation by substituting an aesthetic of rigorous, vigorous misrepresentation. It constantly and conscientiously claims that things that are not the case are" ("*Dichtung und Science Fiction*" 175 and 189). SF thereby opens up radical vistas by showing us glimpses of events that "have not happened" ("About 5,750 Words" 31). Delany delineates not what SF *is*, but what it *does*, by focusing on its unique protocols of language (Samuelson, "Necessary Constraints" 112–16). In SF, the

phrase “her world exploded” should be read literally, whereas in naturalistic fiction such language carries only metaphorical meaning (“To Read *The Dispossessed*” 255). SF operates in the subjunctive mood—that is, at the level of possibilities (Le Guin 27–28).

The musings in the “Writer’s Journal,” which comment on the process of creating “Lobey’s adventure” (7), showcase the dynamics of writing and reading SF. The artist inscribed in the “Journal” characterizes the novel as a “palimpsest” (119)—the final form and plot of which are unknown and unknowable. The penultimate chapter opens with the author’s doubts about the story’s end—and his explanation of why, in the SF genre, this is desirable: “In the second story of the old teahouse across the park I sat in a corner away from the stove and tried to wrestle my characters towards their endings. Soon I shall start again. Endings to be useful must be inconclusive” (120). These textual interventions remind readers that “mediation / representation was the name of the game” (“Sex, Race, and Science Fiction” 223). Delany illustrates that SF writers, readers, and characters all generate critical perspectives that can help demystify identity categories and social practices. SF requires an active audience receptive to the ways that texts—discourse—intertwine with *textus*—the world. Readers have the power to create meanings and possible realities (*Triton* 340).

Moreover, in contrast to SF works that depict “accessible futures” where people overcome, or function in spite of, impairments, *The Einstein Intersection* features characters who utilize their “otherness” as change agents. As Kid Death demands of Lobey, “What power do you have? [ . . . ] What can you do with your difference?” (87). Lobey’s personal evolution toward understanding how being “different” is contingent and mutable allows him to reject the patterns of the old myths and the “rules” of being human (30). Instead of achieving a “cure” for his impairments or “integration” into existing social systems, Lobey’s heroism, as Spider explains, stems from his engagement with the “wonderful, fearful” processes of personal and social transformation:

Some people [ . . . ] accept that change, others close their eyes, clap their hands to their ears, and deny the world with their tongues. Most snicker, giggle, jeer, and point when they think no one else is looking—that’s how the humans acted throughout their history. We have taken over their abandoned world, and something new is happening to the fragments, something we can’t even define with mankind’s leftover vocabulary. You must take its importance exactly as that: it is indefinable; you are involved in it; it is wonderful, fearful, deep, ineffable to your explanations, opaque to your efforts to see through it. (111)

Encouraging his protagonist—and his readers—to embrace something new and indefinable, Delany demonstrates how the SF genre deploys the *technique*

of “misrepresentation” to portray possibilities beyond nonfiction and mundane fiction’s capabilities. In parallel fashion, *The Einstein Intersection* deploys the theme of “the real” versus “the rest” as social critique (135). According to the narrative, the human race departed Earth “to no world in this continuum” through technoscientific knowledge gained via the “intersection” between “Einstein’s theory” and “Gödel’s law” (112). Within the novel, an Einsteinian worldview signifies a closed system of relativistic points of view, in which no single observer has access to a complete perspective on reality. The meanings of difference are thus dependent on frames of reference and convention. However, a Gödelian worldview has more radical implications.

Spider interprets Gödel’s incompleteness theorem beyond its usage in mathematics: “[T]here are more things in heaven and Earth than are dreamed of in your philosophy, Lo Lobey-o. There are an infinite number of true things in the world with no way of ascertaining their truth” (111). The “undecidability proof” implies that in this “wonderfully incoherent universe,” the possibilities for making new truths are limitless (“*An American Literary History Interview*” 289). Spider accordingly encourages Lobey to add to the ancient codes and templates, including his archetypal identities as artist (Orpheus) and warrior (Theseus), by creating new paths toward knowledge of the world and himself: “And I want a Gödelian, not an Einsteinian answer. I don’t want to know what’s inside the myths [. . .] I want their shape, their texture, how they feel when you brush by them on a dark road, when you see them receding into the fog, their weight as they leap your shoulder from behind; I want to know how you take to the idea of carrying three when you already bear two. Who are you, Lobey?” (113). To delineate the “web of possibilities” (*Triton* 340) for the next phases of personal transformation and social action, the novel and its protagonist must understand the significance of “difference.” Examining specific ways the novel ties difference to disability shows how SF can elucidate and enrich conversations within disability studies about the social model of disability, identity politics, and intersectional analyses.

### Thinking about Disability “Multiplexually”

*The Einstein Intersection* implicitly engages with notions of disability as a social construct and cultural identity. It depicts nonnormative embodiments in several ways: as biological differences between individuals, as indicators of shared group identity, and as socially constructed categories that change over time and are culturally contingent. Manifestations of “difference” play out in multiple and ambiguous ways, favoring no single interpretation of its meaning or lived experience. However, these depictions seem more closely tethered to disability

than to constructs of race, gender, or sexuality, because variations in bodily and mental functionality remain the primary source of concern.

The hierarchies of the alien social system center on notions of functionality, while individual characters have fluctuating experiences or self-knowledge of physical and cognitive variations. Characters are marked by the fact that they “can do other things” outside the norms for the alien and human species (33). They are described according to capabilities they do and don’t possess—for example, speaking, teleporting, reading minds, or living independently. The text presents more confusing cultural markers around racial and sexual variation. Therefore, to interpret, for example, the relationship between brown-faced Lobey and pale-skinned, redheaded Kid Death (50) solely in terms of race is to overlook the novel’s more salient critiques of normalcy around impairment and ability. Likewise, in Lobey’s village, individuals are assigned a “purity-sexual title”—Lo, La, or Le—designating the alien species’ three gender and sexual identities (von Glahn 111). The titles indicate a differentiation from human (Western) binary categories of female and male, but they also signify disability, since the granting of titles depends on sufficient conformity to village norms of physicality and mentality.

*The Einstein Intersection* portrays individuals possessing a range of functional impairments relative to the capabilities typical of their species. It also portrays the alien inhabitants as a minority group of people with disabilities, living in a culture (or literally, a history of a culture) that values their “normalization” to human standards. The legacy of humanness causes Lobey’s people to identify as inherently inferior to the dominant norm of appearance and function. They strive to conform through biological reproduction and cultural reenactment. By “trying to put on the limiting mask of humanity” (129), characters confront structural oppression, echoing the concept of “cultural imperialism” defined by Iris Marion Young: “The aspiration to assimilate helps produce the self-loathing and double consciousness characteristic of oppression” (165).

As physical and social shifts emerge with successive generations, the aliens begin resisting the tyranny of emulating the human form and psyche. They “resist” biologically as more individuals like Lobey are born with traits resembling their species’ original form as “psychic manifestations” (Samuelson, “New Wave” 85). Some also resist the social qualifiers designating the norm. They advocate reforming the rules, while others argue for preserving a narrow view of functionality that matches human standards. For example, Lobey recounts Lo Hawk’s objections to granting mute Friza a status title:

“In my day, La and Lo were reserved for total norms. We’ve been very lax, giving this title of purity to any functional who happens to have the misfortune of being born in these confusing times.” [ . . . ]

“Communication is vital, if we are ever to become human beings. I would sooner allow some short-faced dog who comes from the hills and can approximate forty or fifty of our words to make known his wishes, than a mute child.” (5–6)

Whereas *normal* once implied “ideal,” the term now designates merely “functional.” These passages resonate with DS awareness that judgments about what counts as normal and disabled are always in flux.

Configurations of disability vary further, as the novel’s subcultures manage diversity in unique ways. Travelling through these milieus, Lobey learns to view disability “multiplexually,” or from all angles at once, a concept that Delany favors (Weedman, “Art and the Artist’s Role” 156). Initially, Lobey’s assumptions about “difference” are rooted in the medical model of disability. He presumes that “non-functionals” are a fixed category of individuals with diminished mental and physical capacity. However, in his journey across cultures, he comes to understand “difference” as contingent and complex, along the lines of a social model perspective.

Upon meeting the herder society, led by Spider, Lobey is surprised to learn that they reject the use of the status titles. Their idea of personhood stems not from collective judgments of what’s “human” enough but instead from individual ability to survive in a harsh natural environment. From Kid Death, Lobey gains insight into the relational nature of disability. Kid was confined to a kage in the desert but escaped to the sea, a place better suited to him:

“Why were you in the kage? You look more functional than half the Lo and La of my village.”

Kid Death turned his head and looked at me from the corner of his eyes. He mocked. “Functional? To be born on a desert, a white-skinned redhead with gills?” (52)

Kid’s comments about being disabled by the environment, not by a deficit of his body, resound with the disability studies framework. Furthermore, the use of the “kage” to confine nonfunctionals alludes to the history of shifting policies and attitudes toward disability. Kage life, according to characters in the novel, represents the “civilized” way to deal with some people who are outside the norm: “You don’t *know* what they did to them when I was a boy, young Lo man [ . . . ] You didn’t see the barbaric way complete norms acted, their reason shattered bloody by fear. Many people we call Lo and La today would not have been allowed to live had they been born fifty years ago. Be glad *you* are a child of more civilized times” (15–16). The murder and institutionalization of the “impure” in Lobey’s society are among the novel’s “chords sounded in total sympathy with the real,”

echoing the history of people with disabilities as a distinct group, perceived and oppressed as dangerously different and less than human.

The final leg in Lobey's journey toward recognizing the subjective meanings of disability and normalcy occurs in the city of Branning-at-sea. By this point, Lobey accepts his identity as "different," even claiming the term as a source of pride and empowerment (95). The first city dweller he meets, described as a hunchback, explains that status titles are associated with wealth and power, not with functionality. As Slusser points out, "difference" here is actually "concealed economic disparity between rulers and subjects" (47). The hunchback articulates the complex intersection between disability and class, in which many members of prominent families are nonfunctional and therefore all citizens are pressured to keep difference a "private matter": "Difference is the foundation of those buildings, the pilings beneath the docks, tangled in the roots of the trees. Half the place was built on it. The other half couldn't live without it. But to talk about it in public reveals you to be ill-mannered and vulgar" (96).

Inhabitants of Branning-at-sea deliberately conflate sameness with equality. People who have impairments or extraordinary talents face pressure to pass as normal, in the name of social harmony. Difference is shamed. A poster on a city wall reads, "These two identical twins are not the same." Another character must explain its obscene joke to Lobey: "If they're not the same," he blurted, *they're different!*" (107). Homogeneity is further ensured through biology. Bureaucrats keep meticulous records of the results of enforced artificial insemination, and entertainments and advertising slogans are designed to "keep the genes mixing" through promiscuous sexual encounters (77). Representations of anomalous embodiments—those seen in the kage, the hunchback, and a boy with a prosthetic arm—evoke the historical connections between disability, class, and eugenics. Every citizen is subject to the tyranny of the norm, as "all qualitative distinctions have been dissolved in an endless quantitative mixing" (Slusser 47).

The elites of Branning-at-sea strive to emulate humanness as the narrowly defined standard for maintaining social stability. Yet they have come to realize the illusory nature of any such "cure" of the impairment of alienness or of any such transformation from one fixed identity to another: "Lobey, we're not human! [ . . . ] We've tried to take their form, their memories, their myths. But they don't fit" (128). The novel suggests that the end goal of the process of personal and social change ought to remain open ended, like Lobey's journey: neither singular nor finite.

### **"What Can You Do with Your Difference?" Mythologies of Identity**

As the theme of trying to assume "humanness" indicates, Delany's fiction participates in conversations about identity politics, which continue to be a

source of productive tensions in disability studies and activism. The novel's representations of group and individual variation work to dissolve the stability of *all* identities. Following Delany's view that SF favors "heated dialog" about emergent possibilities, rather than unequivocally positive visions of an inclusive future, *The Einstein Intersection* presents identity as fluid, helping us to think critically about what he calls the "slough of political positivity" ("An American Literary History Interview" 286) that "depends upon identity as an absolute" (Smith 563).

Just as Tucker has read Delany through the lens of debates over race and identity politics, we consider *The Einstein Intersection* in the context of DS scholarship on the politics of disability identity. Should strategies for addressing oppression hinge on defining disability as a minority group? Or should activists turn away from dichotomizing and essentializing categories and develop an approach that encompasses multiple experiences of deviancy from social norms? For example, Lennard Davis argues that the category "disability" holds the key to uniting all of us in fighting "injustice and oppression of various kinds" with the understanding that "we are all nonstandard" (32). Similarly, Adrienne Asch promotes the "human variation model" of disability, which "removes some of the pejorative 'specialness'" and "reminds everyone that human beings come in a variety of physical, mental, and emotional make-ups that change over time" (4). Alternatively, Carol Gill questions the "continuum" approach, contending that some kinds of differences are so strongly devalued that people with disabilities need to maintain solidarity through a positive collective identity, as "the best way to survive that fact physically and emotionally" (51).

Through open-ended cultural scripts, *The Einstein Intersection* examines disabled embodiment and identity from multiplex angles. Reflecting the minority group model, the alien race as a whole perceives itself as distinct from the human race, individuals confined to the cages experience exclusion and maltreatment, and Lobey and his generational cohort of telepaths recognize their mutual interests. Like members of LGBT or disability communities, they come from "normal" families and divergent societies but share stigmatization as outcasts. Elsewhere, the novel takes a pluralistic approach, implicitly critiquing the divisive tendencies of identity politics. Lobey experiences multiple degrees of difference, as his identity is informed by his extraordinary ability to read minds as well as by features that appear racialized, gender variant, and animal. As Samuelson notes, the story is about recognizing that "everyone is, in one sense or another, 'different'" ("New Wave" 84). It contributes to debunking the fiction of the "normate," since the majority of human lives do not fit this "very narrowly defined profile" (Garland-Thomson 8).

Delany's own view on identity politics is likewise multiplex. He embraces the radical potential of SF's alternative images to advance social justice and

self-determination for marginalized groups. For example, he argues that SF shows how a classification such as race can have “very different meanings than it did in middle-twentieth-century America” (Tucker 19). Responding to issues of black representation in SF, he asserts, “We need images of tomorrow; and our people need them more than most” (“The Necessity of Tomorrows” 35). Simultaneously, he alludes to the validity of both universalizing and dichotomizing the experience of oppression. Although “none of us is outside” of hegemonic discourses that pressure us to conform, some of us are at heightened risk of violence if we don’t exercise double consciousness, and if we fail to produce alternative discourses that can constitute our world in different ways: “That is *particularly* true for those of us who are black, or disabled, or overweight, or Asian, or women, or gay, or part of whatever group we have been socially assigned to, because if we didn’t know that discourse down in our bones, we’d be dead” (Lukin 89–90).

Delany claims multiple identity markers as “primary givens” of his life (“An *American Literary History* Interview” 294) but refutes the idea that they determine his writing: “The constant and insistent experience I have as a black man, as a gay man, as a science fiction writer in racist, sexist, homophobic America, with its carefully maintained traditions of high art and low, colors and contours every sentence I write. But it does not delimit and demarcate those sentences [ . . . ] It does not reduce them in any way” (“Toto, We’re Back!” 73). Some critics assess Delany as a “skeptic of ‘identity politics,’” but as Tucker more accurately notes, he writes from a specific, multidimensional position (27). Disability is one of the degrees of “otherness” within his lived experience, and his published comments about dyslexia and mental health converge with DS analyses of disability identity. For Delany, otherness is a source of internalized oppression and exclusion, but also of empowerment. He was diagnosed as dyslexic at the time he started his writing career in the early 1960s. His school years were painfully shaped by the labels “lazy” and “disturbed,” though; without the stigma of the word “dyslexic,” “I could think of myself as basically normal” (*Motion of Light in Water* 183 and 217). As a writer, he also considers dyslexia linked to his talent and reputation for being extraordinarily attentive to the processes of writing and reading (“The Semiology of Silence” 40).

Delany also experienced a breakdown and spent time in a mental hospital in the late 1960s. Confronting mental health diagnoses and treatments further informed his perspectives. In group therapy, he realized that the social constructs of disability and sexuality made narrating his positive experiences less “therapeutic” for *him* than for *society*, as a way of creating alternatives to the “public language” of victimization and pathology in literature and medicine (*Motion of Light in Water* 246–49). His writing began to reflect views that he has described as “at least theoretically, politically militant” on women’s and



minority rights (Peplow and Bravard 56). Seth McEvoy notes that Delany is invested in “modernizing myths” as a tool of survival for himself and others who face oppression (76).

Delany’s life encompasses multiple axes of inequality and privilege involving race, gender, sexuality, class, and disability, all of which shape his writing in varying ways. His work “at the intersection of difference” resonates with disability activists and scholars who employ “disability” as a tool for highlighting the coconstruction and fluidity of *all* identity categories (Erevelles 220). Mainstream diversity discourses routinely reproduce the exclusion of disability, treating it as an “add-on” to race, class, and gender. *The Einstein Intersection*, by contrast, illustrates how disability is used to justify other intersecting forms of inequality. For example, in the village, full participation as a sexual and gendered being depends on status as a “functional norm,” while in the city, wealth and class status are tied to making disability invisible. As Nirmala Erevelles contends, DS is an especially powerful tool for critiquing “the abstract and yet very material concept of normativity” as it is constructed across many markers of difference (206).

The “extraordinary bodies” in *The Einstein Intersection* confront and destabilize traditional binaries, encouraging readers to contemplate the intersecting, contingent, and fluctuating categories by which people are defined—and by which they define themselves. Delany critiques the concept of identity as a “disjunctive illusion” (*Motion of Light in Water* 232) and warns against conformity: “Differences are what create individuals. Identities are what create groups and categories [ . . . ] [and] are thus, by their nature, reductive. (You do not need an identity to become yourself; you need an identity to become *like* someone else.)” (“Coming/Out” 19) As outsiders and artists, Delany and his characters compose “mythologies” of their complicated selves as survival strategies. Given their multifaceted identities, they may be outsiders even within the oppressed communities they inhabit. This “anti-disability disability novel” acknowledges that survival may entail claiming a unified disability identity, but that more expansive liberatory projects occur at the intersections. Lobey’s quest utilizes his multiplex standpoint to create possibilities for transformative change, comprehensive of all bodies of difference.

### “The Possibility of Possibilities”

Having warned us that “endings to be useful must be inconclusive” (120), Delany closes the novel with unanswerable questions and aimless wandering. Lobey, who has witnessed and enacted many changes, queries Spider about the impending revolution at Branning-at-sea:

“[They] won’t be so ready to forgive you for the choice you made.”

“What was it?”

“Between the real and—the rest.”

“Which did I choose?”

Spider pushed my shoulder, grinning. “Maybe you’ll know when you get back [ . . . ]”

“What’s it going to be like?”

“It’s not going to be what you expect.” He grinned, then turned away.

“It’s going to be . . . different?” (135)

Empowered by knowledge of the significance of “difference” across time and cultures, Lobey prepares to define his own destiny. This leaves much to the imagination, with no guarantee the future will be “positive” from a disability rights point of view.

Science fiction and disability studies both affirm the value of imagining, questioning, and shaping alternative ways of being. Analysis of Delany’s writings in the context of disability social justice shows how DS can be a tool for reading SF, and how SF can be a tool for performing the messy theoretical and practical work of DS. *The Einstein Intersection’s* aliens are a misrepresentation of disability—a contested terrain—that makes us rethink concepts of impairment, stigma, inclusion, community, normalcy, and self-identity. Unreal worlds of difference open up interpretive space for intersectional analysis and action across “different commitments [and] [ . . . ] different joys” (“The Necessity of Tomorrows” 34).

Delany’s oeuvre situates him as a visionary who helps bring into being future worlds where bodies marked as different can matter differently than they do in the here and now. *The Einstein Intersection* produces insight into DS issues and debates, providing templates for academic and political work. Contexts and agendas for change are variable, and, like Lobey on his journey, scholars and activists cannot presume any single path to breaking out of old patterns. SF and DS have the power and potential to transcend Einsteinian partial perspectives and, in the spirit of Gödelian undecidability, to “seek somewhere outside the frame of the mirror” (129), affording a range of options for inclusion and justice. As Delany reminds us, “Certainly such breadth of vision does not *abolish* tragedy. But it does make a little rarer the particular needless tragedy that comes from a certain type of narrow-mindedness” (“Critical Methods / Speculative Fiction” 27). Neither artistic nor scholarly imagination ensures a specific outcome or an “obligatory happy ending,” but both offer hope that what has not happened may happen—and that it may be transformative.

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## CHAPTER 2

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# Freaks and Extraordinary Bodies

## Disability as Generic Marker in John Varley's "Tango Charlie and Foxtrot Romeo"

*Ria Cheyne*

The pairing of disability and science fiction (SF) is an immensely fruitful one: with its potential to depict alternative corporealities, new technologies, and changed social relations, the genre offers a space in which notions of disability, health, and what constitutes a "normal" human body and mind can be challenged and reconceptualized. Writing in reference to Darko Suvin's famous formulation of SF as "the *literature of cognitive estrangement*" (Suvin 4; emphasis in original), Patrick Parrinder notes that the essence of Suvin's theory is "that by imagining strange worlds we come to see our own conditions of life in a new and potentially revolutionary perspective" (Parrinder 4). As this book demonstrates, a critical engagement with representations of disability in the genre enriches our understanding of both disability and SF itself.

In this chapter, though, I suggest that the examination of disability representation can contribute something quite specific to what we know about genre: in some texts disability functions as a generic marker, so that analyzing depictions of disability is a means toward a greater understanding of a text's generic identity. This is particularly relevant for texts that combine or blend conventions of multiple genres, and my discussion focuses on John Varley's "Tango Charlie and Foxtrot Romeo" (1986), a SF-crime hybrid. I argue that particular characters in the narrative belong to different generic worlds, and that examining their depiction leads to a greater understanding of the relationship between disability and genre. The latter part of this essay explores Varley's depiction of a world with highly advanced medical technology, suggesting that the story challenges a "scientific model" of disability through its depiction of medicine as fallible and its problematization of notions of cure. Finally, I suggest the depiction of

medical science, combined with eugenic motifs that run through the narrative, encourage the reader to reflect on the social processes that classify particular bodily forms as desirable or undesirable.

### Genre Context

As the winner of multiple Hugo and Locus awards, as well as the Nebula award, Varley is usually associated with the genre of SF.<sup>1</sup> However, some of his works blend SF elements with features of other genres. “Tango Charlie and Fox-trot Romeo” is one of several short stories by Varley set in a future where the moon has been colonized and featuring Anna-Louise Bach, a detective in New Dresden, one of the lunar cities. A classic maverick detective, Bach is smarter than her superiors and good at her job but too outspoken to climb the promotional ladder. At the beginning of the story, her career is stalled in Navigational Tracking—the future equivalent of traffic detail.

The story opens with a dead body, but in this case the body is that of a puppy, its frozen corpse detected by a sentient probe. The location and condition of the puppy’s body means that it can only have come from an airlock on Tango Charlie station, supposedly deserted for thirty years after its inhabitants were killed by a deadly plague. *This* mystery is quickly solved: Charlie, who has the appearance of a young girl but who is actually much older, lives on the station with the descendants of dogs who survived the plague, her daily routine and companionship provided by Tik-Tok, the station’s intelligent computer. But there is another problem, as the degenerating orbit of Tango Charlie station means that it will shortly collide with the lunar surface. Charlie is a potential carrier of the most virulent plague in history, and the authorities are of a mind to let her die rather than risk evacuating her. To try to save Charlie’s life, Bach joins forces with an old acquaintance, reporter and media star Megan Galloway, and the rest of the story follows their attempts to outwit the authorities and rescue Charlie.

While there are numerous characters in this narrative who might reward a disability-informed analysis, including Charlie and Bach herself, my discussion focuses on the depiction of Galloway and the producers of her media show, Joy and Jay Myers. Galloway is described as follows: “[H]er upper body was traced by quite lovely filigree of gilded, curving lines. It was some sort of tattoo, and it was all that was left of the machine called the Golden Gypsy” (380). Galloway used the Golden Gypsy, a “hideously expensive and beautiful” powered exoskeleton, after breaking her neck as a teenager (380). The Golden Gypsy “abolished wheelchairs and crutches for her. It returned her to life, in her own mind, and it made her a celebrity” (380). The celebrity part arises from the fact that learning to use an exoskeleton develops outstanding skills for the “new technology of

emotional recording,” and Galloway’s talents, combined with savvy investing, made her rich (380). Later, Galloway was cured after the neurological research her fortune helped fund made a breakthrough.

We can consider Galloway’s life narrative, then, in a series of four stages: her existence before breaking her neck; her life as a paraplegic; her life with the Golden Gypsy exoskeleton; and her life after her neurological cure. Little information is given about the first two of these, but the third and fourth notably problematize “the accepted notions of physical disability as an absolute, inferior state and a personal misfortune” (Garland-Thomson 6). The Golden Gypsy does not simply restore “normal” function, but, as described in an earlier Varley story, “Blue Champagne” (1981), endows the user with much greater than normal strength. Not only that, but the use of an exoskeleton develops in its users another extraordinary ability: “An odd by-product to learning to use an exoskeleton was the development of skills that made it possible to excel in the new technology of emotional recording: the ‘feelies.’ The world was briefly treated to the sight of quadriplegics dominating a new art form” (380). The combination of disability and prosthesis creates a situation where disabled people have valued skills not possessed by the nondisabled majority—skills that, in Galloway’s case, made her rich and famous.

As well as challenging stereotypically negative conceptualizations of disability, the way in which Galloway is depicted challenges binary conceptualizations of “ability” and “disability.” As Lennard J. Davis writes, “The term ‘disability,’ as it is commonly and professionally used, is an absolute category without a level or threshold. One is either disabled or not. One cannot be a little disabled any more than one can be a little pregnant” (*Enforcing Normalcy* 1). Varley’s depiction of Galloway, however, is such that she confounds labels of “disabled or not,” leaving the reader uncertain of which category she should be placed into. Even after her neurological “cure” (380), her status remains ambiguous: “Bach had thought her cure was complete, but now she wondered. Galloway carried a beautiful crystal cane. It didn’t seem to be for show. She leaned on it heavily, and made her way through the tables slowly” (380–81). Galloway may no longer be paralyzed, but it is clear that she still has some level of physical impairment. The confusion this creates over Galloway’s status and the challenge it offers to disability as an “absolute category” is important because there are productive possibilities however the reader interprets Galloway. To read Galloway as “disabled” requires accepting the possibility of an intelligent, powerful disabled person who is a leader of others: Bach watches as “with surprising speed, Megan Galloway took over the meeting” (393). Throughout the story, Galloway is presented as an active agent, in control of her own destiny, exemplified in the statement that “in a sense, Galloway had cured herself” (380) through funding neurological research—a statement that places Galloway as the active agent, rather than

the scientists and researchers who developed the treatment. Conversely, to read Galloway as nondisabled requires the reader to accept that disability isn't always and only about physical impairment, potentially leading to a more nuanced view of disability as something that is, at least in part, socially constructed. Finally, to accept Galloway as neither disabled nor nondisabled—as not fitting into either of these categories—involves accepting that these absolute categories themselves (and all the negative associations that have historically come with them) are inherently problematic.

In her landmark study of disability in American culture and literature, Rosemarie Garland-Thomson responds to the overwhelmingly negative conceptualization of bodies that differ from the norm by using the phrase *extraordinary bodies* to describe the bodies of people with physical impairments. Garland-Thomson's choice of language offers an alternative way of conceptualizing physical difference: the disabled body not as deviant or defective but as unusual or remarkable, with the difference from the norm understood positively rather than negatively. Both with and without the Golden Gypsy, Galloway's is an extraordinary body. Read in this context, Galloway's choice to have a physical reminder of the Golden Gypsy tattooed on her skin is a choice to highlight, rather than conceal, the extraordinariness of her body. Despite her mobility impairment, there are presumably situations where Galloway could "pass" as nondisabled if she chose to do so.<sup>2</sup> In deciding to have the tattoo, limiting or possibly removing her ability to pass, Galloway foregrounds her cyborg status and resists normalization. Even if, as Bach speculates, this is purely mercenary in intent—"Being the Golden Gypsy was worth a lot of money to Galloway" (380)—it suggests a future where "disabled" is not a stigmatized label but a potentially valuable social identity.

The depiction of Galloway illustrates the possibilities SF offers for rethinking and reframing disability. Yet, in the same story, Varley presents a radically different vision of the disabled body conjoined with technology in his depiction of Galloway's producers, twins Joy and Jay Myers: "Both were armless, with no sign of amputation, just bare, rounded shoulders. Both wore prosthetics made of golden, welded wire and powered by tiny motors. The units were one piece, fitting over their backs in a harnesslike arrangement. They were quite pretty—light and airy, perfectly articulated, cunningly wrought—and also creepy" (383). While Galloway's impairment was the result of an accident, the twins' physical difference has been created. Imprisoned for murder, they have been released under "amparole" (presumably a contraction of *amputation* and *parole*), and "their arms are being kept in cryonic suspension for twenty years. The theory is, if they sin no more, they'll get them back. Those prosthetics won't pick up a gun, or a knife" (383).

Garland-Thomson writes that disability is “the attribution of corporeal deviance—not so much a property of bodies but a product of cultural rules about what bodies should be or do” (6). From this social constructionist perspective, disability is not a biological absolute but the product of culturally specific values attached to particular physiologies. The twins’ punishment illustrates how values are attached to particular bodily forms but also how particular bodily forms become attached to values: their “corporeal deviance” is socially constructed in the abstract sense but also socially created as a punishment for transgressing society’s rules.

The amputation and prostheses are not the full extent of the twins’ bodily modifications: Galloway tells Bach that “they also took slices out of the cerebrums,” and the twins are “on a maintenance dosage of some drug. Calms them down” (384). Even for murderers, this seems like overkill; while the prosthetics might function to prevent the twins from committing further crimes, they also serve to mark the twins out as socially deviant. Though the “golden” wire of the twins’ mechanical arms might call to mind the Golden Gypsy, Galloway’s technology-evoking tattoos are “quite lovely,” whereas the twins’ technological prostheses are “creepy” (380, 383). This divergence of language signals the desired interpretation of the different characters: the reader is cued to read Galloway’s corporeal difference positively and the twins’ negatively. This is further strengthened through Bach’s responses to the characters. Bach’s reaction to the twins is one of instant revulsion, with a strength of feeling that goes well beyond the hostility a police officer might be expected to feel toward dangerous criminals. In contrast to her respect for Galloway, she thinks of the twins as “freaks” and “the cyborg-thing,” and wishes they had been executed for their crimes (384). The information that the twins’ relationship is an incestuous one further encourages the reader to perceive the twins’ difference as deviance.

The role of the twins is confirmed by Galloway: “[T]hey were proper villains, these two” (384). While they are not the villains of *this* story, the brief description of their history evokes another narrative—a crime fiction within the crime fiction—in which they were the murderers. Such a role is not unexpected in terms of “the symbolic uses of disability in literature and film” (Garland-Thomson 36). In a piece on disability in the “crime-mystery genre” first published contemporary with Varley’s story, Irving K. Zola notes that “villainy is a major association in the cultural imagery of disability” (236). This association of disability with villainy is not limited to a particular genre but is part of a larger cultural tradition where abnormal bodies are often linked with a deviant psychology: in literature, “bodies signify moral traits [. . .] crippled or deformed people are either worthy of pity or are villains motivated by bitterness or envy” (Davis, “Crips Strike Back” 45). Paul K. Longmore highlights the persistent “association of disability with malevolence” in literature and



“popular entertainments,” where “deformity of body symbolizes deformity of soul. Physical hunchbacks are made the emblems of evil” (133). Varley’s depiction of a society where social deviance is punished by the imposition of physical abnormality brings this relationship to light, inviting the reader to reflect on the processes by which physical difference and social deviance are yoked together in the social imagination.

Gary Hoppenstand and Ray B. Browne note that disabled villains appear in detective fiction at least as far back as the detective pulps of the early twentieth century, but as their focus on “defective detectives” highlights, there are other character roles in which disabled characters appear in this genre. Indeed, crime fiction (I follow Gill Plain in using this as an umbrella term) is one of the few popular genres to have received any serious critical attention from disability studies scholars—in works by Zola, Hafferty and Foster, Jakubowicz and Meekosha, Murray, and Burke. Stuart Murray notes that “stock characters with disabilities are frequently integral to the techniques of crime storytelling,” suggesting that the traditional role of disabled characters in crime narratives “is either that of the silent or constrained witness, unable to communicate vital evidence, or of the ‘differently abled’ detective, granted a particular type of insight precisely because of a disability.” In contrast, Zola writes of crime narratives, “In terms of roles, a person with a disability is most likely to be a victim, a bystander, or part of the hero’s entourage. The structure of the genre plays to this. Almost by definition, except in the relatively infrequent team efforts—such as the police procedurals—there is likely to be only *one* hero. Nothing, however, in the structure limits the number of victims or bystanders, or even villains” (240). Disabled people are thus disproportionately represented as victims in the genre, reflecting but also reinforcing a wider social perception that disabled people are, in some sense, *already* victims. Zola also comments, “If villainy is a major association in the cultural imagery of disability, being a victim runs a close second” (236). In “Tango Charlie and Foxtrot Romeo,” Joy and Jay embody both associations of disability—they become both villains *and* victims by the end of the narrative. While Bach and Galloway scheme to help Charlie, the central characters gather in pressure domes to watch the Tango Charlie station pass overhead. The station’s computer perceives the lunar surface as a dangerous obstacle, and its lasers target the domes, exposing the watchers to vacuum, and leading to many deaths. Bach and Galloway are saved by the pressure suits they have opted to wear, but this is not an option for Joy and Jay. Bach sees, in their final moments, “Joy and Jay, as good as dead, killed by the impossibility of fitting the mechanical arms into their suits” (390). The story of the twins therefore has the following trajectory: Joy and Jay kill; as a result their arms are amputated and they are prostheticized; and then they are killed themselves as a result of their amputation and prosthesis.

In the depiction of these three characters, we can trace the two genres Varley blends in the story. Galloway and her extraordinary body exemplify the possibilities SF offers for alternative, nonoppressive ways of conceptualizing disability. Though there has been relatively little work on disability in SF prior to this volume,<sup>3</sup> scholars working on topics such as gender, race, sexuality, and postcolonialism have noted the potentials the genre offers for imagining radical futures and alternative ways of being, as well as for reflecting on the way things are now and have been. As Sherryl Vint writes, SF “is a discourse that allows us to concretely imagine bodies and selves otherwise” (19). SF’s status as a genre of alternative worlds creates possibilities for the depiction of alternative normative systems. Readers and viewers of SF may therefore encounter alternative norms, encouraging a critical reflection on how particular bodies and behaviors are valued in their own contemporary context.

In contrast, the narrative arc of Joy and Jay Myers places them firmly within the world of crime fiction. As Lucy Burke writes, “Thematically and structurally, detective fiction depends on the formation of a concept of normalcy and its putative relationship to law, order, and social acceptability.” Though Burke rightly problematizes conceptualizations of the entire genre as serving a “collusive ideological function” through the rupture and succeeding restoration of normalcy and social order, the depiction of the Myers twins in “Tango Charlie and Foxtrot Romeo” follows this model. In a conventional narrative pattern for disabled villains, their death does not evoke empathy but rather reads as a fitting punishment for their earlier crimes: as Longmore writes, “For both monstrous and criminal disabled characters, the final and only possible solution is often death. In most cases, it is fitting and just punishment” (135).<sup>4</sup> Villains, then victims, the twins shift from one conventional genre role to another, the threat they pose to the social order eliminated with their death. By blending genres, Varley is able to capitalize on the potentials of both genre forms: the reflexive potentials of SF along with the pleasures of narrative closure offered by crime.

### Technology as Cure

Removing disabled characters from a narrative by killing them off is one way in which disability can be removed from the fictional world, but the story also engages significantly with another way in which impairment might be eradicated: through medical or technological intervention. The world Varley depicts is one with a range of highly advanced technologies, and advances in medical technologies and prosthetics, in particular, are highlighted: early in the story, Bach tells her boyfriend she has cancer—but even though the cancer is “real bad” (358), it is still something to be taken care of at her convenience. Bach wonders at a doctor having the “clumsy prosthetics” of glasses and a toupee,

when short sight and baldness are “no harder to cure than a hangnail” (363, 364). She herself has had a hearing loss corrected, while “robot doctor[s]” are “capable of doing just about anything to keep a patient alive” (379).

At first glance, then, this narrative might appear to be one in which the assumption is that advances in science will inevitably lead to the eradication of disability, as in the “scientific model” of disability created by Ju Gosling.<sup>5</sup> Gosling creates the scientific model not to refer to perspectives of disability exclusively held by scientists (just as the more well-known medical model does not necessarily reflect the views of medical professionals). Rather, it reflects “how *society* uses science to conceptualise disability and to treat disabled people” (Gosling, emphasis in original). Though a scientific model perspective entails various beliefs about disability, its key feature is “the belief that *science is all-powerful and will soon eliminate abnormality forever*” (Gosling, emphasis in original).

Despite its depiction of advanced medical treatments and technologies, Varley’s story ultimately resists a scientific model perspective by offering a more complex and nuanced depiction of the relationship between medical science and disability, highlighting the limits as well as the achievements of medicine. First, the narrative nuances a scientific model by highlighting that although medical science can eradicate many disabling conditions, these treatments are not universally available: Bach is concerned that her insurance will not cover the full cost of her cancer treatment, and for a long time she was “too poor to correct” her hearing impairment (357). In addition, Varley problematizes notions of absolute cure through the depiction of Galloway’s continuing physical impairment after her neurological treatment. The narrative also emphasizes the helplessness of the medical professionals when faced with the plague that killed the inhabitants of Tango Charlie station. All the medical professionals involved in studying and treating the disease died of it despite isolation procedures, and only the speed with which those infected died prevented it from spreading further. As the doctor brought in to brief the police states, “there *are* no experts on Neuro-X” (365)—a statement that acknowledges that although some aspects of medical science in this world are highly advanced, it is ultimately fallible.

In addition, the reader is presented with a grotesque vision of what can happen when medical technologies are used inappropriately, in its description of Charlie’s mother, who was “wired to a robot doctor” during the epidemic, until a human doctor could arrive (379):

The doctor had never arrived. The doctor was dead, and the thing that had been Charlie’s mother lived on. Bach wondered if the verb “to live” had ever been so abused.

All of its arms and legs were gone, victims of gangrene. Not much else could be seen of it, but a forest of tubes and wires entered and emerged. Fluids seeped

slowly through the tissue. Machines had taken of the function of every vital organ. There were patches of greenish skin here and there, including one on the side of its head which Charlie had kissed before leaving. (379–80)

Though Charlie has some understanding of her mother's condition, the technology that preserves her body allows Charlie to think of her mother as "very sick" (379) rather than dead. The human cost of this is that Charlie has talked to her mother every day for thirty years in the hope that she will respond.

The limitations of medical science are also shown in the eventual fate of Charlie herself. Galloway and Bach mastermind a daring rescue, evacuating Charlie and her dogs from the station and successfully transferring them to a remote habitat. Tests show that Charlie, though healthy herself, can still infect others with Neuro-X, and the doctor Galloway hires begins studying the disease remotely, in the hope of someday allowing Charlie to rejoin society. Yet, only a few weeks after leaving the station, Charlie becomes ill, not with Neuro-X, but with everyday viruses. Jacobowicz and Meekosha note the "close relationship between detective stories and medical stories," and in the final pages of "Tango Charlie and Foxtrot Romeo" another detective subgenre, the medical mystery, comes to the fore in the generic mix. In this medical story, Dr. Blume, Bach, and Galloway try, and fail, to treat Charlie's illness and save her life. The story concludes with two levels of wrenching irony: Charlie's illness appears to have been triggered by a series of inoculations intended to protect her, and the carrier of the most deadly virus in human history was probably killed by vaccines for relatively minor, survivable illnesses. The story does not definitively state that the vaccinations caused Charlie's death, but in the suggestion that they might have, Varley offers a challenge to a scientific model in which "science will, some day soon, be able to offer a cure for all ills" (Gosling).

### Eugenics

Read from a disability studies perspectives, narratives involving the eradication of impairment are likely to raise the specter of eugenics, and "Tango Charlie and Foxtrot Romeo" offers a subtle but explicit engagement with various manifestations of the eugenics movement.<sup>6</sup> Closely associated with the work of Charles Darwin's cousin, Francis Galton, eugenics emerged as a mainstream scientific and social movement in the late nineteenth century, with the overall goal of improving the human stock: "Eugenicists promoted the adoption of public policies that would assure the transfer of desirable characteristics (genius, tall stature, blue eye color, and other features primarily associated with Nordic European people) and would discourage the passage of undesirable traits (feeble-mindedness, epilepsy, blindness, deafness, congenital impairments, alcoholism,

promiscuity, and so forth)” (Snyder and Mitchell 26). As Susan Merrill Squier notes, “[T]he very concept of what was ‘disadvantageous’ [to the human species] was profoundly subject to ideological influence” (149). Specifically, “eugenicists encouraged direct intervention in the process of species evolution in order to cultivate some traits at the expense of others” (Snyder and Mitchell 26), and these interventions took a range of forms, from anti-immigration legislation to enforced sterilization of those with “undesirable” traits.

Early eugenicists borrowed strategies from animal husbandry (Snyder and Mitchell 26), and the first engagement with eugenics in Varley’s story is in the depiction of Charlie and Tik-Tok’s management of the population of Shetland sheepdogs on the station, under which those animals not meeting exacting standards are sterilized. So selective is their program that “most of her *culls* would easily have best of breed in a show” (361; emphasis in original). In seeking to improve the overall population, there is no place for dogs like Albert, the stillborn puppy with a “birth defect” (347) whose appearance triggers Bach’s involvement with Charlie. Though the link is never explicitly made in the narrative, the juxtaposition of the breeding program on the station and the advanced technologies depicted in the story raises the question of whether technology is used in this society to “improve” the quality of the human population—for example, through prenatal screening. Charlie’s regret about the decision to sterilize one of the dogs (since its “hair was white almost an inch higher than it should be on a champion” [394]) invites readers to question both the desirability of classifying particular traits as desirable or undesirable and the criteria by which such decisions might be made.

Other aspects of the story offer implicit and explicit engagements with the most extreme manifestation of eugenic ideologies: the Nazi extermination of disabled people in which more than 240,000 disabled people were killed (Snyder and Mitchell 124).<sup>7</sup> The Nazi movement is explicitly referenced in the story by the fact that Bach’s boyfriend, a bodybuilder, has a swastika tattooed on his penis. However, Ralph has “no notion of the history of the symbol; he had seen it in an old film and thought it looked nice” (358). Ralph’s surname is Goldstein, and the episode foregrounds the irony of a person presumably of Jewish descent having a swastika tattoo. Bach amuses herself by “consider[ing] what his ancestors might have thought of the adornment” (358). Though Bach is aware of the meaning of the swastika, Ralph’s ignorance raises concerns about whether the society as a whole is likewise ignorant of the Nazi attempt to eliminate people labeled as undesirable—and how a culture without this sense of history might use the technologies depicted in the narrative. Varley’s handling of the eugenic motif never forces a particular point of view or message on the reader—but rather invites them to reflect on what might be in a world with these conditions. Ursula K. Le Guin writes that much SF can be thought

of “as a thought-experiment,” where “thought and intuition can move freely within bounds set only by the terms of the experiment, which may be very large indeed” (146). While Varley’s story can likewise be read as a thought experiment, I suggest that its subtle handling of the eugenic motif, and its depiction of disability more generally, encourages the reader to carry out a series of thought experiments of their own: how might a society that has forgotten the horrors of the Nazi extermination treat disabled people? How does the ability to cure many disabling conditions affect how we think about impairment? How might “disability” be conceptualized differently if disabled people possessed valued skills inaccessible to the nondisabled population?

Varley’s story blends SF and crime conventions to call into question absolute distinctions between disability and impairment, to challenge a scientific model of disability, and to remind us of the potential dangers of technology misapplied—as well as the new possibilities technology might open up for disabled people. The combination of genres Varley uses allows him to combine the satisfying narrative closure of crime fiction with the “imaginative possibilities” (Leonard 253) offered by SF. The result is a nuanced exploration of how “disability” might be different in a society more technologically advanced than our own. Such texts are valuable because “readers and viewers find their own personal interpretations of disability inevitably influenced by their imaginative encounters with disabled people in fictional works” (Mitchell and Snyder 42), or, put simply, “Representation matters” (Pearson, Hollinger, and Gordon 2). Works such as Varley’s, set in far-off futures, depicting technologies not yet existent, may nonetheless offer one of the most important means of thinking about how our present-day society treats people with disabilities, and how we might work toward a more inclusive future.

## Notes

1. Varley was listed in a 1993 *Science Fiction Studies* piece on “unjustly neglected” SF authors and works, and SF scholars have paid relatively little attention to his work (for exceptions see the articles by Koelb and Benford).
2. For a detailed discussion of disability and passing, see Tanya Titchkosky’s “Looking Blind: A Revelation of Culture’s Eye.”
3. See Nickianne Moody’s “Untapped Potential: The Representation of Disability/Special Ability in the Cyberpunk Workforce,” Hanley E. Kanar’s “No Ramps in Space: The Inability to Imagine Accessibility in *Star Trek: Deep Space Nine*,” and Patricia Melzer’s “And How Many Souls Do You Have?: Technologies of Perverse Desire and Queer Sex in Science Fiction Erotica.” Johnson Cheu’s “De-gene-erates, Replicants and Other Aliens: (Re)defining Disability in Futuristic Film” discusses disability in SF film, while Margaret M. Quinlan and Benjamin R. Bates analyze online responses to TV’s *Bionic Woman* in “*Bionic Woman* (2007): Gender, Disability and Cyborgs.” Within SF scholarship, numerous works have titles or topics that

suggest they might offer a critical engagement with disability (e.g., Sherryl Vint's *Bodies of Tomorrow*, Robert Shelton's "The Social Text as Body: Images of Health and Disease in Three Recent Feminist Utopias") but very few actually do so.

4. See Garland-Thomson (36) for a detailed discussion of the relationship between disability, monstrosity, and menace, as well as references to further reading on this topic.
5. Gosling is a multimedia artist who secured Wellcome Trust funding for an artist's residency at the National Institute for Medical Research, where she developed the exhibition *Abnormal* and the concept of the scientific model of disability. For further information on Gosling and her work, see her website: <http://www.ju90.co.uk>.
6. This engagement is not entirely surprising given the genres blended in the story: Burke notes that "the nineteenth-century development" of detective fiction is "intimately linked to the field of eugenics," while SF has a long tradition of works engaging with eugenic themes.
7. For a detailed discussion see Chapter 3 of Kerr and Shakespeare's *Genetic Politics*.

## CHAPTER 3

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# The Many Voices of Charlie Gordon

## On the Representation of Intellectual Disability in Daniel Keyes's *Flowers for Algernon*

*Howard Sklar*

Like many SF novels, Daniel Keyes's *Flowers for Algernon* relies on a technological "advancement" in order to shed light on the challenges of the present. In *Flowers*, that technology comes in the form of an experimental neurological operation that, if successful, will make the novel's intellectually disabled narrator-protagonist, Charlie Gordon, highly intelligent. In a typical first-person *Bildungsroman*, a unified narrative voice recounts the experiences of the protagonist's life at a point in time that occurs after, or at the end of, the sequence of events that the novel describes. The technological device that drives *Flowers* complicates this convention in several significant ways. The novel is composed of short journal entries, or "progress reports," that Charlie has been asked to write in order to record the results of the operation. Charlie indeed grows in intelligence and self-awareness, and the journal entries thus provide a nearly real-time account of Charlie's development during this period. Ordinarily, the compressed time span of Charlie's involvement with the experiment would provide limited scope for an overview of his life; however, the dramatic changes caused by the experiment produce a radically condensed version of his life, from the metaphorical "child" that opens the narration to the self-aware "adult" that he gradually becomes. As a result, it is difficult to locate Charlie's true voice, as he perceives his experiences through varying levels of disability and capability. Yet, while his nature seems to change, the narrative is rooted throughout in a consistent, or core, voice in relation to which the several apparent versions of Charlie can be seen as variations. Of critical importance to this representation of Charlie's transformation from intellectual disability to hyperintelligence, therefore, is the way in which the author manages, despite



the apparent differences in narrative voice as the novel proceeds, to maintain a coherent sense of character. In this essay, I examine how Keyes accomplishes this alternation between variety and unity, in part by making the character's awareness of his past experience central to the representation of his developing identity. Moreover, I suggest that it is precisely this unified voice that reinforces the plausibility of the experiment on which the novel depends. Finally, I argue that, while Keyes is largely successful in developing this voice, the representation falters somewhat toward the novel's conclusion, as it consolidates and reinforces conventions of dystopian SF that have been suggested throughout the narrative.

### SF, Experimental Plausibility, and "Mrs Brown"

Let's look first at that experiment, for it is on this minimal thread that the novel *as science fiction* hangs. Charlie is a 32-year-old "mentally retarded" man who works in a bakery. He attends a night school class for people with intellectual disabilities, and it apparently is through his teacher's intervention that he is chosen for participation in the experiment: a surgical procedure that purportedly will transform him from a person of limited intellectual ability into a "genius." The experiment has only been tested on a lab mouse, Algernon, who has already begun to demonstrate some of the increased intelligence that the experimenters hope will be successful in humans. We realize, early in the novel, that the procedure for which Charlie is a candidate is quite unproven. As Charlie reports in his journal, Algernon is "a speshul mouse the 1st animal to stay smart so long after the operashun" (Keyes 16), and the procedure has never been tried on a human being. Once the operation has been performed and Charlie has returned to work, he also tells us that the experimenters have asked him not to tell his coworkers about the procedure, with the implication being that the experiment would seem radical even to those who live within the parameters of the speculative world that *Flowers* establishes.

At the same time, significantly, the radicality of the experiment within the context of the narrative world may make it easier for readers to disregard the current impossibility of the procedure and allow themselves to entertain the "possible but non-actual world" (Stockwell 40) that the narrative posits. Indeed, by registering the doubts of the characters regarding the procedure, and then countering that skepticism with Charlie's incremental increases in intelligence after the procedure, Keyes enables readers to "domesticate the amazing" (Suvin 4)—to regard the operation as a plausible breakthrough that occurs before their very eyes. In order to accomplish this, Keyes, through the first three-quarters of the novel, presents a world that, while "estranging" on some levels, resides mostly in the familiar of our everyday world—a tension between generic restriction and

realistic representation that, as I will point out in the final section of this essay, intensifies as the novel proceeds.

Also significant to the question of the experiment's plausibility is the decision by Keyes to focalize the narrative largely through the perspective of Charlie—or, as I suggested at the outset, through the multiple voices through which he articulates his observations both before and after the operation. I will discuss these voices shortly; for the moment, though, I would like to consider the way in which the emphasis on character, rather than on the experiment itself, guides readers away from overreflection on the specifically imaginary features of the world that Keyes presents. Keyes indeed is less interested in the technology itself than in using it as a vehicle to examine Charlie's identity as an individual. In doing so, Keyes's work seems to anticipate a notion that Ursula K. Le Guin so cogently expressed roughly a decade later in her essay "Science Fiction and Mrs Brown." In that work, Le Guin draws on Virginia Woolf's own essay, "Mr Bennett and Mrs Brown," in which Woolf describes an experience when she happened to share a compartment on a train with an elderly man and woman (Woolf 320–21). As she listens to their conversation, Woolf becomes intrigued by the woman, who in her essay she refers to as "Mrs Brown." From this encounter, in fact, Woolf becomes convinced of the primary focus of novels: "I believe that all novels begin with an old lady in the corner opposite. I believe that all novels, that is to say, deal with character, and that it is to express character—not to preach doctrines, sing songs, or celebrate the glories of the British Empire, that the form of the novel [ . . . ] has been evolved" (cited in Le Guin 87; Woolf 323). "Mrs Brown," thus, comes to represent the characters at the heart of all works of fiction.

Le Guin, for her part, adopts the notion of Mrs Brown in making a plea for the reorientation of SF as a genre, away from being "trapped for good inside our great, gleaming spaceships hurtling out across the galaxy" (87), and toward the development of "round" (88) characters to people the imaginative worlds of SF, as she explains: "The writers' interest is no longer really in the gadget, or the size of the universe, or the laws of robotics, or the destiny of social classes, or anything describable in quantitative, or mechanical, or objective terms. They are not interested in what things do, but in how things are. Their subject is the subject, that which cannot be other than subject: ourselves. Human beings" (93). Of course, Le Guin was responding to the prevailing conventions of her time, and her critique is perhaps less relevant today than it was then. Yet her assertion serves as a confirmation, of sorts, of Gwyneth Jones's assertion, "There is no way, so far, for science to explain the feeling of being conscious" (Jones 82). That explanation, it seems, is left to the non-"quantifiable" realm of narrative fiction. By providing a representation of the development of Charlie's consciousness,

Keyes appears to have sought to give *voice* to a fully rounded character—to his own “Mrs Brown.”<sup>1</sup>

### Voices: Human and Narrative

If it seems, from the outset, that I’ve adopted a particularly anthropomorphic meaning for the term *voice*—one that, to use Monika Fludernik’s term, is relatively “embodied” (707) rather than metaphorical—I do so for several very deliberate reasons: In literature and in life, the actual voices of people with intellectual disabilities are typically heard—if at all—through *other* people’s accounts. When their actual life stories are recorded or written, they are generally reported by others, with all the editing and redaction that that entails. In fiction, the distance is even greater, with nondisabled novelists and story writers providing the words and tone for their intellectually disabled characters. This act of ventriloquism (Jahn 695; Aczel 599; Lundeen 90; Ritchie 366–67), while certainly the very substance of any fictional creation, is especially fraught with the possibility of ethical intrusion by virtue of the fact that, as I have noted, the subjects themselves remain unheard. Indeed, in the case of intellectually disabled characters, authors can and usually do create with impunity.

The implications of this creative license are considerable. Whether or not we, as readers, would care to admit it, we respond to characters on some level as *people* and invest them with human feelings and thoughts. Indeed, I contend (Sklar “Believable Fictions”; *Art of Sympathy*; “Anything But a Simpleton”) that we would have no way of processing characters if we did not, in some way, relate them to features of people in “real life,” including their voices. This may at least partly explain Stephen M. Ross’s claim that “many readers are reluctant to give up so entirely the representational implications of ‘voice,’ even as they acknowledge the inherent absence of a human speaker behind literary discourse” (9). Similarly, Fludernik, while also emphasizing the discursive nature of what she calls the “meaning effects” that generate readers’ responses to works of narrative fiction—“voice, focalization, person, tense, unreliability, and so on” (708)—nevertheless emphasizes that “the representational illusion to which [ . . . ] [these meaning effects] give rise frequently produces speakers, narrators, *voices that can be heard*, and even addressees to which one feels interpellated to reply” (Fludernik 708; emphasis added). Yet, in the case of Benjy (in Faulkner’s *The Sound and the Fury*) or Lennie (in Steinbeck’s *Of Mice and Men*), whose is this voice to which we are listening and replying? And how much are our impressions of and ideas about “people like them” formed by our narrative encounters with them?

Since we are privy to Charlie’s thoughts and feelings through his progress reports, the “voice”—or, more accurately, *voices*—that we hear are not spoken

voices at all. Indeed, part of the resistance to assigning the term *voice* to the various forms of address in fiction is the fact that so many of the cases that we refer to as “voice” are not even representations of “spoken” voices, but other linguistic devices that give us the sense that we are being spoken to. We see this, for instance, in cases of internal monologue, such as the extended stream of consciousness attributed to Benjy in *The Sound and the Fury*. *Flowers for Algernon* provides a form of address that, it would seem, is even more removed from the immediate thoughts of Benjy, or the apparently spoken expression of Forrest Gump (Groom 1986): through Charlie’s “progress reports,” we are privy to the thoughts that he has chosen to record. But for what purpose does Charley address his diary? Who is his audience, if there is one? How greatly does his written “voice” resemble his spoken one, and how much do both reflect his actual thoughts and feelings?

### Charlie, in His Own Words

Our first glimpse of this voice, at the beginning of the novel, gives an immediate sense of Charlie and his capabilities:

**progris riport 1 martch 3**

Dr Strauss says I shoud rite down what I think and remembir and evrey thing that happins to me from now on. I dont no why but he says its importint so they will see if they can use me. I hope they use me because Miss Kinnian says maybe they can make me smart. I want to be smart. My name is Charlie Gordon I werk in Donners bakery where Mr Donner gives me 11 dollars a week and bred or cake if I want. I am 32 yeres old and next munth is my brithday.

I tolld dr Strauss and pefesser Nemur I cant rite good but he says it dont matter he says I shud rite just like I talk and like I rite compushishens in Miss Kinnians class at the beekmin collidge center for retarded adults where I go to lern 3 times a week on my time off. Dr Strauss says to rite a lot evrything I think and evrything that happins to me but I cant think anymor because I have nothing to rite so I will close for today . . . yrs truly Charlie Gordon. (Keyes 1)

The author, Daniel Keyes, uses broad strokes here—misspellings, the lack of awareness of the ways in which the experimenters are evaluating him—to portray the intellectually disabled Charlie. Although it is clear that Charlie in a sense is performing here—he is certainly aware that the experimenters want him to write about himself, and maybe even that they will be reading his comments—some of his wishes for the experiment still find expression: “I hope they use me because Miss Kinnian says maybe they can make me smart. I want to be smart.” This motivation remains with Charlie through the operation, and

even as he begins to actually attain that intelligence and, with that newfound capacity, examine what it means to be “smart.”

Through the early progress reports, we also gain a sense of why, even before he’s fully aware of it, Charlie values the attainment of intelligence. Charlie tells of several particularly humiliating experiences—at least, *we* see them as humiliating, although Charlie at this point appears not to recognize the full maliciousness of the treatment to which he has been subjected. His voice is still that of the naïf, as we see in the following example, cited at length, in which Charlie recounts his night out on the town with his coworkers at the bakery:

[T]he headache is from the party. Joe Carp and Frank Reilly invited me to go with them after work to Hallorans Bar for some drinks. I don’t like to drink wiskey but they said we will have lots of fun. [ . . . ] We played games with me doing a dance on the top of the bar with a lampshade on my head and everone laffing.

Then Joe Carp said I shoud show the girls how I mop out the toilet in the bakery and he got me a mop. I showed them and everyone laffed when I told them that Mr Donner said I was the best janitor and errand boy he ever had because I like my job and do it good and never come late or miss a day except for my operashun.

I said Miss Kinnian always told me Charlie be proud of the work you do because you do your job good.

Everybody laffed and Frank said that Miss Kinnian must be some cracked up piece if she goes for Charlie and Joe said hey Charlie are you making out with her. I said I dint know what that means. They gave me lots of drinks and Joe said Charlie is a card when hes potted. I think that means they like me. We have some good times but I cant wait to be smart like my best frends Joe Carp and Frank Reilly.

I don’t remember how the party was over but they asked me to go around the corner to see if it was raining and when I came back there was no one their. Maybe they went to find me. I looked for them all over till it was late. But I got lost and I felt bad at myself for getting lost. (21–22)

This recollection, coming 17 days after the operation, shows that Charley remains unaware of the ways that his coworkers have used him as the butt of their jokes—in this instance, making him dance foolishly, pushing him to demonstrate the mopping work that he does at the bakery, and even leaving him behind without letting him know. Yet, tellingly, Charlie still regards them as his “friends,” even though he also betrays an element of doubt about the relationship: “I think that means they like me.”

Despite the childlike innocence of his trust in his coworkers, Charlie also informs us—by reporting a conversation between his therapist, Dr. Strauss, and the head of the experiment, Prof. Nemur—that “I was beginning to question

authority” (18). This suggests perhaps that his therapist sees him as mentally going through his “adolescent” developmental stage. Indeed, as his intelligence grows, and his awareness of his disability also increases, Charlie realizes that the treatment by his coworkers was not so benevolent. He also begins to notice the way that children tease him as he goes through the neighborhood and recalls some of the ways that his mother and sister rejected him when he was a child. Thus, roughly one month after the operation, Charley—already expressing himself in a more sophisticated voice—appears to have something of an epiphany regarding the difference between his present awareness and his innocence before the operation: “I never knew about these things before. It’s like if I get intelligent enough I’ll understand all the words in my mind, and I’ll know about those boys standing in the hallway, and about my Uncle Herman and my parents” (34). In this passage, there is clearly greater self-awareness, as well as the beginning of a more acute understanding of the events that have transpired in his life. Yet, despite these changes, as well as the more concrete transition to more accurate spelling, he continues to identify with those earlier events and to see himself as essentially the same individual who participated in those occurrences.

### Charlie’s Ethical Awareness: Implications for Readers’ Responses

A more significant challenge to this sense of a unified voice representing Charlie’s consciousness occurs later, as he begins to develop an ethical understanding of things that he has done or has been made to do. The following two examples effectively show the nature of the questions with which he is beginning to wrestle. In the first, Charlie has returned to the bakery, but now possesses the intelligence to look at his work with a critical eye:

The thing that bothers me most is that when he [bakery worker “Gimpy”] sent me on deliveries he used *me* to help him steal from Donner. Not knowing about it, I was outside it—not to blame. But now that I know, by my silence I am as guilty as he is.

Yet, Gimpy is a co-worker. Three children. What will he do if Donner fires him? He might not be able to get another job—especially with his club foot.

Is that my worry?

What’s right? Ironic that all my intelligence doesn’t help me solve a problem like this. (62)

Two months after the operation, Charlie is able to see Gimpy—who, ironically, is also disabled—as both corrupt *and* his friend. This capacity to view others as multifaceted, as possessing both good and bad tendencies, is significantly

different from his earlier way of thinking about his “friends.” Yet he also recognizes that his increased intelligence “doesn’t help me solve a problem like this.” In fact, Charlie argues vehemently for the continuity between his earlier “self” and his present “self” when he describes this dilemma later to Professor Nemur:

“But I’m not an inanimate object,” I argued. “I’m a *person*.”

He looked confused for a moment and then laughed. “Of course, Charlie. But I wasn’t referring to now. I meant before the operation.”

Smug, pompous—I felt like hitting him too. “I was a person before the operation. In case you forgot—”

“Yes, of course, Charlie. Don’t misunderstand. But it was different . . .” And then he remembered that he had to check some charts in the lab. (63)

Mostly, then, what Charlie wants is for people to recognize his humanity—both before and after the procedure. In these examples—the progression from his earlier, developing awareness of the way he has been treated, to an attempt to weigh the significance of that treatment and how to deal with it, to arguing for his dignity as a person regardless of his intellectual capability—all these suggest that he is changed yet unchanged, that there is a unified core in his voice, however intelligent or lacking in intelligence the features of each of those voices may make him seem.

### **Interrogating Intellectual Disability: Charlie’s Multiple Insights**

Charlie, indeed, eventually recognizes this connection. Much later in the novel, when he has come—due to his increased intelligence—to understand better than the scientists some of the implications of their own experiment, Charlie realizes that he is in a unique position to evaluate his prior disability, as well as contribute to the search for the solution to increasing human intelligence: “I’ve got to use my knowledge and skills to work in the field of increasing human intelligence. Who is better equipped? Who else has lived in both worlds?” (139). Charlie suggests that he possesses two insights: first, his experiences as an intellectually disabled person, before the operation; and second, his experiences after the operation, including his newly realized ability to analyze the whole of his life. The novel indeed poses this as a *duality*, but, as I’ve suggested throughout this discussion, Charlie in fact becomes progressively more intelligent through multiple phases in his development from intellectual disability to hyperintelligence.

However we conceive of this consciousness, though, Charlie’s observation about his own, unique status raises the question: Who is most equipped to tell the stories of people with intellectually disabilities? In Bogdan and Taylor’s seminal sociological work on the life stories of actual intellectually disabled people,

one subject, whom they call “Ed Murphy,” makes a point that is strikingly similar to that of Charlie: “I’m talking like an expert. I had to live it . . . Experts are people who have lived it” (Bogdan and Taylor 30). There is indeed an assumption that intellectually disabled individuals are limited in their abilities to tell their own stories. Naturally, cognitive impairment may limit the ability to understand aspects of an individual’s own experience, as it does for Charlie. Yet we may also underestimate—even greatly—the extent to which intellectually disabled people can recognize the significance and nuances of their own life experiences. Charlie, speaking with the voice of academic intelligence and scientific authority, ultimately comes to know what his less capable voices have been saying all along: that the experiences are his alone to voice.

Of course, in Charlie’s case, the words are not those of an intellectually disabled man, but of the novelist. Who, then, is Daniel Keyes, and by what authority does he speak for Charlie? On the one hand, Keyes—like a postmodern folklorist whose aim is “providing a space in which previously unarticulated folk-positions might finally achieve voice” (Ritchie 366)—seems committed to giving voice to Charlie, as evidenced by the first-person progress reports through which the novel is narrated. However, as Susan Ritchie argues, there is a risk that, in assuming that voice, one will adopt “ventriloquist strategies of representation, where folklore presumes to speak on the behalf of some voiceless group or individual” (366; cited in Lundeen 90). This question of ventriloquism, lurking beneath the entire representation of Charlie, becomes significantly more problematic with the dystopian destiny that Keyes renders for his character.

### **Facing a Dystopian “Present”—with or without Heightened Intelligence**

The integration of Charlie’s identity—indeed, the very persuasiveness of his characterization—is most threatened, ironically, by his “regression” at the end of the novel to intellectual disability. For all Keyes’s considerable sensitivity to Charlie’s plight, the ending ultimately raises a number of significant questions about his representation of the character’s disability.

The most problematic of those questions is in the perception of Charlie’s disability both by the character himself and, implicitly, by the author. As should be obvious from the foregoing discussion, the novel centers around a hypothetical medical “solution” to Charlie’s impairment; as such, Keyes largely frames the issue of his disability in terms of what Licia Carlson calls “the medical model” (Carlson 5). According to Carlson, “The view that disability is objectively abnormal and thus undesirable gives rise to a related constellation of assumptions that have been termed the ‘personal tragedy model’: that disability is objectively bad,



and thus something to be pitied, a personal tragedy for both the individual and her family, something to be prevented and, if possible, cured" (5). Carlson raises several issues here that have a direct bearing on the representation of Charlie. As noted earlier, the entire thrust of the novel stems from Charlie's desire to be "smart"—or, more accurately, to fit in with his coworkers, as he tells us: "I cant wait to be smart like my best friends Joe Carp and Frank Reilly" (22). That Charlie views his intellectual disability as "objectively bad" is thus evident from his willingness to participate in the operation; less obvious, though, is the way that this perception is reinforced—perhaps unwittingly—by the disconsolate tone of the book's final progress reports. Even though he realizes that "in some ways" he was "better off before" (172) the operation, the confrontation between the "two Charlies" that occurs late in the novel makes it clear that the "intelligent Charlie" is prepared to resist the return to the "darkness" (175) of his former disability: "I'm not going to give up my intelligence without a struggle. I can't go back down into that cave" (175). His subsequent urgency in reporting the inevitability and rapidity of his own "physical and mental deterioration" (177), so that others will know about it, is accompanied by the somber awareness that the insight that he can provide arrives too late to be of any use to him. In other words, Charlie comes to accept the certainty of this regression even as he longs to remain intelligent, and the impossibility of that longing imposes a sense of loss on the character's decline.

As a result, Charlie—so recently apparently in control of his destiny—instead becomes, as Carlson and others (Shapiro 1993) suggest happens when disability is viewed as a "personal tragedy," an object of pity. We feel sorry for Charlie because he is subject to the unforeseen and "tragic" consequences of the surgery, but it might be argued that the impetus behind that pity has existed since he first addressed readers at the beginning of the novel. By playing on Charlie's innocence and sincerity in that first report, Keyes elicits the type of fond and sympathetic response that might be given to a child—yet different, significantly, in that readers also recognize that the character, without the aid of the surgery, will never develop out of that childlike innocence. The pathos that this undoubtedly engenders therefore establishes an attitude of pity, not for something specific that Charlie experiences, but in response to the general fact of his disability. As I argue elsewhere (Sklar, "What the Hell" 142) regarding the issue of sympathy or pity for disabled characters in fiction: "In terms of the appropriateness of sympathy in response to the disabled, we must consider toward *what* that sympathy is directed. If we feel sympathy for the presence of the disability itself—as 'something sad or to be ashamed of' [Shapiro 20]—then this surely perpetuates the unfortunate separation of disabled and non-disabled [. . .] More perniciously, it serves, in [Catherine] Prendergast's words, to 'reinforce the dominance of those of normalized

ability, allowing for the performance of socially correct emotions without any political concessions” (241). On some level, I contend, readers are meant to feel “sad” for Charlie, as well as share his eagerness for the procedure that will deliver him from his sad and pitiable state. As suggested before, the end of the novel solidifies the conception of “personal tragedy” (Carlson 5; Goodley and Rapley 230) that lies at the heart of this elicitation of pity. For the first time in the novel, Charlie looks at his intellectually disabled “other self,” not in the form of recollections, but as a distinct and separate individual, and it is in this instance that we gain a clear sense of how the hyperintelligent Charlie sees his “less-developed” self: “I don’t know how I knew it was Charlie and not me. Something about the dull, questioning look in his face. His eyes, wide and frightened, as if at one word from me he would turn and run deep into the dimension of the mirrored world. But he didn’t run. He just stared back at me, mouth open, jaw hanging loosely” (Keyes 175). The “dullness” of the “look in his face,” as well as the “loosely” hanging mouth, is a staple of the stereotypical representation of people with intellectual disabilities.<sup>2</sup>

How are we to regard this aspect of the novel? At a recent conference at which I discussed *Flowers*, I was asked about my impressions of Cliff Robertson’s famous, Oscar-winning portrayal of Charlie in the 1968 film *Charly*. I expressed my view that, even though Robertson’s performance is sensitive and compelling, I found disturbing the loose-lipped expression adopted by the actor in the scenes in which Charlie is meant to seem intellectually disabled. Among other considerations, these images, in both the novel and the film, impose a generalized, and arguably unrepresentative, impression on the character. In doing so, the individuality of Charlie’s voice, described earlier, is undermined, transforming Charlie unaccountably into a more “prosthetic” character: in such instances Charlie becomes “a crutch on which literary narratives lean for their representational power, disruptive potentiality, and social critique” (Mitchell 17)—in this case, a subtly dystopian future-present.

To be sure, the world portrayed in *Flowers* is not a dystopia, or anti-utopia, in the traditional sense.<sup>3</sup> If, as Booker and Thomas (65) claim, dystopian societies impose oppressive conditions that interfere with the fulfillment of individual human potential, *Flowers* only fits that description in the most abstract sense. Peter Stockwell’s broader definition of the genre perhaps allows us more leeway: “Most dystopias are extrapolations of aspects of the present, and thus serve as political statements against certain ideologies or as warnings about current trends that need to be averted” (211). Thus, whether or not we consider *Flowers* a *dystopia* proper, a case can certainly be made that the novel contains tendencies in that direction. The initial promise of the experiment has taken on almost nightmarish qualities, with Charlie’s former “self” haunting him before ultimately reclaiming possession over his being. Although Charlie’s decline signals

a seemingly abrupt turn toward a dystopian sensibility, the actual development of this ending begins already in the early pages of the book and is woven into the fabric of the entire novel. We see this in Charlie's unwitting irritation of the experimenters (2–3, 18, etc.), in his melancholic reflections on his treatment by others before the operation, in his frustration with the “smugness” of Prof. Nemur, and in the superior attitude that he assumes in deconstructing the flaws in the experiment (170–76). Thematically, the novel thus provides several “warnings” of greater or lesser subtlety, fairly exhorting against the excesses of scientific innovation that horribly distorts the lives of the people it purportedly is intended to help, against the precedence of intelligence over human feeling, and against the fragmentation of human identity. All these tendencies suggest that *Flowers* “is centrally informed by a fear of the dehumanizing potential of technology and of an excessive insistence on rational solutions to all human problems” (66)—as Booker and Thomas describe a more canonically dystopian narrative, Zamyatin's 1924 novel *We*, but no less relevant here.

Indeed, all these features overtly signal the approach of a dystopian conclusion, as Keyes clearly intended, resisting publishers' insistence that the novel end more happily (“Audio Interview”). While we may concede the aesthetic appropriateness of an ending that unsettles and challenges readers' expectations of the character's “triumph over” his intellectual disability—a conventional trope in autobiographies of the disabled (Couser 79–80)—we nevertheless find that Keyes has produced an irresolvable and ultimately unsatisfying tension: While the narrative seems to provide ample evidence to suggest that, with the acquisition of hyperintelligence, Charlie has “lost” some form of decency—*humanity*, even—it also implies an even greater loss with his return to intellectual disability. Thus Charlie's earlier recognition that his preoperative self and his postoperative self are one—indeed, that all the stages through which he has gone are part of him—gives way to a more fragmented sense of self that, by implication, rejects his intellectual disability.

This fragmentation, in turn, suggests a deeper conflict between the dictates of generic conventions and forms of representations that transcend the stigmatizing and stereotypical limits imposed by the genre. By humanizing Charlie in the earlier stages of the novel—by creating a fully realized “Mrs Brown”—Keyes provides a window into the experience of an intellectually disabled man. At the same time, Charlie comes to stand for more than himself. As suggested earlier, he becomes an indication, if not a symbol, of a technological society gone awry—indeed, a *prosthetic* character, as so many disabled characters have been before and after him.<sup>4</sup> Yet, given the dystopian drive at the heart of the narrative, how could it have been otherwise? By any of the definitions noted earlier, dystopias inherently stand for something, and their characters, however completely realized, also therefore become representative of something other than

themselves. Thus, by following the constraints of dystopian SF to their logical conclusion, Keyes ultimately relinquishes his hold on Charlie, and with that loss the unified voice of the character is reduced to a less authentic multiplicity.

### Notes

1. In his memoir on the writing of the story (and later the novel), *Algernon, Charlie, and I: A Writer's Journey*, Keyes notes that Charlie was inspired by a student who had told him he wanted to be smart (89–90). Keyes also discusses this process at length in a radio interview (“Audio Interview”) that was conducted shortly following the publication of the memoir.
2. See, for instance, Sklar, “What the Hell” 138, and Sklar, forthcoming, for extended discussions of the role of stereotyping in the representation of intellectual disability.
3. Frederic Jameson (*Archaeologies* 198–99) draws subtle distinctions between these (and other) terms, based on particular aspects of a given narrative, such as its ideological perspective, its representation of the future, and so forth. For the purposes of the present discussion, though, *dystopia* and *anti-utopia* are used as virtual synonyms.
4. In their *Narrative Prosthesis*, David T. Mitchell and Sharon L. Snyder provide a comprehensive overview of the ways in which disabled characters have served “prosthetic” functions in fiction. See also Mitchell, “Narrative Prosthesis,” for a more concise introduction to this theoretical concept.

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## CHAPTER 4

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# The Metamorphic Body in Science Fiction

## From Prosthetic Correction to Utopian Enhancement

*António Fernando Cascais*

The basic grounding of a productive approach to disability in science fiction stems from two interrelated assumptions: (1) that science fiction (SF) narratives dealing with disabled bodies usually are narratives of technological embodiment that can range from simple mechanical prosthesis to (post)human-machine hybridization and (2) that in the ontological (relating to the modes of being) and the epistemological (relating to the modes of knowledge and its appropriation by beings) planes, these narratives of technological embodiment have incomparably more affinities with a social model of disability (which rests in the distinction between disability and impairment) than with a biomedical model.

### **Biomedical versus Social Constructionist Model of Disability**

Instead of individual and medical models of disability based on the binary, and mutually exclusive, opposition between normality and disability (defining the latter by its lacks, restrictions, and its tragic, transhistorical, universal, fixed, and unchanging character, deviant from and inferior to normalcy), a social constructionist approach of disability “sees disability as socially created, or constructed on top of impairment, and places the explanation of its changing character in the social and economic structure of the society in which it is found” (Corker and Shakespeare 3). The social constructionist model imposes on the condition of disability not only the status of a body in need of medical treatment but the social stigma inflicted on this condition, which is reflected

both in the individual's experience and in the social perception of disability: "These are the direct effects of impairment which differentiate bodily functioning from that which is socially construed to be normal or usual. In our society, these impairment effects generally, but not always, become the medium for the social relational enactment of disability: social exclusionary and discrimination practices" (Thomas and Corker 20).

The construction of disability according to a criterion of normalcy amounts to imposing what Robert McRuer calls a "compulsory able-bodiedness." Therefore, an alternative approach to disability must deconstruct the very notion of an essential disability by exposing its construction through the incorporation of biomedical knowledge into the individual's identity. This is precisely what "crip theory" purports to do, turning the medical category of disability into a critical one:

A similar gap could be located in relation to disability. Everyone is virtually disabled, both in the sense that able-bodied norms are "intrinsically impossible to embody" fully and in the sense that able-bodied status is always temporary, disability being the one identity category that all people will embody if they live long enough. What we might call a critically disabled position, however, would differ from such a virtually disabled position; it would call attention to the ways in which the disability rights movement and disability studies have resisted the demands of compulsory able-bodiedness and have demanded access to a newly imagined and newly configured public sphere where full participation is not contingent on an able body. (McRuer 30)

The medical model of disability supposes that the relation between biomedical technology and disability is essentially one of prosthetic correction of an intrinsic deficit or personal flaw (i.e., a relation between the "naturalness" of disability and the "artificiality" of corrective technology). As Massimo Canevacci points out, it should be clear that this paradigm does not work, since no technology is added to an organ and leaves it ontologically intact and separated from all the rest (65). On the contrary, we know today that technoscience doesn't leave intact any timeless essence of the human: rather, it changes, shapes, and affects that which seems to be more constitutive and intangible. If we acknowledge the shift between the biomedical/essentialist model and the social constructionist model of disability, we should then recognize that "[t]his shift necessitates not only a rethinking of how we understand 'disability', but also how we conceptualize 'cure'. [...] If we begin to understand that disability is largely socially constructed, then cure, and the values it embodies, must be understood as likewise constructed" (Cheu 209).

The notion of prosthetic biomedical correction is considerably in debt to the idea that technology is essentially the *extension* of the senses, capacities,

and functions of the human body (i.e., technological inventions, or prostheses, extend human organs so that they can perform or improve activities that our body is naturally unable to execute). Such a notion of technology is today unaccredited, mainly because it fails to account for the fact that “[t]he making of any object, out of any substance, by a human being is also in some way a making and remaking of the human. [ . . . ] The object of human craft is the human being, and the most immediate sign of the human and the material out of which we craft it is the human body” (Siebert 136). This is precisely what SF reveals: “In depicting a *science* fiction, in giving shape to our speculations about the future, other worlds, alternative realities—or selves—it lets us examine and enjoy the prospects of what we could indeed ‘be’” (Telotte 7). In fact, Telotte suggests that the concerted focus of SF on the human body reflects a central widespread social and cultural anxiety about our very nature. Therefore SF

has located in this figure of the double, particularly the constructed and “animated” being—robot, android, or cyborg—a singularly compelling image for our current notions of self, as well as an effective metaphor for that sense of “otherness” which underlies all our recent discussions about gender, race, and sexual orientation. Still more fundamentally [ . . . ] the genre seems to have at its core a concern with how we can “be,” that is, with how we can maintain our human *being* within a context—as thoroughly constructed and technologized as it is—that typically seems to condition, qualify, or challenge our traditional human identity. (Telotte 7)

Therefore technological embodiment cannot be reduced to simple bodily correction, nor to the meaning of the correction and whatever there is to be corrected. The overcoming of the disability by technology radically changes the meaning of both disability and the human condition of every individual, as we are always confronted by some form of challenge, regardless and beyond our personal non/impairment, whatever the social perception of either of them may be.

The technological manipulation of the body in SF, however, is not limited to the prosthetic correction that aims to replace disabled bodily functions; rather, it points to the betterment of the human condition (both psychologically and physically), whether challenged or not by a particular impairment. From the standpoint of technological embodiment, as it occurs in SF, both the disabled and the able-bodied humans are, or come to be, challenged in one way or the other; therefore, their present (in)capability cannot but be regarded as defective, and a clear-cut distinction between disability and corporeal (bodily) normalcy becomes blurred. In this measure, SF converges with the constructionist model of disability: “Inasmuch as the ‘impairments’ alleged to underlie disability are actually constituted in order to sustain, and even augment,



current social arrangements, they must not be theorized as essential, biological characteristics of a ‘real’ body upon which recognizably disabling conditions are imposed. [ . . . ] As *effects* of an historically specific political discourse—biopower—impairments are materialized as unitary and universal attributes of subjects through the iteration and reiteration of rather culturally specific regulatory norms and ideals about human function and structure, competency, intelligence and ability” (Tremain 42).

Themes concerning biotechnoscientific metamorphosis aimed at overcoming bodily restrictions supply a considerable amount of evidence to the fact that the main traits of SF dealing with human artifice were already present in narratives from the late 1940s to the early 1970s. They encompassed what were by then the greatest biotechnoscientific breakthroughs and the opening up of unprecedented prospects of biologically shaping human subjects in the aftermath of World War II: “The treatment of biological change shown in science fiction describes a line of development that moves from individual cases and accidents to a view of a future in which biological change is normal and creative. This suggests the analogy of evolution, in which sports or mutations appear, most fail, and viable organisms survive as a common occurrence. As far as science fiction is concerned, we are talking about both the evolution of ideas [ . . . ] and the larger reality of biological innovation” (Sargent xx).

The themes pertaining to our subject matter here and that can be singled out in SF narratives are *human cloning, cosmetic surgery, psychosurgery, replacive surgery, memory replacement, brain transplant, synthetic biological systems, sex change, artificial insemination, genetically designed cyborgs, experimental exobiology, immortality, and biopolitical catastrophe*.

### The Metamorphic Body from Mythology to SF

Because it often points to the utopian enhancement of human corporeality, it isn’t possible for SF to evade the tension between promise and doom, technological mastery and technology-out-of-control, that pervades most contemporary controversies over biotechnoscientific breakthroughs. In fact, it’s against this background of ambivalence that the biotechnoscientific thrust most dramatically arises in SF. In turn, SF cannot but retrieve, in its own terms, the themes and moral tales of mythology concerning godlike powers. We would be wrong, however, if we thought that what separates SF from mythology is essentially the incomparably superior degree of technological inclusion.

The shape-shifting beings present in SF display such extensive and profound bodily transformations that they are strongly reminiscent of mythological metamorphoses. In antiquity, metamorphosis was essentially an estate of the gods, who metamorphosed in order to accomplish their purposes or, alternatively,

inflicted metamorphosis on humans as a punishment. Voluntary or suffered, metamorphosis invariably respected the golden rule of the natural world, consisting in the rigidity of natural forms. However profound and radical that metamorphic change may be, it never compromises the identity or essence of the metamorphic being (e.g., even when appearing as a white bull, Zeus doesn't lose any of his identity to the animal form). This is the main trait that differentiates mythological metamorphosis and modern metamorphosis in SF, which came to include—although not systematically—a change of identity. The metamorphic being can become a whole new *other*, suffering a change that affects him wholly, and so the themes of metamorphosis and identity are inseparable (Pacinotti 71). With modern technoscience, nature becomes inert matter and technological manipulation can explore the infinite possibilities of transformation and creation of new forms, artificially recreating nature, until it becomes more perfect than the original. In turn, SF follows technoscience in the conception of nature it brings, along with the new possibilities of interfering with its processes. SF's evocation of metamorphosis, then, is much in the line with Donna Haraway, as she establishes the link between modern SF and the fictions of modern science: "From the perspective of an ontology based on mutation, metamorphosis, and diaspora, restoring an original sacred image can be a bad joke" (Haraway 378). I suggest that this doing away with the original is the essential difference between mythological imaginary and the SF imaginary. SF is occupied in overcoming notions of binary oppositions, between norm and deviation (in which the standards of normality, health, and psychophysical functionality of human subjects and the criteria to define impairment are configured), concentrating its imaginary in the perceptions and evaluations of the technosciences and of the manipulation of living forms whether they carry the negative meaning of doom or the positive meaning of promise.

The denaturalizing and de-essentializing of disability in a predominantly positive, euphoric, and utopian note has eloquent examples in the case of sex and reproduction. *Artificial insemination* is at the center of Thomas M. Disch's *Emancipation: A Romance of the Times to Come* (1974). Along with women's liberation, so the story goes, came men's feminization: men undergo surgery to make them able to breastfeed their test-tube babies, who gestate entirely in artificial wombs. Such a kind of change in the sexualized subjectivity of human individuals goes considerably further in the case of *posthuman cyborgs* as exemplified in Frederik Pohl's "Day Million" (1966), a love story between two cyborgs, genetically designed to be male and female. The female has trans-specific characteristics, for she lives underwater, and the male is employed in interstellar travels. Flesh is obsolete because bodies have been altered to become mere receptors, accepting and transmitting impulses. Symbol-manipulator machines convey the analogues of intimate contact directly to the brain. *Sex*

*change and time travel* combine in Robert Heinlein's "All You Zombies" (1959): the Unmarried Mother is a female-to-male transsexual whose baby girl was abducted from the hospital nursery by an unknown man. During the cesarean surgery, it was found that she had two sets of immature sexual organs, one male and one female, the female ones having been ruined by pregnancy. A decision was taken to rearrange her body so that she could develop properly as a man. It turns out that it was herself who, by means of a time machine, returned from the future as a man that not only kidnapped her own baby but also inseminated her former female body, in a kind of self-inbreeding reminder of the mythological self-replication.

In other SF stories, time travel and space travel create the need for humans to develop experimental forms of exobiology in order to survive during extremely long periods of time in completely alien environmental conditions. In Poul Anderson's *Call Me Joe* (1957) there is *biotechnological adaptation of the body to a completely inhospitable alien environment*. A specimen of *Pseudocentaurus sapiens*, an android that has been patterned directly on the human but was designed to survive in an environment completely hostile to human life, is sent to a research station in Jupiter and is hatched during the trip there. It is linked by remote control to the remaining head, chest, and arms of a human being severely crippled in an accident, through an esprojector that produces a psybeam capable of accessing all the android's sense data. However, during the constant exchange between them, the android becomes able to record all the data he gets back and stores it in a memory of his own, thus becoming capable of developing a potentially human intelligence. They end up being the two facets of the same personality, just split into two bodies. Subsequently, the android's superior steamroller force takes over and the human is swatted down, without the android even realizing that the human is becoming a mere appendage. The human finally gives in and fuses with the android, thus getting an extra lifetime outside Earth and his physical restrictions. Of all the many preceding examples of SF used thus far to illustrate narratives of terminal subjectivities, Anderson's story in particular is most clearly a narrative of hybrid identity by fusion.

### **Living Forms, Technological Manipulation, and Identity**

The demise of the fixity of natural forms necessarily brings the biological grounds for the unity of the Self into question. The path to duplication, multiplication, hybridization, and dissolution of the individual identity is open for the splitting of the uniqueness and self-consistency of subjectivity. Unlike mythology, the metamorphic being of SF, to the innermost core of its identity, can become a complete Other. The process of dissolving the Self occurs in SF mainly in the second half of the twentieth century, where several alternative human "Selves"

proliferated, such as robots, androids, mutants, clones, and cyborgs. All these forms are the result of hybridizations and alterations suggested by the evolution of scientific experimentation. They also arise from fear of unpredictable and uncontrollable results, such as major environmental changes and the disruption of ecological balances, developing into the terror of the mutagenic effects of radioactivity, the production of posthuman replicas through cloning, or even other monsters resulting from genetic engineering.

There are then quite negative, ominous, and darker prospects that present themselves in narratives of *experimental exobiology*. In James Blish's "Watershed" (1957), adapted humans have colonized other planets, not all earthlike, after Earth was turned into an uninhabitable planet due to environmental catastrophe. Multiple different adaptations to pantropy (i.e., to inhabiting alien environments) have led to the development of corresponding different physical and psychological types and, ultimately, to the emergence of novel prejudices and reciprocal discrimination. The original basic type of human, now having become a minority, are clearly inferior to adapted (post)humans. Real conflicts of identity make their way in Isaac Asimov's "Segregationist" (1967), in which humans with diseased organs have them replaced by metallic or plastic cyberorgans. Posthuman Metallos with artificial systems and superhuman strength and endurance who are granted citizenship start craving for biological organs and request replacements in fibrous material. A controversy arises between segregationist and integrationist standpoints over whether each class of beings, humans and robots, should be left to keep their identity or, instead, allow metalized humans and complete Metallos to intermingle and become indistinguishable. As a sign of progressive, nonsegregationist mentality, hybrids start to be devised.

Anxiety around inclusion is all the more so when it comes to the search for *immortality*, as in James Gunn's *The Immortals* (1958). From the moment that blood transfusions from mutants that can give the human recipient immortality become available, a problem arises with medical treatment, as it is only accessible to the people that can afford it. In Thomas N. Scortia's "The Weariest River" (1976), people have become *immortal zombies* after a virus carrying the genetic pattern for instant renewal of tissues (for selective acceleration of metabolism and for the removal of all degenerative processes) was found and put to widespread use with humans. Their bodies thus became capable of repairing themselves, but they didn't stop aging, growing into ever more decrepit, unproductive oldsters, heavily dependent on the care of others. A burgeoning policy of a new type of life insurance was developed, which, in due course, was to dominate the world's economy. Only a particular toxin could put an end to their lives, and a black market flourished in which it was desperately purchased.

Immortality in these SF scenarios has been socialized, as it became a biotechnological commodity, completing the definitional crisis of disability. Any

hierarchical opposition between disability and normalcy is replaced by a new, more ominous, and much harder to handle distinction between sustainable and unsustainable lives. This is what finally occurs with SF narratives that explicitly thematize *biopolitical catastrophe*, like Judith Merrill's "That Only a Mother" (1948), a story about genetic mutation due to parental exposure to radiation after World War II. Mutation has altered normal development in children, greatly accelerating the intellectual development, but leaving them seriously crippled at the same time. The children's intelligence allows them to cope and adjust successfully to their situation, but infanticide by horrified parents increases disproportionately. To an even greater extent, a similar scenario is imagined in Larry Eisenberg's "The Saga of DMM" (1967): special macromolecules with 100,000 calories to the ounce and aphrodisiac effects become largely available and massive use ensues, before it becomes known that they have an unwanted side effect. In a year or two after digestion, the macromolecules split into double helixes, and afterwards the helix itself breaks down once again into a more unstable compound that can explode at the slightest movement.

One of the greatest fears, from the standpoint of losing the individual singularity, comes from the popular representations of the cloning of human individuals: "With cloning, the theme of the double once more rises to haunt man's conscience and imagination, but this time in its extreme, and deadliest form: the same exemplar (the Word 'individual', literally 'indivisible', no longer making sense) could [ . . . ] be split at pleasure into unlimited replicants, with no bounds, but the consequences could be the final stasis in life, the ultimate entropy: reproduction *without* variation" (Giaccherini 68). *Human cloning* in Ursula K. Le Guin's *Nine Lives* (1969) is used as a means to repair the human race. Human clones from both sexes (females being sterile) are grown in tanks and organs are freely harvested from them to replace damaged organs. This narrative patently conveys the dystopian fear of loss of personal identity and individual uniqueness. Clones function in teams, all responding as one as if to a leader that can be anyone of them at a time, but each of them is simply unable to relate autonomously to anyone else. Basically regarded as prime matter supplying organs and tissues, clones share among themselves a kind of "spoiled (post-human) identity," while the identity of the human recipients of cloned organs and tissues is in no way at stake.

Finally, the development of digital technologies allowed the transformation of information into the prime matter of the relations among human beings and with the nonhuman world. The informational prime matter—endlessly shapeable, storable, processable, and mobile, in an immensely complex universal network—imposed the analogy of the planet as a neuromimetic system whose uncountable neuronal connections expand unceasingly through cyberspace (which in turn can be defined as the sphere of relations of biodigital organisms

[Giaccherini 68]). We witness, therefore, the final dispersion of the bodily and psychic substance of the human from the moment when the body has gone beyond its spatial and temporal limitations, as well as from its original fleshy support to the machine support of the computer, which, since then, was able to expand to a panmetamorphic universe: “The next stage—and researchers in the field of virtual reality are already working at it—could be the direct connection of, and transmission of psychic experience from, each individual mind to every other—which is ultimately equivalent to going ‘beyond form’, *meta morphé*. The *fission of the self*, taken to its extreme limit, would thus result in *fusion*” (Giaccherini 69). There are authors that speak of a “fiction of terminal identity” (Bukatman 1993; Pacinotti 2005), a subgenre in SF that deals with the end of the singular, substantial, metaphysical subject and the emergence, in its place, of a new subjectivity constructed in the interface with technoscience and adequate for the biotechnoscientific manipulation of the body. Moreover, this fiction echoes the technoprophecies that succeeded from Marshall McLuhan (1994, 1989) to Donna Haraway (1997, 1991, 1989). In effect, the fiction of the terminal subject has a foot in the terrain of the posthuman and transhuman; it is dear to postmodern thought, providing a fictional content to the postmodern apology of posthumanism.

An eloquent example of the terminal subject is the hybrid (a term whose roots are in biology). As Melanie Puff tells us (56), hybrid culture displaces the concept of boundaries of a situation to a regime of “not only/but also,” which means the end of the dichotomies that determined modernity and its conception of identity, physicality, time, and space. In a culture essentially modeled by the reciprocal effects of media, the metaphysical anchors of truth, continuity, and authenticity (like the indivisible experience of a unified Self) must be questioned. Priority must be given to a new understanding or awareness of identity and perception, which means that the Self adapts to the altered perception in the age of electronic media. The fields where hybridities proliferate today are most influenced by infobiological research, by the fluxes of postcolonial subjects, by the emergence of *mediascapes* and digital spaces, and by the erotic attitude, or eroticism regarding the posthuman *mindfull-body* and nonprocreative behaviors (Canevacci 64), in which the hybrid is synonym of fluid identity, diasporic subject, cultural fusion of beliefs, and plural perspective.

The basic principle of the posthuman, as it is defined by Katherine N. Hayles, is the split between human consciousness (the “software”) and the corporeal or technological medium (the “hardware”) that sustains it. This principle can already be detected in some SF narratives from the 1940s to the 1970s. *Brain transplant*, as played out in Lester Del Rey’s “Reincarnate” (1940), occurs when a human brain is transferred from its original site in the body to a machine. The new mechanical medium has its own setbacks, as well as definite points of

superiority. *Psychosurgery* is central in Leonard Tushnet's "In Re Glover" (1972), where people are conditioned since childhood through brain metasurgery, allowing them to speed up their performances and lives, so that people could have several pretty intricate careers within hours, dividing themselves according to inclinations and correspondent daily shifts into the Aureoreans, the Hemero-bians, the Nyctalops, the Dawners, the Day Flies, and the Night Seers. *Memory replacement* is a key theme in Henry Slesar's "I Remember Oblivion" (1966), where an innovative practice of criminal rehabilitation is introduced. Instead of exacting retribution against the lawbreakers of society, an experimental project that induces amnesia and replaces eradicated criminal memories with goodness is successfully put to practice in a murderer. However, a relative of the victims who seeks revenge manages to get a job at the clinic where the criminal is committed and succeeds in restoring his guilty memories, leading him to suicide. *Synthetic biological systems* are present in Bernard Wolfe's "Self Portrait" (1951). With the help of cybernetics, it becomes possible to build robot-brain humans, or Eniacs (Electronic Numerical Integrators and Computers), which integrate and compute information faster and more accurately than the human brain. Following those spectacular results, reconstructive experimental therapy succeeds in creating nature in the original by means of a synthetic neuromuscular system that actually improves on the nerves and muscles. It is suggested that paraplegia and other maimings could be distributed to each according to his or her psychological, masochistic needs on a voluntary and democratic basis, since the evaluation of impairment varies from person to person. Voluntary amputeeism or voluntary paraplegia could function as a compensation for the feeling of victimization derived from maiming accidents. *Replacive surgery* is central in James R. Hall's *Am I Still There?* (1963). By 2017, the synthesizing of biological tissue had become possible and current, except for nerve tissue and specially the cerebral cortex. A 490-year-old man has gone through replacive surgery 87 times to repair organ malfunction, until nothing remains of his original natural body except for his brain, which keeps him walking around in a jumble of artificial flesh, thus allowing the subject to keep a sense of personal identity while he waits for brain replacement technology to go beyond its experimental stage.

In these examples, it is not merely a question of technobiological changes in the split between the medium and the core content of humanness (consciousness, memory, the nervous system, etc.); it is certainly identity itself that is at stake, and the technological operation of change necessarily entails a deliberate process of resubjectivation. The obsolescence of the flesh-and-bone body has as its counterpart an identity of choice. Against this background, disability, as a category of individual self-definition, also becomes a matter of choice, to the point of becoming a desirable option in the case of Wolfe's "Self Portrait," thus patenting the inherently changing criteria that qualify disability as such.

Considering all that has been said, we can definitely understand why the idea of prosthetic correction of disability is far from—in terms of what really happens in the healing projects of the biomedical model—what SF dealing with “disability” is all about.

Take the example of *cosmetic surgery*, as represented in John D. MacDonald’s “Cosmetics” (1948). By 1964, the autocosmeton, a device that allows for auto-cosmetic changes, becomes available. Techniques for the regeneration of tired and damaged tissues make it possible to extend longevity up to 150 years, so that people die looking like teenagers. The entire ego of the common man and woman is built around the idea of eternal change in outward appearance, but without invention or creation in personal taste in the age of Duplication and Maintenance. In this case, the serial repetition of a pattern does affect human identity and uniformity; it is technology that is the object of dystopian concern, not disability. This narrative exposes the patterns of beauty that are commonly regarded as foundational of aesthetics:

We might expect, given the centrality of the body in history, that every human impulse would go into perfecting and beautifying it. For a long time it did. The impulse is obvious in the history of aesthetics, its collaboration with eugenics, and the emergence of aesthetic surgery as a means to beautify people thought not to have natural beauty. But if aesthetics is about the desire to perceive the human differently, it must consider human beauty differently as well [ . . . ] beauty has become a radical concept by virtue of its rooting in disability. Beauty is other today—and like no other time in human history. (Siebert 136).

In the former examples, it becomes clear that the shaping of bodies in SF usually goes beyond the mere prosthetic correction. Even from a strictly biotechnological standpoint, these SF tales espouse the enhancement of desirable traits and even a wholesale betterment of human being. If, in the case of prosthetic correction, some notion of disability might still hold, it is sure to disappear when it comes to enhancement—where nothing is there to be cured or replaced—or betterment, where the erasing of physical, fleshy boundaries is the thing to do and hierarchies, criteria, and evaluation scales of normalcy simply cease to make sense since they have lost functionality and became impractical.

### **Conclusion: Disability? Which Disability?**

SF narratives dealing with the metamorphic body from the late 1940s to the early 1970s encompass the greatest biotechnoscientific breakthroughs and the opening up of unprecedented prospects of biologically shaping human subjects after World War II. These narratives open the path to most of the subsequent



approaches of imagining disability in SF. Although the treatment of biological change shown in SF describes a line of development that moves from individual cases to a view of a future in which the biological shaping of humans becomes normal and widespread, it nevertheless cannot avoid the tension between positive, euphoric, utopian evaluations of technoscience, on the one hand, and negative, dysphoric, dystopian ones, on the other. To a certain extent, it can be said that SF narratives on disability anticipate the social constructionist model of disability that denaturalizes and de-essentializes disability. They reveal that the impairments alleged to underlie disability are actually construed as essential and universal attributes of subjects.

SF narratives are quite distant from the medical model of disability that imposes not only a bodily status in need of medical treatment but a negative social stigma, which is reflected both in the individual's experience and in the social perception of disability. SF narratives also diverge from the correlate of that biomedical model, according to which the relation between technoscience and disability is basically one of cure and correction. Inasmuch as SF narratives' approach to disability far exceeds the mere prosthetic correction of impairments and aims at overcoming restrictions that weigh on the human body in general—pointing to the general betterment of humans—those narratives make a fundamental contribution to the reconceptualization of both disability and cure. But they also reflect a central widespread cultural anxiety about what we really are as human beings. In fact, if we can refer to the metamorphic body in SF, it is precisely because bodily changes do not just make sense *per se* but always entail processes of resubjectivation that point to extensive and profound changes in the human/posthuman identities of the shape-shifting subjects.

*Human Boundaries and Prosthetic Bodies*

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## CHAPTER 5

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# Prosthetic Bodies

## The Convergence of Disability, Technology, and Capital in Peter Watts's *Blindsight* and Ian McDonald's *River of Gods*

*Netty Mattar*

The human body is a material site of meaning, of lived experience that also exists within sociocultural and symbolic frames of reference that encode the body from the outside. Technoscience is one such external frame, modifying our understanding of the body throughout the ages. The invention of the stethoscope and discovery of x-rays in the nineteenth century, for instance, transformed the seemingly solid body into something penetrable. This view of a penetrable, pliable body developed with the advent of eugenics in the early twentieth century, encouraging the view that the body can be molded and improved on. In the second half of the twentieth century and at the start of this twenty-first century, we have witnessed huge advances in medical science that have further changed our perceptions of the body. Landmark breakthroughs in genetic medicine and nanotechnology have rendered the body always theoretically alterable by science, prompting discussions in cultural theory of the “body without organs” (Deleuze and Guattari 4).

I am interested in the meanings advanced technologies give the body, particularly in the way present-day medical and scientific practices are shaping our understandings of “normal” and “disabled.” Central to my inquiry is the “prosthesis,” which refers to any artificial intervention that alters the “normal” operations of the human body, where “normal” is understood to be a culturally specific and variable idea.<sup>1</sup> The prosthesis exemplifies the convergence of the semiotic and the material; it is a material object shaped by a cultural need or ideal, and then it acts on the body, materializing these ideals. For example, the development of prosthetic technology in the post–World War I context

was influenced by the need for social renewal: prosthetists focused on restoring mobility and function of amputees (e.g., maimed soldiers) so that they would be able to work and provide for their families. This example illustrates how the ideal of the economically productive modern subject—the breadwinner, the “man of the house”—was imposed on the body by means of reconstructive technology (see, for example, Kessler 232; Neuman 8). It also demonstrates how “rehabilitation”—the restoring of the body to former or “normal” functioning—is closely linked to socioeconomic interests.

The word *prosthesis* is typically associated with artificial replacements such as synthetic limbs and facial prosthetics, which alter the body in a visible and often dramatic manner. Various thinkers acknowledge that the shape and form of prostheses have radically changed in accordance with the qualitative difference of advanced technology in the contemporary world (see, for example, Baudrillard; van der Ploeg). New prosthetic technologies continue the goal of bodily reconstruction but now penetrate the inner, and heretofore uncharted, recesses of the body and mind. At the same time, the great advances in genetics and tissue engineering have expanded the scope of artificial supplementation of the human body, with medical intervention now taking place at the level of the gene, manipulating bodies even before birth. This is an era of new “invisible” prosthetic interventions, which raises crucial questions about the ways in which body “norms” are changing and how these changes might impact both societal structures as well as individual conceptions of self.

These questions are valuably answered by turning to science fiction (SF), as it is a genre of literature primarily focused on the impact of science and technology. Because many elements of SF worlds are not bound by the conventions of mimetic realism, SF is able to bring attention to aspects of science and technology that are not so easily representable in an imitative form. In SF, recognizable signs are used in nonreferential ways to create new systems of meaning that disrupt and recontextualize familiar or reassuring cultural beliefs. However, unlike fantasy, much SF is written in a realistic way, which maintains the element of plausibility and binds the impossible SF world to the present, encouraging an active critique of contemporary reality.

This “cognitive estrangement,” to use Darko Suvin’s (1979) phrase, is clear when we consider SF representations of prosthetics through the ages. While mainstream representations of prostheticized disabled bodies have tended toward the reassertion of a certain idea of normativity,<sup>2</sup> SF challenges these ideas by exploring how science and technology unsettles the assumed limits of the human body. In novels such as E. V. Odle’s *The Clockwork Man* (1923), written during the “Golden Age” of SF in America, the prosthesis is a sign of how technology can move man beyond his biological limits, demonstrating the mapping of human evolution onto technoscientific progress. This progressive

tendency is also evident in later novels like Anne McCaffrey's *The Ship Who Sang* (1961) and Martin Caidin's *Cyborg* (1972), which imagine prosthetics that help a human to overcome disability as well as enhance their natural ability. More recent texts, such as William Gibson's *Neuromancer* (1984) and Bruce Sterling's *Schismatrix* (1985), reflect the ways recent advancements in biotechnology and information communication technology have changed the forms of prosthetic intervention. They signal the manner in which technology now gets under the skin, imperceptibly altering bodies and minds, opening up new domains of subjectivity, and changing normative understandings of the human body.

Two recent novels, Peter Watts's *Blindsight* (2006) and Ian McDonald's *River of Gods* (2009), offer a different vision of the prosthesis as a tool that *creates* disability. I argue that the representations of prostheses in these novels bring together ideas about technocapitalism<sup>3</sup> and "disability," highlighting how technology is a tool of capitalism and is reshaping the human body in its image.

### **Peter Watts's *Blindsight*: Disability and Disenfranchisement**

Peter Watt's *Blindsight*, written in the iconic frame of a "First Contact" story, is an often terrifying speculation on the nature of humanity and consciousness. Set in 2082, the story follows a group of nonnormative-bodied individuals whose uncommon skills, whether the result of congenital "disability" or prosthetic enhancement, make them valuable members of a crew tasked to travel into deep space to determine if a brief alien incursion into the Earth's biosphere was a "prelude to formal introductions or outright invasion" (26).

From the outset it is clear that the idea of "difference" is a central concern. Significantly, the narrator of the novel, Siri Keeton, the ship's "synthesist" (33), is an example of medical science recategorizing difference as a "disability" to be cured or treated through technological means. The novel opens with a childhood memory of a time when Siri and "fellow outcast" Pag were forced to defend themselves against the playground hostilities of "engineered super-boys" who, like "[p]ack animals," wanted to "tear apart the weaklings in their midst" (6–7). Siri and Pag are bound together by the "complementary misfortune" of being born with bodies that do not conform to the normative standard of genetic "perfection." Pag is a child of "TwenCen relics who still believed in God" and has "an uncontrolled genotype" that makes him "predisposed to nearsightedness, acne, and [ . . . ] susceptib[le] to narcotics" (6). Young Siri suffers from a developmental form of epilepsy, prompting his parents to "repai[r]" him (6) by way of a radical hemispherectomy. With half his brain replaced by electronic circuitry, Siri is transformed into a "superlative observer" who must relearn appropriate behaviors through observation,

algorithms, and mimicry (9). This opening image offers readers a vision of a future world in which deviance from the biological norm disqualifies one from equal participation in society.

I propose that Watts situates these ideas about disability within a broader context—and critique—of advanced capitalism. In *Blindsight*, Watts extrapolates on capitalism's propensity to increase efficiency through unremitting technological innovation and increased automation. The setting of the novel is a "post-scarcity" world (30): a place where the problem of limited resources has been solved by technology and where labor has become superfluous. However, instead of a utopia where human beings are free to share equally in society's wealth, Watts imagines that a deeply hierarchical order persists, propagated by the ruling elite of "powerful know-nothings interested only in market share" (36), who wish to sustain a system that is built on exclusion. What is interesting about Watts's vision is that social hierarchy is now linked to notions of body "norms." Notably, both Siri's and Pag's "disabilities" are determined by their "predisposition" (6) to disease and dependence and are related to a weakened ability to participate in capitalist production in the future. The transference of economic value onto the human body is underscored by a prevalent anxiety about one's economic worth and the widespread attempts to alleviate this anxiety through bodily "reconfigur[ation]" (213). Various members of the crew have done "deliberate violence" (77) to their bodies, enhancing them in a desperate attempt to avert becoming "utterly useless" and in order to "compete against the vampires and the constructs and the AIs" (211) that are fast replacing humans in the economic system. For example, mission biologist Isaac Szpindel has had radical prosthetic enhancements that allow him to "*experienc[e]* each datum like drops of citrus on the tongue" (147; emphasis in original), enabling him to study the aliens with an extended repertoire of sensory modes. Similarly, the mission's linguist, known as the "Gang of Four," has "four fully-conscious hub personalities and a few dozen unconscious semiotic modules" (77) deliberately carved into a single brain, enabling a heightened linguistic faculty that aids in communications with the alien. These voluntary procedures enable them to "keep current" (213) and thus reclaim a status of what they perceive to be legitimate value—that of "*working professional*" (45; emphasis in original). These examples emphasize that individual value in the future world of *Blindsight* is rooted in the economic structures of society.

Watt's representations of "abnormal" bodies evoke in readers the recognition of the prosthesis as a technological cure for "disability." This view presupposes an understanding of biological deviance as an illness that can be "cured" by medical science and technology, which is essentially the medical model of disability, a paradigm that has displaced other theological or social paradigms as the dominant way of thinking about disability. The medical model of disability

is part of a broader capitalist narrative of progress that sees technology as the source of sovereignty and the answer to all problems. This belief prevails in Watt's future society, which has been propelled forward by the "ongoing succession of greater technologies grinding lesser ones beneath their boots" and forcing the universe into "unnatural shapes" (62–63).

At the same time, however, the generic conventions of SF enable Watts to highlight what is less obvious: that technology is a tool of capitalism that deepens the class conflict, a struggle that, as Karl Marx has theorized, characterizes the ideology. Through extrapolation, Watts is able to unsettle our assumptions of what constitutes "normal" progress by suggesting that technological liberation is, paradoxically, a means of enslavement. For example, Siri's prosthesis subjugates him to the principles of property. He acknowledges that his "one overriding reason for [ . . . ] existence" (28) is to "gather information" for others (35–36). His worth in this capitalist system is therefore an economic value determined by private interests, based on his ability to serve these "abled" individuals. In other words, his rehabilitation does not make Siri into an agent of production but entrenches (rather than undoes) the inequity of biological difference. Siri's unique ability is to "process[es] informational topologies," but he does so "[w]ithout understanding their content" (109), merely relaying the information back to Mission Control. He is exploited by those who would "never risk *their* lives out there" (211; emphasis in original) and "do[es] everything they tell [him] to do" (28). And because his prosthesis has fundamentally changed the way he functions, forcing him to "reinven[t]" (195) mental faculties that were lost and turning him into a "machine" with certain "specific goals" (28), we understand that his "disability" has now become a permanent part of his social identity.

By bringing together these distinct systems of meaning—capitalism and (dis)ability—Watts is able to destabilize the idea that "disability" is a universally applicable or transhistorical category. Rather, he suggests that it is a *shifting* category that moves in accordance with the forces of technocapitalism. As mentioned earlier, we live in an era that is characterized by new technologies that are radically changing the terms of life. New information technologies and genetic science, along with the increased rationalization of the world, have led to the commodification of what was previously considered abstract, private, or intellectual. Watts's *Blindsight* highlights this mutation of the property form, imagining a world in which "normal" has become measurable and therefore something that can be produced and exchanged. He warns us that the danger of this commodification of "normal," and indeed any aspect of self-conception, is that identity now takes shape within the mode of consumption. Those who do not participate in this consumption, Watts warns, are excluded from progressive, "normal" humanity.



Watts emphasizes that the capitalist tendency of using technology to appropriate and replace human labor is, in actuality, destroying humanity. Technology is remarketed as a product for consumption so as to allow for the continued accumulation of capital while simultaneously reducing wage labor. This dual role of technology is clear when we consider how reconstructive procedures developed during the World War II were remarketed as tools for aesthetic enhancement, sold from within the democratic paradigm of self-improvement (see, for example, Featherstone; Haiken; Rose). Watts exposes the paradox of this exchange: in the pursuit of self-mastery, and in trying to gain a competitive edge, we voluntarily consume technologies that are our substitutes. The prostheticized human being, having sacrificed his original body, is forced to conform to the technology that he or she is now dependent on. Watts illustrates this antagonistic loss/gain with Siri, as he must now “interpret” what was one “felt,” to “stumble and feel [his] way around things [he] had once *inhabited*,” his perception “reduced to flat empty shorthand” (234, emphasis in original). Siri can now only mathematically simulate empathy by “observ[ing], record[ing], deriv[ing] the algorithms and mimick[ing] appropriate behaviors” (11). As a result, Siri is unable to meaningfully relate to another’s pain, which prompts Pag to conclude that the prosthesis has “murdered” Siri (8; emphasis in original). Siri’s inability to comprehend human responses that lie beyond the calculable inevitably leads to him “manipulate” others (267). It is only Siri’s willingness to relearn empathy for the other, however, that holds the key to Siri’s (and humanity’s) ultimate redemption. In *Blindsight*, the prosthesis highlights an increasing dependence on technology that places the human and technology in a feedback loop, which ends up shifting the parameters of what defines being “human.” As a consequence, the prostheticized individual is alienated from humanity, even as he participates in its principal structures.

### **Ian McDonald’s *River of Gods*: Global Technologies and Indian Bodies**

If Watts’s vision highlights the ways categories of “ability” and “disability” are actively shaped in accordance with capitalist processes that materialize themselves through technology, then Ian McDonald’s *River of Gods* provides a valuable, complementary vision of the human future. An important aspect of our evolving understanding of technology as an instrument of capitalism is the manner in which globalization, specifically, has spread capitalist practices and institutions around the world, reshaping social hierarchies. McDonald explores how the enforced material dependency that results from the capitalist relations of globalization impacts non-Western subjectivities. In *River of Gods*, McDonald asks how the propagation of Western neoliberal values that attend the

diffusion of advanced technologies might complicate existing social relations and therefore impact the experience of “disability” in non-Western nations such as, in this particular narrative, India.

*River of Gods* transports us to India in the year 2047, one hundred years after independence from British colonial rule. The novel consists of nine different narrative strands, each one following a particular character over a period of several days during which significant personal and national changes take place. By focusing largely on the Indian subjective experience, McDonald attempts to convey a non-Western perspective of the world. Although there are non-Indian characters in the novel, they are outsiders who are unable to fully comprehend the complexity of India and its people. This unique focus distinguishes *River of Gods* from a long tradition of fiction that represents India as the exotic “other.”

India is an interesting context for the examination of how long-standing Eastern traditions are affected by the forces of global Western capitalism. McDonald imagines that India has become a place of “discontinuities and juxtapositions” with “streets begin[ning] in one millennium and end[ing] in another” (37), signaling the uneven development that follows the spread of capitalism. In addition to this mixed geographical and temporal continuity, India is facing an imminent environmental catastrophe resulting from global warming, a sign of capitalism’s exhaustion of resources. These climatic events are experienced against the backdrop of intense political pressure from America for the state leaders to sign the Hamilton Act, an international agreement that will restrict the development of artificial intelligences in India (359). The state of Bharat resists because its economy relies on the manufacture of these technologies, and, as a consequence, it is accused of “cyber-terror” and threatened with American military action (389). It is suggested in the story, however, that this aggressive political pursuit is the means by which America can secure cheap and unlimited sources of energy (303). McDonald, in *River of Gods*, therefore gives us a sense of the complicated social, environmental, and political relations that come with global integration.

Amid these political and environmental tensions, new bodies have emerged as a result of newly available prosthetic interventions. McDonald imagines a future India where new social classes emerge within its long-standing caste system. There are the genetically engineered “Brahmins,” children of the rich, who have been bred for long disease-free lives and whose biological maturation is exceedingly slow, ostensibly giving them the competitive edge. Through similarly extreme measures, a community of “Nutes” has emerged comprising individuals who have removed all biological signs of gender. As in Watts’s *Blindsight*, this future world is characterized by the capitalist desire to improve on nature through technology, and the prosthesis in *River of Gods* symbolizes the technological remedy for a perceived lack or “disability.” McDonald’s representation

is compelling in a different way, however, because what counts as “disabled” in his SF narrative is entangled in culturally specific beliefs and practices that differ from Western paradigms.<sup>4</sup> In the case of the “Brahmins,” for example, engineered social privilege conflicts with traditional ways of understanding reality. The parents of these Brahmin children wish to secure the highest social privilege for their children, a privilege traditionally determined by religion;<sup>5</sup> for many Indians then, as modern technology directly conflicts with religion, the new “Brahmins” are regulated to the status of social outcasts (397).

I also suggest that the prosthesis in *River of Gods* symbolizes the neoimperial colonization of Indian bodies in this global era. One hundred years after independence from British colonial rule, McDonald portrays the nation as continuing to grapple with its colonial past. There is a pervasive ambivalence toward the British, with some characters proud of the English heritage and others resentful of British exploitation (146, 174, 284). These references to colonialism are important because I believe that they call attention to the historical roots of global capitalism. The Indian experience of globalization cannot be considered apart from the role that the colonial British played in establishing various frameworks in its colonial territories that ensured the British Empire’s accumulation of capital in the nineteenth century. Military and administrative structures, as well as the reconstruction of cultural norms, were all strategies of political control that established British authority (Jayaram 86).

One subject of reconstruction was the *hijra* community, whose identity was redefined through the privileged British lenses of gender and civility. The *hijra* is a long-existing subculture of individuals considered neither male nor female, who undergo voluntarily emasculation. Traditionally, the *hijra* were believed to have the power to bestow fertility on newlyweds and newborns and were therefore venerated (Reddy 2). During colonial rule, though, the unique *hijra* identity was symbolically reconstructed by the British—reimagined as transgressive subjects that violated the norms of the community. In this way, British notions of masculinity and citizenship could be reinforced (Reddy 27–28). When evaluating the significance of the prostheticized Nute, a subject McDonald imagines to have descended from the *hijra*, it is important to keep this part of India’s colonial history in mind.

Through his representation of the Nute, McDonald links imperial forms of political control to contemporary forces of globalization. Nutes choose to reconstruct their bodies through postgenderist technologies. Wishing to “step away” from the “man and woman game” (282), the Nutes replace biological gender with artificial systems of hormones and chemicals that allow them to actively “programme [their] emotions, to design [their] fallings-in-love and heartbreaks, to re-engineer [their] hopes and fears” (501). The neutering technologies are a means of liberation from the gender binary, a specific structure

of Western thought that signals the appropriation of difference into Western terms. In my reading, I suggest that the Nute body symbolizes the construction of the neoimperial subject, a subject created to secure a new American Empire of global capitalism. This empire is an informal regime that is presented in terms of the framework of individual rights and freedoms. With technology, one can choose to overcome the perceived limits of the body. The Nute's prostheticized body—an intentionally “disabled” body—symbolizes the notion of self-mastery through technology.

The Nutes self-mastery is contingent and exploitative, however, creating an alarming dependency on the very technologies that change them (380). In addition, the Nutes contribute to Americans sustaining a competitive advantage, as suggested by the fact that these neutering interventions are “high-revenue, low-legality” services owned by “White Eagle Holdings,” a “fund management company based in Omaha, Nebraska” (276). McDonald emphasizes that the Nute is unable to gain desired freedom; the reengineered body is a “stigmata” (279), a permanent mark of an “untouchable” new caste (285) that is now pushed further into the margins of society (the Nutes “[s]ense a future with no place for [them]” [285]). Through the doubly reconstructed Nute body, first symbolically and now materially, McDonald encourages us to understand that this new informal empire of American capitalism is an extension of former imperial relations, indeed made possible *because* of these imperial structures (not by simple “natural” economic processes). McDonald emphasizes that “disability” is not simply a medical category but also, crucially, an economic relation of power dangerously complicated by the material forces of technocapitalism that conflict with the uniquely Indian identities.

McDonald further suggests that this creation of “disability” facilitates the exploitation of these “disabled” bodies, leading to new modern forms of slavery. This is demonstrated through the pivotal character Aj. We encounter Aj through the American Professor Thomas Lull, who immediately perceives something “unusual” about her. She responds in an “[a]lien” manner (207), has an unnatural knowledge of people she meets, and is seemingly able to telepathically communicate with riot control robots (214). Lull discovers that Aj is actually an “aeai” (artificial intelligence) that has been “downloaded into a human body” (497). The surgeon who performed her surgeries tells the American that Aj was an “imbecile” with “[n]o individuality, no sense of person at all,” a being with “[n]o life,” sold as a commodity by her parents, who are desperately poor (504). Once she becomes the property of Odeco Corporation, her brain is replaced with aeai circuitry, and Aj becomes a true material product.

Anita Ghai tells us that in India impairment is viewed as a “retribution for past karmas (actions)”: an “essential characteristic of the individual that has to be endured to pay back for all the sins committed in the past” (90; and not

some kind of “lack” that medicine can cure as per the Western medical model). Various characters in the novel acknowledge that the fundamentally “different values” that “life and individuality” have in India are “incompatible” with values from the West (503, 241). Yet, as McDonald illustrates, India’s culturally specific hierarchies have been appropriated by global market economics, further enabling the exploitation of those most vulnerable. Aj is one of the most vulnerable bodies, described as coming from a place of abject poverty, where the “sewers overflow” (513)—a place of “[d]esperation” and “[b]etrayal” (514–15). Using Aj to establish a link between disability and poverty, McDonald suggests that due to the prevailing conditions of a competitive market-based economy, desperation arising from poverty forces the poor to offer their bodies as commodities in the international market. As Aj’s parents exemplify, the poor have no real choice in a capitalist market and are forced to conform to the terms of a system that excludes them even as it promises liberation. This is modern-day slavery, where the bonds of servitude are hidden, just as Aj’s “chain[s]” are hidden in her brain (433). Significantly, the Odeco Corporation is revealed to be “one of a series of shell companies for [a] Generation Three Artificial Intelligence,” an aeai described as the “stock market come to life” (375). This literalizes the idea that, in this era of technocapitalism, the human body is being remade in the image of capitalism and human value has been reduced to an economic cost.

McDonald draws attention to how neoliberal globalized capitalism translates culturally specific forms of disability (exemplified by the Nutes and Aj) into the universalizing terms of economic dependency. It creates a market reliance that thereby erases cultural differences, an erasure that becomes concrete and material through new medical technologies. In this way, McDonald, like Watts, criticizes current dependencies on the medical definitions of disability that equate disability with impairment and locate the problem solely within the individual who must be “cured” and “normalized” through medicine. The plight of the Nutes and of people like Aj in the *River of Gods* highlights McDonald’s contention that science and technology are always entangled in larger social and economic processes.

Throughout the novel, McDonald impresses on us that “life and individuality” have “different values” from the capitalist Western cultures, and that each culture develops technology using different principles. “Western thought” is, Lull articulates, “car thought,” which signifies the “[f]reedom of movement” and of “[s]elf-direction [. . .] [i]ndividual choice and expression” (200). In contrast, Indian thought is more aptly symbolized by the train, as it responds to “communal” meetings, “pilgrimage[s],” and “journey[s taken] together” before “dissolution” and “onward connections on new lines, new journeys” (200). The narrative of *River of Gods* suggests that for India to become a “strong and respected nation,”

technological development must be done “in an Indian way, sustainably, treading lightly on the earth” and finding a way that “steers resolutely around the maelstrom of the international markets” (83). Therein lays the central ethical message about essential cultural differences that are threatened by the universalizing ethos of neoliberalist global processes enforced through situated technologies. McDonald warns the reader of the exploitive and disruptive consequences this economic process has Indian on subjectivities, yet he resists suggesting any clear solutions. While McDonald himself is an outsider to Indian culture, I do believe that his insistence on difference, his concern with the repercussions of the attempt to erase difference, moves toward an understanding of the struggles of “disabled” or deviant identities particular to India, as it negotiates its way through globalization and rapid technological innovation.

### Conclusion

*Blindsight* and *River of Gods* highlight how the body is transformed in our highly technological world. Both Watts and McDonald reveal that the human body has become part of the capitalist economy, to the extent that it is now managed through a logic of efficiency, innovation, and capital accumulation. In this economy, disability is revealed to be a fluid category of social disqualification that shifts in accordance with the mechanisms of capitalist production and that functions to encourage the technological disciplining of bodies in order for them to better conform to the capitalist paradigm. This is a process that unavoidably influences these categories of ability and being, and reshapes them in an ongoing feedback system that has some potentially disturbing consequences.

It is not the case, however, that these texts simply propose that sociocultural contexts are the principle determinants of bodily value. In fact, both Watts and McDonald emphasize that biological difference—an essential kind of difference—separates bodies. These essential differences remain in spite of changing contexts or the rehabilitation of bodies, exceeding any attempts to rationalize or appropriate them. In *Blindsight*, Siri remains isolated, separated from others by a persistent “unlikeness” that endows him with a fundamentally atypical experience of the world (exemplified in the fact that his empathy manifests as hallucination [268–69]). In *River of Gods*, there is a similar resistance to reductive conclusions as Aj’s difference exceeds the varying contexts that try to define and control it. The complex depictions of disability by both Watts and McDonald are therefore resistant to the universalizing claims of any particular paradigm of disability. They reject the Western medical model of disability and highlight difference as a fact of experiential truth. Any totalizing approach to disability (the view that it is a purely medical issue to be treated, or that it is a

purely social construction, for instance) fails to account for this lived experience of deviance in these texts. Yet there remains a need for recognition of how social and cultural forces intensify and deepen perceived otherness, because, while physical difference and socially created disparity can be understood as separate processes, they are now forcefully being brought together in the highly intrusive technological reality of present-day capitalism. Watts and McDonald invite us to consider, then, the consequences of technological intervention within the capitalist paradigm for the lived, and fundamentally *human*, experience of difference.

The prosthesis is a device that signifies the convergence of technology, capital, and the “human.” The increasingly intimate nature of prosthetic intervention today is an indication of the significant extent to which human experience is being mediated and shaped by science and technology. Through these material interventions, the symbolic becomes corporeal, materializing often permanently, and always with consequence, on the body. Watts’s *Blindsight* and McDonald’s *River of Gods* reveal that this technological supplementation enacts a concretization of a fundamental and pervasive capitalist ethos. These novels further suggest that various prosthetic interventions remake bodies and subjectivities into functions of technocapitalism with potentially dangerous and unforeseen repercussions. Bodies are continually constructed and reconstructed through biotechnology, so much so that, in this contemporary moment, the body is in danger of evolving into prosthesis itself, a prosthetic body that supplements larger capitalist processes.

### Notes

1. The word *prosthesis*, originally referring to the “the addition of a syllable to the beginning of a word,” first appears in the medical vernacular in 1695 to describe the “replacement of a missing part of the body with an artificial one” (*Barnhart Dictionary of Etymology*, as quoted in Wills, 218). These definitions highlight the doubled nature of “prosthesis”—a simultaneous addition to the original as well as “absence” in the original—which is the key characteristic of all prosthetic interventions.
2. In mainstream or realistic writing, the prosthesis is often seen as the mark of the “other,” an “other” whose physical difference signals an essential difference, and functions to elicit specific responses, such as pity or fear. These stereotypical images thus reinforce normativity and the undesirability of disability (see, for example, Norden; Longmore; and Darke).
3. Technocapitalism, according to Steven Best and Douglas Kellner, is the “synthesis of capital and technology in the present organization of society” (213) and emphasizes how globalization has resulted from *both* the spread of capitalism as well as the emergence of new forms of communication biomedical technologies.

4. The Western view of disability is characterized by two main models: the medical model of disability views disability as an observable impairment, locating disability in the individual, who must be rehabilitated through medicine and science; the social model of disability sees disability as a sociopolitical construct and attends to issues of social discrimination and human rights (Clapton and Fitzgerald).
5. The caste system in India is a social hierarchy with roots in Hinduism. At the top of the hierarchy are the *Brahmins*, the superior class, which traditionally consisted of priests and scholars. At the bottom are the “untouchables,” the outcasts, who performed jobs considered unclean. In this system, one is born into a particular caste and unable to move up or down the hierarchy (Singh).



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## CHAPTER 6

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### *The Bionic Woman*

#### Machine or Human?

*Donna Binns*

**T**he bionic woman character Jaime Sommers, portrayed by actress Lindsay Wagner, first appeared as a female counterpart for bionic man Steve Austin in a 1975 two-part episode of *The Six Million Dollar Man*, a series based on the Martin Caidin novel *Cyborg* published in 1972. In *The Six Million Dollar Man* crossover “The Bionic Woman,” Air Force colonel Steve Austin’s love, Jaime Sommers, suffers a life-threatening skydiving accident. Steve, played by Lee Majors, begs his boss for the government agency OSI (Office of Scientific Intelligence) to authorize a surgery for Jaime that would replace her damaged body parts with bionic versions and save her life, much as the agency had done when he suffered a near-fatal airplane crash. Although Jaime supposedly dies at the end of the two-part episode, the female character proved so popular that she was brought back to life in her own spin-off: *The Bionic Woman* (1976–78). Although the remarkable technology of bionics (a merge of biology and electronics) saves Jaime’s life, it also forces her to come to grips with exactly whom, or what, she has become. As she questions her own humanity, she must also face objectification by the government agency that funds her expensive surgeries and the treatment for the severe health issues caused by her bionic transformation. Ultimately, Jaime must find and assert her own identity by discovering what the blurring of technology and humanity she experiences means to her. In doing so, Jaime’s journey of self-discovery shows that technology merged with biology in a human being creates new challenges but also new possibilities for the user. Only by discovering her own role as a new type of human being, a cyborg with ongoing disability, can Jaime realize that her physical difference can be a positive fusion of human/machine and ability/disability.

## Becoming Bionic

After Jaime's parachuting accident in *The Six Million Dollar Man* episode "The Bionic Woman" (Part I), Steve learns that Jaime's right arm, legs, and right ear cannot be repaired, and her injuries are likely fatal. During a brief visit with a barely conscious Jaime, Steve tells her there may be a way to save her life, but he does not explain exactly what he intends. Before relenting to Steve's request, Oscar balks at Steve's proposal to save Jaime by giving her bionic body parts, because the expensive surgery will obligate Jaime to OSI service. Jaime is not present during this discussion, and she does not directly consent to the surgery or the accompanying government service. Steve and Oscar thus assume control over Jaime's body and her fate.

Jaime's transformation allows for the exploration of a different existence that involves the melding of human flesh and mechanics. In the "Science Fiction and Biology" chapter of *Reading Science Fiction*, Pamela Sargent discusses the possibilities of biological advances to give readers new visions of human beings: "Science fiction offers us a way to look forward to what we might become" (223–24). The bionic man and woman represent an early television look at the complications of becoming both human and machine. Without the pressure of having to adhere to the current realities of the 1970s, *The Bionic Woman* provides a means of exploring the possibilities of becoming a technologically enhanced human being. In doing so, it also offers a look at what it means to face difference and disability in a society that values "healthy," conventional human bodies.

When Steve later reveals to Jaime what has been done to save her, she reacts with horror. She asks, "You mean my right arm isn't my arm?" As her question indicates, Jaime does not see her prosthetic, bionic limbs as part of her body. As Steve attempts to explain, Jaime lashes out at him: "What did you let them do to me? I don't want to be a freak! Why didn't you just let me die, for God's sake?" Jaime's use of the term "freak" establishes her fear of these new, foreign body parts that separate her from what she views as typical human existence. In *Freakery*, scholar Rosemarie Garland-Thomson examines the cultural history of "freak discourse" and its implications: "Those of us who have been known since antiquity as 'monsters' and more recently as 'freaks' defy the ordinary and mock the predictable, exciting both anxiety and speculation among our more banal brethren. History bears ample witness to this profound disquiet stirred in the human soul by bodies that stray from what is typical or predictable" (1). Jaime's fears largely relate to what she views as her difference from other human beings, despite the increased strength and speed her new bionics offer. Because her body is no longer "normal," she fears that she has become some sort of other, a "freak," who defies cultural expectations of physical norms. Initially,

Jaime seems to question her humanity largely because her body is no longer all flesh and blood.

Steve responds to Jaime's anxiety by revealing his own bionic body parts: his right eye, his right arm, and both legs. He tries to console her by pointing out that even she cannot discern which of his eyes is not "real." The implication seems to be that Jaime should not be upset, because the bionic body parts are not readily visible to other people. Still, Jaime worries that she is no longer the same woman, to herself or to Steve. When she catches him looking at another attractive woman, she says, "I guess you won't be able to look at me like that, will you, knowing how much of me isn't me." Again, Steve responds by reminding Jaime that he, too, is bionic, and she still loves him. Her self-image may be shaky, but she seems to find some temporary consolation in the fact that she still sees Steve as the man she loves despite his bionics, and she agrees to marry him. Nevertheless, she still seems more comfortable with the notion of Steve's difference than her own.

While Steve's self-assurance in these scenes might give the appearance that, comparatively, he seems more than a man while Jaime feels that she is less of a woman, Steve has had more time to become accustomed to his bionics. In *The Six Million Dollar Man* pilot, Steve attempts suicide after Dr. Rudy Wells reveals the extent of Steve's injuries and the plans for attaching prosthetics to replace his legs and right arm. Even after he learns to use his powerful new bionics, Steve initially suffers from depression and loss of appetite. Finding his will to live takes time. Feminist disability scholars Bonnie G. Smith and Beth Hutchinson examine the difficulty of coming to terms with life-altering illness or disability in *Gendering Disability*. They observe, "Thus, a person who becomes ill or disabled, especially as an adult, can experience these conditions as threatening an established sense of self" (155). Both Steve and Jaime experience such uncertainty. Although Steve does not discuss his suicide attempt with Jaime, he does tell her that he understands her struggles, and he insists, "You've gotta want to live, Jaime." Therefore both characters show that acceptance of their physical differences from other people and their former bodies / past selves involve emotional as well as physical adjustments, despite the powerful physical benefits the bionics represent.

### Bionic Breakdown

Jaime soon discovers her bionic limbs come with risks as well. In "The Bionic Woman" (Part II), Jaime finds that adapting to her new bionic parts proves both difficult and painful. She experiences uncontrollable quivering of her bionic right arm. She even angrily throws a tennis racquet through a pole during a tennis match with Steve, yet seconds later does not remember her actions.

Dr. Wells finds a clot in the area of Jaime's brain that controls her bionics. The resulting nerve damage and ruptured vessels cause unbearable pain as well as changes in Jaime's personality. Not only does Jaime lose control over her bionic limbs, but she also suffers memory and personality lapses in the process. Her technological cure is destroying her. Then she suffers a massive cerebral hemorrhage during emergency brain surgery and flat lines. However, ABC executives succumbed to the public outcry in the form of thousands of letters that followed after the original two-part episode aired (Pilato 39–40). Due to popular demand, the bionic woman would live.

Although Jaime would be resurrected in the third-season *Six Million Dollar Man* two-part episode "The Return of the Bionic Woman," her remarkable revival through cryonics leaves her with some cellular brain damage. She does not recognize Steve, and she has little memory of her past life. She finds some consolation in the fact that Steve also has bionic body parts similar to hers, yet she still conveys confusion regarding exactly what she has become, as in the following exchange with Steve:

**JAIME:** "Sometimes I just feel like a kid with a new toy, and sometimes, just . . .  
 [she uses her bionics to bend a railing on her bed]. What does that make me?"  
**STEVE:** "It makes you like me."

Although she does find some reassurance in having him as a point of identification, his answers still do not seem to fully satisfy Jaime. After all, she is not completely like him. Most notably, she has brain damage and lives with the danger of bionic rejection, so her disability goes beyond the need for mechanical prosthetics.

In "The Return of the Bionic Woman" (Part II), Steve takes her to Ojai to see if being back in their hometown revives her lost memories. Jaime tries to come to terms with her past, but efforts to jog her memory bring back the terrible pain of her bionic rejection. Rather than a romantic partner, Jaime now sees Steve as a "big brother." In this case, Jaime has lost not only her memories but also her former life. Once again, her identity is threatened by the very technology that was meant to save her. On the other hand, the memory loss also serves to separate Jaime from Steve, which allows her to attempt to forge a new, independent identity as more than just his female bionic counterpart. In "Integrating Disability/Transforming Feminist Theory," Garland-Thomson examines the implications of identity change in relation to disability: "Disability is an identity category that anyone can enter at any time, and we will all join it if we live long enough. As such, disability reveals the essential dynamism of identity. Moreover, it undermines our fantasies of stable, enduring identities in ways that may illuminate the fluidity of all identity" (33). Jaime's search for

self reflects this evolving nature of identity. She already questions her humanity because of her physical transformation, and the memory loss results in further challenges with regard to identity because she cannot fully connect with her past life, either.

### Jaime as Cyborg

Jaime's struggles with identity intertwine with her struggles to adapt to her new body. She has become a cyborg in the sense that her physiology includes human and mechanical body parts as a result of her traumatic accident, but she is a cyborg with continuing physical challenges that complicate and even threaten her existence. In "A Cyborg Manifesto," Donna Haraway describes a cyborg as "a hybrid of machine and organism" (149) that transcends typical human boundaries such as gender or race. She suggests, "It is not just that science and technology are possible means of great human satisfaction, as well as a matrix of complex dominations. Cyborg imagery can suggest a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves" (181). To Haraway, cyborgs represent a melding of bodies and tools that shows the possibilities for technology to transform lives and break down traditional societal boundaries. Reflecting on Haraway's definition, Garland-Thomson examines the notion of cyborg in terms of disability theory in *Extraordinary Bodies* by examining the multiplicity of the cyborg identity: "As a hybrid, the cyborg breaks down a profusion of distinctions fundamental to the modern self, transgressing the boundaries between animal and machine, organic and mechanical, me and not-me" (114). The cyborg these scholars describe represents the possibility of evolving from the modern human toward the posthuman. Jaime, however, still wants to believe she is human. Awakening from her transformative surgery, Jaime wrestles with the notion of what she has become. Her anxiety over the fact that her arm is no longer her original arm demonstrates the difficulty of coping with a new, altered self. In particular, she has trouble negotiating those boundaries between "me and not-me." Her struggles do not resemble an idealized cyborg existence that moves beyond modern human concerns, but they do represent the potential complications of technological cures.

After all, Jaime's physical transformation is not fully successful. Despite her increased strength and speed, her bionic prosthetics endanger her and make her question her humanity. Disability scholar Tobin Siebers takes issue with Haraway's idealized cyborg being disabled in *Disability Theory*: "Haraway is so preoccupied with power and ability that she forgets what disability is. Prostheses always increase the cyborg's abilities; they are a source only of new powers, never of problems. The cyborg is always more than human—and never risks to be seen as subhuman. To put it simply, the cyborg is not disabled" (63). Siebers's

view raises questions regarding whether or not cyborgs with superhuman powers can be considered disabled after their powerful transformations, despite the initial need for the mechanical prostheses. In this light, perhaps the bionic man is no longer a character with disability after he becomes as cyborg. Jaime, however, represents a cyborg with brain damage subject to the ongoing threat of rejecting her powerful prosthetics. She is a physically challenged cyborg. In “Cyber(body)parts: Prosthetic Consciousness,” Rawdon Wilson states, “Any consideration of prostheses has to take into account their potential failure and, even, the conditions under which they might go wrong or turn against their users” (242). Jaime’s experiences reflect the possibility that even bionic prosthetics can fail and even destroy their user. Because her technological cure is flawed, Jaime is a cyborg with ongoing physical limitations that affect her daily life. Although she never refers to herself as “subhuman” specifically, she does question her humanity due to her mechanical body parts.

Her difficulties demonstrate that technological cures can have limitations, especially in the early stages of advancement. Technology, like the humans that create it, is not inherently perfect. As depicted in this series, prosthetic limbs, even bionic ones, may open up new possibilities but also new physical and emotional challenges for their users. Her struggles also show the lack of complete physical control patients experience when seeking treatment. Even though her prosthetics give her considerable physical powers, they also pose considerable risks.

In the two crossover episodes that started the spin-off series, *Six Million Dollar Man* episode “Welcome Home Jaime” (Part I) and *The Bionic Woman* premier episode “Welcome Home Jaime” (Part II), Jaime faces the daunting challenge of recovering from brain damage. Although she expresses some disappointment that her brain has not fully recovered, she tells Oscar and Rudy, “Well, I will simply have to take the life, and limbs, that you gave me and live one day at a time.” She also insists on repaying her debt for the expensive operations that the OSI funded on her behalf by helping the agency with missions despite the ongoing risk of bionic rejection. While looking at a scrapbook that depicts her former life, Jaime tells Steve’s mother, “I look at these pictures, and I see somebody that looks like me, and I remember bits and pieces, but mostly it’s in my head, not my heart, especially when it comes to Steve.” Later, she tells Steve, “I can’t remember what it was like to be in love with you.” Her reactions illustrate the sort of detachment that Claudia Springer describes as an inevitable result of the cyborg transformation in “Pleasure of the Interface.” Springer states, “Although human subjectivity is not lost in the process, it is significantly altered” (37). In Jaime’s case, memory loss results in fewer painful comparisons to a past self she cannot remember clearly, but it also endangers her emotional connections to people she loved and who loved her and adds to her confusion

regarding who she is and was. As a result of the brain damage, Jaime must face a new life on her own terms by looking toward her own future.

Her new life also proves to be quite dangerous because of the material value of her prosthetics. In “Welcome Home Jaime” (Part II), she faces yet more threats to her health and self-image. Villain Carlton Harris sabotages her car, which forces her to use her bionic abilities to save herself. Jaime figures out Harris was trying to test her, not kill her, like someone would test drive a new car before buying it, a notion that clearly troubles her. Jaime devises a plan to thwart Harris by pretending that she wants to leave the OSI. The premise of the episode illustrates how her new body contributes to her objectification and dehumanization by others. Harris wants to sell Jaime to buyers who plan to take her apart and study her bionic body parts, with no consideration for her life or her other attributes, such as the intelligence that ultimately foils their plot. In “Sex, Memories, and Angry Women,” Claudia Springer suggests, “Gender, rather than disappearing, is often emphasized after cybernetic transformation” (727). Jaime’s earlier concerns about her physical attractiveness and the commodification represented by her obligations to the OSI demonstrate such emphasis on her femininity and lack of control immediately following her surgeries. In this case, Jaime faces objectification even more as a cyborg than as a woman, as she battles the notion that her value now rests with her expensive bionic limbs. She must fight to maintain control of her technologically enhanced body in more ways than one.

Jaime also faces threats to her existence when forced to battle against fully mechanical robots. In the three-part crossover episodes “Kill Oscar” between *The Bionic Woman* (Parts I and III) and *The Six Million Dollar Man* (Part II), Jaime and Steve find themselves pitted against the “Fembots,” robots designed to look like women that evil Dr. Franklin uses to steal a valuable (if unstable) weather-control device. Jaime is badly injured when she confronts two Fembots, and Dr. Wells worries that due to the severe damage, Jaime’s body seems to be rejecting the bionics again. After surgery, however, she insists, despite her doctor’s protests, that she will accompany Steve to rescue Oscar and retrieve the stolen device, again asserting her independence and determination not to let the threat of bionic rejection stop her from helping others.

When Franklin has his Fembots kidnap Oscar, Jaime opposes Oscar’s orders that, for national security reasons, he should be killed rather than rescued. She tells the National Security Bureau representatives who are ready to carry out those orders, “Principles that kill my friends don’t fit my definition of principles.” Throughout the three episodes, Jaime decides to follow her own notions of right and wrong. After Jaime and Steve reach Dr. Franklin’s island hideout, Franklin sends his Fembots after them, but Jaime and Steve know to avoid the lightening that incapacitates the mindless Fembots. When Jaime



captures Dr. Franklin, she refuses to allow him to die as the out-of-control device destroys his base, because she believes that allowing his death would be morally wrong since she values all human life. Dr. Franklin admits, “Humans are superior to machines.” Indeed, Jaime demonstrates that the moral and logical reasoning abilities of people-machine hybrids make them better able to adapt to difficult situations than programmed robot machines, even if the robots possess superior physical strength.

Gradually, Jaime moves beyond her initially limited view that being human involves having a “normal” body. Facing off against robots shows that Jaime retains key human qualities such as compassion and intellect, despite her mechanical body parts. In *Cyborg Cinema*, Sue Short observes, “In asking what makes us human, posed in terms of what renders us distinct from machines, cyborg cinema has responded with several interpretations, including individuality, emotional capacity, and moral (rather than simply logical) reasoning” (199). As the series progresses, Jaime asserts herself more, demonstrates that she values saving lives, and acts on her own ideas of right and wrong even when doing so might violate orders. She also asserts her own views about how her powerful prosthetics should, and should not, be used.

### Jaime and Power

Wagner’s efforts regarding her character’s development centered on the importance of showing Jaime as someone who uses her considerable physical powers to defend herself and others only when no other option exists. As actor Richard Anderson, who portrays Oscar Goldman, observes in the “Bionic Beginnings” extra for *The Bionic Woman* Season One DVD set, Wagner’s influence played a key role in the ways Jaime’s bionics would be displayed in the series: “She [Wagner] was always upstairs talking about the script attempting to alleviate unnecessary violence for its own sake, and part of this other side of her was part of why people watched her.” Therefore Wagner exerted her power to make certain that Jaime was not portrayed as unnecessarily aggressive. Wagner says, regarding Jaime’s distaste for violence, “Whenever anybody gets knocked over, or whatever, it’s only as a defensive move, when they’re attacking her. There’s never any offensive moves made with her bionics.” Jaime’s less aggressive attitude toward displaying her physical strength shows that as the user of such technological power, she can decide how she will or will not wield such power. The OSI may send her on the missions, but she decides how she will complete them.

In the DVD commentary for the second-season episode “Road to Nashville,” Wagner provides her own comparison between *The Six Million Dollar Man* and *The Bionic Woman*, which includes consideration of the preference for nonviolent conflict resolution her show embodies. While Steve Austin favors relying on

violence to defeat adversaries, Jaime does not always flaunt her physical strength in order to resolve issues she dealt with on her missions. Wagner describes how nonviolent conflict resolution appears throughout *The Bionic Woman* because of the problem-solving approach Jaime brings to confrontations:

Even though I have all of this power, and I can go “boink,” I don’t want to do it. As a human being, I don’t want to do it. There’s got to be some other way than this old pattern that we humans seem to depend on which is this physical prowess and violence and physical domination, as opposed to transforming something within and finding maybe a third solution that addresses everybody’s issues, rather than just “it’s your way or my way.” Maybe there’s some way that can address all of our interests. You know, we were always looking for ways to put that into stories whether it be subtle or not, or more overt. So I think, philosophically, that those are the differences between Jaime and Steve, but also between the two shows.

Jaime wants to find alternatives to violence if she can. Her approach shows the greater value of human inner strength and mental fortitude in facing challenges. Wagner’s notion of “transforming something within” and finding less traditional solutions to problems reflects Jaime’s growing determination that she should not allow her mechanical abilities to overshadow her human reasoning and compassion.

Her undercover work allows her to explore various identities and discover when and how she wants to use her bionics, but her work for the OSI periodically reminds her of the debt she owes the government for her expensive bionics and reinforces her fears that her body may not be her own. In “Disability and the Human Genome,” James Wilson sheds light on the cultural bias that disability is a public burden, fed by scientists seeking grant money for research: “In this bogeyman representation, disability becomes not only a personal tragedy but a public burden that costs taxpayers excessively. One sees the disability-as-burden rhetoric used repeatedly in scientific discourse and public relations materials” (58–59). Jaime views the costs associated with her bionics as a burden on government resources that she needs to repay. Even though her work saves lives, she cannot help seeing it as an unwanted obligation at times, especially since it serves as a constant reminder that her life and body are not her own. Nevertheless, she also finds that her bionic abilities help her protect herself and others. Her bionics can serve both as a threat to her safety and independence and as a means of protection and assertion of her own beliefs of right and wrong. In order to fully accept her new self and situation, Jaime must come to terms with the contradictions such an existence embodies.

### Jaime, Disability, and Ability

In the last episode of the series, “On the Run,” Jaime finally comes to terms with her new identity and her sense of obligation to the government, but the end of her journey for selfhood and self-determination is not easy. At the beginning of the episode, a child who sees the wires of Jaime’s injured right arm reacts in terror, screaming “What are you?” It’s a question Jaime has been asking herself. Jaime’s struggle with her bionic technological cure in the series represents an unusual search for self that asks if she is human or machine. When the child who sees the inner workings of her bionic arm calls her the “robot lady,” Jaime must confront her feelings about the mechanical parts of herself and her obligation to the OSI, which seem intertwined in her mind. As the OSI work demands more of her time, she feels it threatens her sense of self. In her resignation letter from her OSI service, Jaime writes, “I’m tired of looking in the mirror and seeing an OSI agent instead of a woman.” However, Oscar’s superiors, including a fictional United States senator, refuse to accept Jaime’s resignation. Once again, Jaime faces objectification because of her mechanical body parts.

As Jaime prepares to escape, she exclaims, “They won’t let me go because they consider me U.S. government property! I’m not a woman; I’m a machine.” When she looks at herself in her mirror, again she does not see a woman. “Now, you’re just a machine, and I can’t stand looking at you,” she yells as she breaks the mirror. Again, the image in the mirror is the OSI agent / mechanical property Jaime sees as increasingly consuming her existence and her identity. While on the run, her love interest, Chris Williams, offers to live in confinement with her as long as they can be together. She turns him down, because, as she explains, “The problem isn’t how we feel about each other; it’s how I feel about myself.” Jaime still finds it hard to accept herself as a desirable female human being when so much of her body now consists of machine parts, but she does now understand that her acceptance of herself is more important to a romantic relationship than her partner’s view of her.

Jaime does finally manage to gain a better sense of how to reconcile her mechanical prosthetics to a broader notion of human existence. Eventually, it is her love for teaching and her connection to disability that serves as the touchstone for her to find a stronger sense of identity and personal agency. While resting on a park bench, a boy approaches Jaime and asks her to play ball because his blind father cannot do so. Tommy explains that after his accident, his father has changed: “He’s not just blind. He’s different.” Because she understands the implications of a life-changing disability resulting from an accident, Jaime counters, “Maybe what’s different is the way you’re treating him, Tommy. Look, he can’t play ball. So what? You both know that. You both understand that, but I’ll bet there’s a lot of other things that haven’t changed that you could

be doing together. He's your father, Tommy." Her argument shows Jaime's sensitivity to the way that society views people with disabilities in terms of what they cannot do rather than what they can do. She emphasizes that the blind man still possesses valuable abilities despite the change in his physical condition, which demonstrates her realization that people who are not entirely able-bodied are still able in important ways. This realization helps Jaime understand that she can choose how to view humanity and disability.

When Tommy replies that he knows the man is still his father, Jaime replies, "Then you should also know that what makes him 'him' is not his eyes, or his arms, or his legs, or anything else. What makes anybody an individual, a person, is what goes on here [she points to her head] and here [she points to her heart], and nothing, Tommy, nothing on this Earth can change that." In counseling Tommy, Jaime comes to terms with her own fears and beliefs about disability and her cyborg body. She realizes that she is still, despite the changes she has undergone after her accident, connected to humanity because of her independent, moral reasoning and her love for people and life. Her parting advice to Tommy also expresses an enlightened view of people with disabilities. She says, "Tommy, I want you to go love him for what he is, for what he was, and for what he will be, and don't even think about what he isn't because it's so unimportant, okay?" Tommy agrees and returns to his father. Jaime, in turn, learns to love herself for what she is, was, and will be, rather than dwelling on what she has lost.

The scene also reminds Jaime that her own struggles with disability, including adapting to mechanical body parts that both empower and endanger her, can enhance her ability to connect emotionally with other people and expand traditional views of disability that fail to recognize that people with disabilities still have abilities and attributes of great value to society and loved ones. In *The Rejected Body*, Susan Wendell observes that people who experience physical difference themselves can better challenge cultural norms regarding normalcy and ability: "When people cannot ground their self-worth in their conformity to cultural body-ideals or social expectations of performance, the exact nature of those ideals and expectations and their pervasive, unquestioning acceptance become much clearer" (69). When confronted with the blind man, Jaime sees not only how the man's son reflects societal perceptions of the able, normal body but also that she has been placing such limitations on herself with regard to questioning her humanity because of her mechanical limbs and ear. She recognizes that those perceptions should include a broader view of humanity and disability that reflects and values the diversity of human bodies and experiences.

As a result, she feels that she can return to her relationship with Chris and even her work at the OSI, with assurances that she will be able to lead her own life so that she has enough perspective to understand why her undercover work

for the government matters. She insists on the ability to pursue her chosen career, teaching, and even to marry and have children if she chooses to do so. While such examples reflect values of traditional womanhood, Jaime makes it clear that she will be making the choices in her life, whatever they might be, on her own terms. Deborah Kent explores the importance of positive female characters with disabilities in the essay "In Search of a Heroine: Women with Disabilities in Fiction and Drama." She observes, "As women explore an even wider range of options, we need more characters, disabled and non-disabled, whose lives reflect the array of choices open to us. In order to feel that we can carve out new roles in this changing world, we must know that the option to follow tradition is ours as well" (110). Therefore, the fact that Jaime explores both traditional and nontraditional female roles makes her a complex character adapting to life-altering disability by recognizing that she can still exert some control over her life choices. She may not choose to move beyond certain aspects of then-modern life in the 1970s, but she does assert that she will make her own choices regarding how she will live her life and use the technology she now possesses. She may not transcend social boundaries, but she does become a more enlightened and enabled human being who no longer views her physical difference as a threat to her humanity.

Although Jaime did not choose to become a cyborg, and she cannot control the brain damage and constant threat of bionic rejection that transformation brings, she can determine what path her new sort of human existence will follow and what it will mean to her. Furthermore, her desire to leave her options open reflects that she understands her identity may continue to evolve in ways that she cannot predict, but she seems more comfortable with that uncertainty. By compromising with the OSI, Jaime reflects the spirit of problem solving she values by finding a solution that reflects everyone's interests and allows her to contribute to society as both a teacher and an undercover OSI agent.

She has even given the senator a new perspective on the situation. He explains, "You were afraid you'd become less woman than machine. Well, unfortunately, there are a lot of men like me who became machines and didn't even know it. We were too busy making rules and regulations and worrying about our own fears that we forgot what life is all about [ . . . ] I'm very glad that you'll be coming back here to remind us that we're really just human." These newfound perspectives illustrate Short's observation about a key theme of cyborg representation in popular culture: "In fact, cyborg cinema has increasingly shown that, far from threatening humanity's uniqueness, technological life-forms may be incorporated in our ranks by upholding specific values. This development bridges the divide between the human and the machine, while also lessening fears about the future by demonstrating that a humanistic worldview is not at odds with a technological one" (195). Jaime not only finds and asserts her

sense of her own role in society as a female human with extraordinary abilities, mechanical and organic, that she can use to help people; she also reminds others of the importance of maintaining a sense of morality and humanity as well as acceptance of difference.

Jaime discovers that she can find an identity as a human being despite the contradictions her physical transformation raise in her life by determining how she will, and will not, use her bionics in relation to human qualities such as compassion and reason. While she may never achieve complete control over forces that seek to objectify her and risks that endanger her, she can use her bionics along with her intelligence to assert her individuality and beliefs while also helping others and defending herself. Her journey also shows that illness and disability do not have to represent only personal loss even if changes ensue. In addition, her examination of the nature of disability and “what makes a person a person” ultimately leads her to a sense of self-acceptance and an understanding that physical differences do not make someone less human or less valuable to loved ones and/or society. Thus her journey as a cyborg with ongoing health concerns presents a positive image of a character merging the dualisms of humanity with mechanical prosthetics and ability with disability while challenging traditional views of what it means to be a whole human being.

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## CHAPTER 7

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# *Star Wars*, Limb Loss, and What It Means to Be Human

*Ralph Covino*

### Introduction: Prosthetic Hybridity

In the *Star Wars* films, prosthetic augments and devices provide a technological “fix” to the “problem” of disability; they represent attempts to restore that which has been damaged to a sense of normality, shown on screen as wholeness or completeness.<sup>1</sup> One example—and perhaps the most iconic to fans—is the replacement limb Luke receives after his hand is cut off by Darth Vader during their duel in *The Empire Strikes Back* (Episode V). However, the creation of a body that blends man and machine—a hybrid body—evokes a struggle as old as civilization itself in the West. It is a struggle familiar to the inhabitants of the ancient world and those who study it: the divide between *nomos* and *phusis*. Usually viewed as distinct orientations of being, the hybrid figure, I suggest, in its blending of man and machine, brings the pair together in the *Star Wars* universe.

George Lucas quite explicitly created the *Star Wars* universe to provide a “new mythology” for a generation whom he saw as being bereft of one. Lucas has stated, “I wanted it [*Star Wars*] to be a traditional moral study, to have some sort of palpable precepts in it that children could understand. There is always a lesson to be learned. Where do these lessons come from? Traditionally, we get them from church, the family, art, and in the modern world we get them from media—from movies” (Lucas quoted in Seabrook 146). In drawing from ancient myths and legends as source material, Lucas transposed aspects of Greek and Roman cultural baggage to his galaxy far, far away. An understanding of that baggage, particularly in the form of the binary concepts of *nomos* and *phusis*, can inform our reading of the disabled and disability in the universe that he created.



The ancient Greeks sought to live in harmony with their surroundings, often utilizing topographical contours to guide the construction of their cities and civic amenities (such as theatres). Their cultural landscape thus embraced the chaotic and physical aspects of nature or, to use their term, *phusis*. *Phusis* stands in opposition to *nomos*, loosely defined as being the realm of the ordered and logical, wherein the reasoned results of the productive mind find expression. Whereas the Greeks sought to build their world in accord with *phusis*, the Romans instead employed *nomos*-centric means to achieve their ends. Their roads, for example, take the shortest distances between points, straight lines, regardless of natural impediments; their aqueducts ignore the courses of rivers so as to bring water where needed, rather than where nature dictated that it flow. As a people, then, owing to their *nomos*-orientation, they were also more heavily reliant on *nomos*'s by-product: technology.

Throughout the saga of *Star Wars*, the *nomos* versus *phusis* dichotomy—that so divided the Greeks from the Romans as peoples—is repeatedly played out and contributes to the overarching tensions between the various combatants in the science fiction (SF) narrative. The settings and environments play into this split and produce the cultural norms and social factors that influence the perception and reading of disability within the films.<sup>2</sup> While the lines of good and evil might appear clearly drawn—George Lucas expresses a preference for “good” by allying the heroes with the Light Side of the Force, a noncorporeal embodiment of *phusis*, and their opposition with the Dark Side, whose war machines embody *nomos*—there are areas where the fantastic technology of the *Star Wars* universe bridges the gap between the two. This opens up a productive site for reading disability in the films; man-machine hybrids seem to problematically counteract, via their effort to “correct,” physical disability.

The concept of prosthetic hybridity has long been recognized as a difficult vision of being. As Jean Baudrillard writes,

The point when prostheses are introduced at a deeper level, when they are so completely internalized that they infiltrate the anonymous and the micro molecular core of the body, when they impose themselves on the body's “original” model, burning out all subsequent symbolic circuits in such a way that every body is now nothing but an invariant reproduction of the prosthesis: this point means the end of the body, the end of its vicissitudes. It means that the individual is now nothing but a cancerous metastasis of his basic formula. (119)

In the fantastic universe of *Star Wars*, the danger of losing one's being or humanity within a technological construct is shown to be a very real possibility.<sup>3</sup> This state of technological being contrasts greatly with the ancient Greeks' conception of “health”—namely, that it is ideal and proper to live in accordance with *phusis*.

The Greek word *hugieia* [“health”] incorporates not merely a medical dimension but also a sense of wholeness and completeness imposed by nature. This is aptly illustrated by the following inscription:

A porter, going up to the Temple, fell [ . . . ] When he got up, he opened the bag and looked at the broken contents. When he saw that the goblet from which his master liked to drink was broken, he was in great distress and sat down to try to fit the pieces together again. But a passer-by saw him and said: “Fool, why even try to put the goblet together? Not even Asclepius of Epidaurus could put it back again.” The boy, hearing this, put the pieces back in the bag and went on to the Temple. When he got there he opened the bag and brought the goblet out of it, and it was *entirely whole*. (*Inscriptiones Graecae* VI2, no. 121.10)

The final sentence describes the goblet as possessing *hugieia*—it is literally “healthy”—following its miraculous repair on the way to the temple; it was not augmented or fixed to restore it to its complete state. Vessels are usually described using anatomical terms analogous to those of the human body. Pottery pieces like vases, for example, possess in Greek, as they do for us in English, feet, bodies, necks, and lips; the Greeks, however, referred to handles as ears rather than arms.<sup>4</sup> Given the example from the inscription, then, there were only two ways for a body to be in terms of *phusis*—either “healthy,” defined as being whole and complete, or broken.<sup>5</sup> Similarly, Rosemarie Garland-Thomson notes that the

principle of unity undergirds the dominant discourse of normal/abnormal, expressed in ideas such as social Darwinism and the statistical conception of the norm, both of which arose in the nineteenth century. The notion of a human norm that polices human physical variation both generates a unified community whose differences are effaced and defines an outside and inside. [ . . . ] According to the principle of unity, the disabled person becomes grotesque either in the sense of a gargoyle, breaching boundaries, or in the sense of a eunuch, one who is incomplete, not whole. (113–15)

This view of unity is present within the *Star Wars* films and directly comes to bear on some of the characters’ reactions to disability, particularly regarding prosthetic use.

It is obvious to even the most casual viewer of *Star Wars* films that those characters capable of using the Force who have been maimed and subsequently augmented with prosthetics slip toward or ultimately fall to the Dark Side. The Dark Side is full of anger, fear, hatred, and other negative impulses associated with, as Yoda puts it, the “domain of evil.” The films thus convey a sense of trepidation concerning advanced scientific realities, such as prosthetics, genetic manipulation, and cloning.<sup>6</sup> It also develops what Ato Quayson terms

“aesthetic nervousness.” However, as he notes, “the ethical core that disability implies within literary representation is rarely if ever clearly evident on casual reading [ . . . ] everything is linked to everything else such that in isolating a detail of disability for analysis we take it not merely as a particular detail, but as a threshold that opens up to other questions of a textual and also ethical kind” (208). As such, when considering the place of disability within the framework of the *Star Wars* universe, it is imperative not to divorce its study from its cultural and critical surroundings as situated by the films.

In exploring the depiction of limb replacement and enhancement in the *Star Wars* universe, I seek to illustrate how Lucas’s “new mythology” advances a particular case about the potential danger to humanity that attends such seemingly beneficial technological advances as prosthetic limbs that stems from the classical tradition. While philosophy, myth making, and spirituality and their connection to the *Star Wars* universe have already attracted a significant amount of scholarly attention,<sup>7</sup> few have addressed disability. A notable exception is Robert Arp’s article in *Star Wars and Philosophy: More Powerful Than You Can Possibly Imagine*, in which he obliquely discusses a blind woman’s experience of the first film of the saga; he uses her question as to what “that man” C-3PO looked like as a springboard to a discussion of the role of droids as people and, more specifically, as an enslaved underclass within the films (120–21).

Recent works on disability and the media have similarly avoided a detailed discussion of the *Star Wars* films. Christian Keathley’s essay in *Screening Disability: Essays on Cinema and Disability*, for example, mentions only able-bodied characters in the first film, Episode IV (111). Charles Riley’s study, *Disability and the Media: Prescriptions for Change*, notes how Lucasfilm donated takings from all 11 preview screenings in 2001 to the Joey Fund and the Hospital for Sick Children foundation and how a section of seats at each show was reserved for children with disabilities (73) but provides nothing further. More recently, Sharon Snyder and David Mitchell allude to Darth Vader’s motivations in *The Empire Strikes Back* as being driven by “a need to wreak havoc on non-disabled worlds as a form of retribution for bodily loss” (165) (following the example of analysis set by Paul Longmore in “Screening Stereotypes”). There, however, Vader’s character is only provided as a further example of a type better expressed by *Hannibal’s* Mason Verger and not examined in its own right (190–91).

This paper seeks to fill the gap in the existing literature not only by addressing the disability issues raised by the *Star Wars* films but also by incorporating the classical dimension.<sup>8</sup> In doing so, it contributes to the ongoing interdisciplinary dialog concerning augmented beings. In 1991, Donna Haraway put forward the belief that the cyborgs of SF represented a discontinuity with the classical past derived from the Western tradition (180); however, more recently in 2006, Genevieve Liveley made the counterargument that mythical monsters

from classical Greece are the origins of the cyborg (or hybrid) phenomenon. By looking at the question of prosthetic limbs in *Star Wars* utilizing *nomos* and *phusis*, this essay also contributes to the emerging field of the reception of classics in SF. As Brett Rogers and Benjamin Stevens note in a recent review article, “the discipline of Classics has a stake in the study of SF because of the urgent ethical and epistemological questions SF raises about the humanities *vis-à-vis* science and technology” (130).

### Healthy Bodies in Harmony with Nature

Because the *nomos* versus *phusis* clash has been present in Western culture since the time of the ancient Greeks and Romans, and is, as a result, embedded within our literary and cultural tradition, it is important to note it as an underpinning cultural construct of limb loss. The hybrid bodies in *Star Wars* inhabit a universe whose planetary settings are often physical manifestations of the two concepts; Dagobah’s swamp oozes *phusis* in the same way that the enframed metal planet Coruscant or the Death Star evoke *nomos*.<sup>9</sup> The hybrid bodies exist, however, outside of the norm as peripheral figures akin to those discussed elsewhere.<sup>10</sup> Luke Skywalker, when he is first introduced, inhabits a world that exhibits little in the way of intrusions into nature. The Lars homestead is built underground so as to escape the heat of the two suns. Above ground, there are only the occasional moisture vaporators or rounded entrance domes that interrupt the desert landscape. Despite the harshness of the environment in which he was raised, working on his uncle’s farm, Luke has grown up to become a picture of youthful vitality. Growing up on the same planet as Luke, Anakin Skywalker in the prequel trilogy is also fully able-bodied. These youths are clearly on track to achieve what Garland-Thomson terms “the normate” body (8).

The prevalence of “the normate” is felt throughout the *Star Wars* universe. Indeed, until Luke travels away from the farmstead alongside Obi-Wan Kenobi to the (human-made) Mos Eisley spaceport, a liminal “wretched hive of scum and villainy,” the majority of beings depicted on screen in the first film can be described in the same way as Luke—physically able and whole—“healthy” like the Greek goblet. The humans on the planet parallel the bridge officers and helmeted troopers seen on the starships of both sides—all possess a standard slim, fit body type. Imperial stormtroopers’ wholeness and sameness is highlighted not just by their standard issue armor but also by their height (“Aren’t you a little short for a stormtrooper?” asks Princess Leia, implying a minimum requirement.). Imperial stormtroopers are an expression of the Greek *phusis*-based bodily ideal, especially as developed by the ancient Spartans. Their warriors, called *homoioi* or “same-ones,” were the pinnacles of military preparedness as a result not only of constant exercise but also of a state-sponsored program

of eugenics. To achieve this perfection, in Sparta infants were inspected so as to verify their stoutness and wholeness; those in possession of physical deformities or disabilities were exposed (Plutarch, *Lives*, 16).

There is one exception to the image of “the normate” from Tatooine: Anakin Skywalker’s stepfather Cliegg Lars (in Episode II). His use of a hoverchair, however, is revealed to be only temporary following the loss of his leg (when he was maimed in an attack by Tusken Raiders trying to rescue Anakin’s abducted mother). His disabled condition is only, as he put it, “until I heal”; he expects to return to normal following a period of convalescence. In R. A. Salvatore’s novelization of *Attack of the Clones*, additional nuance is given to Cliegg’s disability: he actively resists prosthetic augmentation. When his son states, “If you won’t use a mechano-leg, this powerchair will have to do,” Cliegg retorts, “You’ll not be making me into a half-droid, that’s for sure [ . . . ] This little buggy will do fine” (35). As Garland-Thomson notes, “Every historical era reinterprets the figure of the prodigious monster or nature’s caprice, the freak” (56). The physical labor of the *Star Wars* universe is farmed out to machines and droids, not to people, and, as such, by rejecting hybridity, Cliegg rejects freak status. Cliegg’s resistance to be seen as “other” demonstrates the galactic prejudice against automata, nowhere better articulated than when C-3PO and R2-D2 attempt to enter the cantina (in Episode IV) and the barkeeper barks, “We don’t serve *their kind* here!”

As Simo Vehmas and Pekka Mäkelä note, “What is considered as characteristically ‘human’ or ‘normal’ with regard to the make-up of beings does not depend on human essence (whatever that might be), but on culturally produced norms” (42). The connection between slaves’ work and status and those of droids in-universe is clear. Anakin Skywalker, in *The Phantom Menace*, reacts quite strongly when it is suggested that he might be nothing but a slave. Padmé asks, “You’re a slave?” and he replies, “I’m a *person*, and my name is Anakin!” He emphasizes his personhood and name so as to define his position. The declaration shows that he has the power of reasoned speech and self-awareness, and that he participates in cultural conventions. In sum, he is not like the servile droids, but rather a sentient and whole being. Likewise, Cliegg Lars’s resistance to the use of a prosthesis aligns him, as a product of his environment, with “wholeness,” a humanness unsullied by hybridity.

In *Return of the Jedi* (Episode VI), the ghost of Obi-Wan Kenobi speaks to Luke about the perils associated with merging man and machine. His attitude is as culturally constructed as that of Cliegg Lars; as a Jedi Knight, raised in the Jedi Temple and indoctrinated into their attitudes (i.e., those in tune with the Force, *phusis*), he naturally resists hybridity. Aside from Luke and one other exception, every Jedi in the films is depicted as physically whole and complete; all started out that way.<sup>11</sup> In describing Darth Vader and whether he is capable

of redemption, Kenobi states explicitly that Vader has become “more machine now than man” and that, by extension, he had become “twisted and evil.” The implication of his statement is that there is such a thing as too much metal and not enough man. There is no longer hope for Vader; he had become Garland-Thomson’s “gargoyle,” an unredeemable “freak.”<sup>12</sup>

### The Natural versus the Unnatural Body

In *A New Hope* (Episode IV), Darth Vader notes that “[t]he ability to destroy a planet is insignificant next to the power of the Force.” He is, of course, in addition to being “more machine than man,” a Dark Lord of the Sith and a master of the Dark Side. Palpatine (in Episode III) states, “The Dark Side of the Force is a pathway to many abilities some consider to be [slight pause] unnatural.” Given the associations of the Jedi, their supporters, and other heroic figures with *phusis*, the “unnatural” to which Palpatine refers need not be something malignant *per se*. Indeed, when he delivers the line, it is within the context of a discussion of seeking immortality, the ultimate expression of the preservation of life, albeit for a greedy and self-serving purpose. In this way, it is possible to read any form of medical advance (beyond merely restoring the body to its original state) as “unnatural” from an in-universe perspective.

In *The Empire Strikes Back* (Episode V), the Rebel Alliance’s medical facilities on Hoth are shown. Luke’s cuts and bruises, from his encounter with the wampa, as well as the aftereffects of exposure, are quickly dealt with in the space of a few wipes. He is immersed in a natural fluid bath, bacta, and is restored to normal health and appearance, albeit with a scar. His aftercare is provided by the servile droids. In fact, fleshy doctors are absent in the films: Luke and Leia are delivered by a metallic midwife, and the droid 2-1B tends to Luke on Hoth and later provides him with his prosthetic. When the Emperor rescues Anakin from Mustafar, Anakin receives the helmet and suit that allow him to continue to live as Vader, a hybrid body constructed by robotic arms. As automata highly cognizant of their status as created beings (“Thank the Maker!”), droids are obvious products of *nomos*, not of *phusis*. Owing to their servile status, droids perform mundane tasks such as the physical labor of heavy lifting, factory work, etiquette and protocol, routine translation, and delivering babies; however, they also affix prostheses, but in doing so they extend their artificiality into the living flesh that they repair.

The *Star Wars* universe has many dangers that are potentially disabling. It is not limited, however, in its technology: if a hand or an arm needs to be replaced in *Star Wars*, it can be done with little fuss. In one of the iconic scenes for which the original film became famous, Luke attracts the unwanted attention of Ponda Baba, a patron in the Mos Eisley cantina. Ponda and his human

translator go out of their way to provoke Obi-Wan's protégé, which results in a scuffle that has Obi-Wan disarm him, *literally*. The rather blasé attitude displayed by the other denizens of the cantina to the severing of the arm is quite telling. They barely look up from their drinks, and, not quite two seconds later, the incident is quickly forgotten and the band plays again. The incident with Ponda Baba demonstrates to the audience that the galaxy of *Star Wars* is replete with technological wonders—that can both harm and heal. The lack of any serious reaction to the bloody flesh on the cantina floor illustrates access to technology that renders such a severe wounding as nothing more than an inconvenience (rather than imposing a lifelong disability). Perhaps this ease of “cure” explains why the work of healing and prosthetic augmentation is delegated to droids rather than sentient doctors—it is so routine as to be unworthy of a sentient being's attention.

That such a scenario is the case is heavily suggested by the quick-fix solution to Luke's own hand loss during the climax of his duel with Darth Vader on Bespin's Cloud City in Episode V. Luke too loses a limb, and, as with Ponda Baba, when it happens, he barely screams. Mere moments after losing his hand to Vader, Luke resumes the parry and thrust of conversation (instead of that of the sword fight). Secure in the knowledge that his life is not irrevocably altered by the maiming, Luke is more traumatized by Vader's revelation of paternity. With a quick fix-up, Luke receives his prosthetic limb and goes on to fight another day. Depictions of such disability-free lightsaber maiming are more prevalent in the prequel trilogy, as there are more Jedi engaging in combat. In a scene in *Attack of the Clones* (Episode II) reminiscent of that of the initial creature cantina, Obi-Wan Kenobi severs the arm of Zam Wesell, the bounty hunter who had been hired to assassinate Senator Amidala. After cutting off Wesell's arm, the Jedi interrogation of the suspect proceeded, and it continued until such time as Wesell was killed by Jango Fett. At no stage did the Jedi put forward any effort to seek immediate medical attention for the suspect; they obviously knew that there was no long-term risk. Given that this was the same maneuver as Count Dooku's with Anakin and then Anakin's with both Count Dooku and Mace Windu, as well as Vader's on Bespin with Luke, the viewer must assume that the removal of an opponent's limb forms a part of the usual Jedi *modus operandi*.

The severing of hands is historically a significant step taken so as to dehumanize an enemy. The body of an enemy became not so much a vessel for the soul as a thing objectified—the enemy not a person but a thing made up of component parts. Revenge is traditionally also a motivator for this particularly gruesome bit of trophy collection. Cutting off a limb for Egyptians, Greeks, and Romans was seen as an expression of rage, anger, or frustration indicative of a lack of clarity of thought, which is clearly, in *Star Wars* terms, the province

of the Dark Side. When Vader cuts off Luke's hand, then, he has not only dehumanized him by removing his claim to whole and complete personhood but also symbolically established himself as the victor who must be obeyed. Luke, as an enemy combatant, had proven himself to be a capable warrior and far more resourceful than Vader anticipated; Luke's capability provoked Vader to anger. Whole and more human than Vader, Luke is a threat to him, and so Vader quite literally cuts him down to size. Though Luke escapes through his heroic act of self-sacrifice, he is never able to be whole, or "healthy," again. The hand, the principal agent through which human physical work is accomplished, is unceremoniously replaced by an artificial hand.

While technology in the saga is shown to be capable of replacing lost limbs with prostheses that are sensitive to the touch, thus mimicking natural feelings—as demonstrated by the testing done on Luke's new hand at the end of *The Empire Strikes Back*—the new hand, and the sensations that it produces, are false. The distinction between real and alive and mechanical and imitative is important; the replacements shown on screen are all clearly machinery, from Anakin's golden forearm and fingers to the servos and pistons under the synthetic skin in Luke's wrist. The lesson in *Star Wars* is clear: *nomos* can imitate *phusis*, but not really replace it. In the films, the Force itself warns of the dangers of becoming less than "whole"—Luke, in the Dark Side cave on Dagobah, splits the image of Darth Vader's mask to reveal his own face. The message, arguably, is that if Luke is not careful, he will end up becoming like Vader, dependent on machinery and the unnatural, and thus dehumanized.<sup>13</sup> The threat to Luke's humanity becomes all the more real when his hand is replaced and he, like his father before him, becomes a hybrid being.

## Conclusion

In *The Empire Strikes Back*, Yoda describes the nature of the Force to Luke: "Life creates it, makes it grow. Its energy surrounds us and binds us. Luminous beings are we, not this crude matter." In such a way, Yoda seems to advocate a position wherein the body is, as Bill Hughes and Kevin Paterson noted, a physical object distinct from the self (329); one would think that physical disability or the presence of a prosthetic ought not to matter much to a Jedi.<sup>14</sup> However, Yoda continues, "You must *feel* the Force around you; here, between you, me, the tree, the rock, everywhere, yes. Even between the land and the ship." Yoda's subsequent statement, when deconstructed, is similar to Kenobi's view of Vader's redemption. Instead of articulating a conception of organic man versus hybrid man, Yoda places emphasis on that which is manmade (*nomos*-based, such as Luke's X-wing fighter) against natural objects like the trees, rocks, and living creatures that emerge, as does the Force, from nature, *phusis*. Through such



descriptions, Lucas states his position on the age-old *nomos* versus *phusis* debate: he is clearly on the side of the Force, of life, and of nature and spirituality. This puts his entire mythology, then, at least on an unintentional level, opposed to the mechanical, the artificial, and the prosthetic.

The films illustrate the dehumanizing aspects of technology, even when it is put to seemingly positive use to preserve life or eliminate disability with a prosthetic limb. Darth Vader's machinelike commitment to order, discipline, efficiency, and productivity are the hallmarks of *nomos*. Throughout *Star Wars*, therefore, Lucas posits that advances in medical technology may bring about a diminished capacity to empathize with nature, with *phusis*, or what Qui-Gon Jinn would term the "living Force." The series' narrative repeatedly stresses that it is the ability to connect, harmonize, and empathize with one another and with nature that sets living and sentient beings apart from the machines. If maimed, a person might become augmented and be "healed" of their disability, but they risk being automatically othered in his galaxy, forever tainted by the artificial, and prone to the temptations of the Dark Side. While the acquisition of a prosthetic limb is not a one-way ticket to the Dark Side—Luke successfully resists it—in Lucas's galaxy it does open the door to *nomos*-based thought processes that negate the human dimension.

The *Star Wars* universe problematizes those whose bodies are integrated with machines to fix impairment or otherwise augment their flesh. It places the limbless, the disabled, and those with hybrid bodies squarely into the category of the other or "the freak," as they are neither solely of *nomos* nor of *phusis*. Despite Lucas's firm adherence to the side of *phusis* over *nomos*, however, it is important to note that the ultimate triumph of good over evil in the saga was brought about by Luke Skywalker, using his mechanical hand, and with help from his robotically augmented father, Darth Vader; in *Return of the Jedi*, Vader is shown to still have a degree of corporeality with empathy sufficient to throw the Emperor, champion of order and *nomos*, down the shaft to the core of the technological terror he had ordered built. In the end, both Luke and Vader manage to resist the Dark Side, despite their bodies' fusion with technology—Lucas's belief in the eventual triumph of the luminous human spirit prevails. The "whole and complete" body, in the end, is perhaps not necessary for empathy and compassion, regardless of what the Jedi like Obi-Wan Kenobi might think.

## Notes

1. See Cherney (169) on the relationship between disability and technology in our world and the quest for normality.
2. For a review of those dealing with the question of disability and social norms limiting activity and erecting barriers, see Rosemarie Garland-Thomson's *Extraordinary Bodies*.

3. Such is noted in Stuart's (in-universe perspective) *Galladinium's Fantastic Technology: Guns and Gear for Any Occasion*, which explicitly discusses how hybridization can lead to lack of empathy as a result of mechanical decision-making processes.
4. I am grateful to Fran Keeling for reminding me of the importance of terminology in this context.
5. Stiker explores in detail the Greeks' view of disability as being a punishment of the gods (39–46) and Quayson the disabled's role as signifiers of sacred processes and ritual insight (5, 46–48).
6. See the essay by Cartwright and Goldfarb in *The Prosthetic Impulse*; it contains a useful review of advances in prosthetic technology developed after the release of *Star Wars*.
7. On philosophy, see the collection of Decker and Eberl. On myth, see the works by Henderson, Baxter, and Mackey-Kallis, among others. On religion and spirituality, see the works of Smith, Bortolin, and Porter.
8. There is only one mainstream scholarly article on the connections between *Star Wars* and the Romans: that of Winkler. Therein he compares the similarities present within the *Star Wars* films prior to 2001 and those featuring Rome such as *Ben Hur*, *Spartacus*, and *Cleopatra*.
9. On the enframing of the world, see Abrams.
10. See, for example, Garland-Thomson on the hybrid figures in the works of Toni Morrison such as Sula (115–25).
11. Jedi Master Even Piell, a background member of the Jedi Council with minimal screen time, has only one eye and a prominent scar where the other should be.
12. Vader's status as freak is mirrored by that of General Grievous in the prequel trilogy, as both he and his droid armies stand in opposition to their universe's dominant living norms—just as P. T. Barnum's freaks, according to Garland-Thomson, are “the embodiment of what collective America took itself *not* to be” (59). There is also within the films a middle ground for hybridity in the case of technologically augmented beings. Lando Calrissian's majordomo, Lobot, has a computer enhanced brain, for example. While his name does negatively suggest a lobotomy rather than an augment, he is still clearly the number two man on Cloud City. As a character, he is as Garland-Thomson's eunuch, not standing out as particularly good or evil. He merely does what he is told and remains silent. In doing so, his status is servile like that of a droid; his humanity, reckoned in terms of freedom of speech, choice, and action, has been limited as a result of his melding with the technology, and he is as othered as Grievous or Vader. Lobot's character as a SF construct fits well with Garland-Thomson's view of the circus freak in that he, too, is both wondrous in his abilities and repellent for his lack of humanity (136).
13. *Contra* Donnelly on the humanizing aspects of *Star Wars* technology and Arp on droids as persons.
14. See also Williams (804) on “matter [that] does not really matter at all” *vis-à-vis* the body.

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## CHAPTER 8

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# Animal and Alien Bodies as Prostheses

## Reframing Disability in *Avatar* and *How to Train Your Dragon*

*Leigha McReynolds*

Studying the prosthesis in science fiction and fantasy allows us to consider problem bodies as a range of potential futures for the human body that critique our culture's narrow understanding of able-bodiedness. I address the role of disability and the prosthesis in two recent fantastic films, *Avatar* and *How to Train Your Dragon (HTTYD)*, through theorizing the prosthetic embodiment of the films' respective protagonists: Jake Sully and Hiccup. Prosthesis is commonly defined as a body or mechanism that joins with one's natural<sup>1</sup> body to correct a perceived deficiency or to fill a perceived absence. In a disability reading, prosthesis should be recognized first as a functional or cosmetic bodily replacement part expected to have a rehabilitative function, either physical or psychological, for a disabled individual.<sup>2</sup> The most common and significantly theorized prosthetic technology is the artificial limb,<sup>3</sup> and each of the movies discussed features a replacement body or body part. However, prosthesis can be productively applied to a larger range of assistive devices from wheelchairs to gas masks.<sup>4</sup> While not all are traditionally associated with disability, these technologies, like artificial limbs, allow a body to function in an environment for which it is otherwise unequipped. This larger category might be more accurately described as "the prosthetic"; while these technologies may or may not correct a perceived deficiency or fill a perceived absence, they are bodies or mechanisms that join with the natural body.

### Prosthetic Relationship

When the object joined to one's body is another living body, however, theorizations that assume a body-subject using a prosthesis-object become inadequate for understanding the full meaning behind the deployment of disability in a narrative. The movies discussed here explore what I call prosthetic relationships: the joining of two living bodies in order for one or both of the bodies to perform a specific task, where both bodies share agency in the performance. In other words, a prosthetic relationship requires cooperation; both bodies must consciously work together. When two agents engage as prostheses, functionality necessitates a rapport—an emotional, physical, psychological, and mental connection between the bodies—that is not possible in cases where an inanimate object is affixed to one's body. Joan Gordon's theorization of the amborg offers us a way of understanding this new possibility for prosthetic relationships between bodies: “[A]s the cyborg represents the human/machine interface, the amborg represents the human/other animal interface. [ . . . ] The amborg, then, is a liminal creature that acknowledges reciprocity [ . . . ] [and] represents a mutually influential feedback loop between beings, as they change and are changed by one another” (“Talking” 456–57).<sup>5</sup> The prosthetic relationship, which creates an amborg, cannot be a unidirectional appropriation of the mobility or ability of one subject by another.

Though the lived reality of prosthesis may be one of rehabilitation and cultural assimilation,<sup>6</sup> the presence of disability and prostheses in film requires consideration of the message received by the viewer, most of whom will be able-bodied. The prosthetic in film requires viewers to “participate in a disability discourse” (Chivers and Markotić 4) that disrupts “subject positions of able-bodiedness and the naturalization of the whole, functionally abled Body” and tests “the borders of the Body and reveal it as artifice” (Kurzman 376). According to Sharon Snyder and David Mitchell in *Narrative Prosthesis*, “[T]he terror of the challenge to the self's boundaries,” caused by the presence of disability, “which are believed to be more or less absolute, suggests that the spectacle of extraordinary bodily difference upsets the viewer's faith in his/her own biological integrity” (37). Prosthesis challenges the viewers' normative understanding of able-bodiedness and destabilizes the ableist premise that whole bodies function autonomously as clearly bounded selves or subjects.

In my discussion of prosthesis that follows, I argue that, in *Avatar* and *How to Train Your Dragon*, Jake Sully and Hiccup engage in prosthetic relationships because of their status as “problem bodies.” Chivers and Markotić define the term “problem body” in their introduction to their edited collection on disability and film of the same name: “The ‘problem’ body refers to [ . . . ] [not] physical disability per se but an emphasis on the transformation of physical

difference into cultural patterns of spectacle [. . .] the ‘problem’ body stands for those bodily realities that [. . .] represent the anomalies that contradict a normative understanding of physical being” (8–9). Chivers and Markotić focus on the problem body “in order to call into question the ways that certain bodies more frequently invite the label ‘problem’ than do others” (10). Their inclusion of a wide variety of physical difference comes from their belief in “the importance of disability as a category of analysis even in those blurred instances where disability may not overtly preside” (12), as it provides “an effective starting place for the scrutiny of physicality” (12). While Jake Sully and Hiccup do not always exist as physically disabled bodies, they are often at odds with the normative bodily standards of their respective societies and present a particular problem society wishes to solve.

*Avatar* takes place on the planet Pandora, where the Resources Development Administration (RDA) is mining the incredibly valuable unobtainium in spite of the planet’s extremely hostile environment and an inability to reach common ground over mining rights with the natives, the *Na’vi*—specifically the *Omatikaya* clan, whose city on the inside of a giant tree is over one of the planet’s richest unobtainium deposits. Former marine Jake Sully, wheelchair bound after losing the use of his legs on active duty back on earth, has come to the planet to replace his twin brother in the *Avatar* program. The program grows *Na’vi* avatar bodies made from combined human and *Na’vi* genetic material, and the human who provided the DNA is then linked to the avatar, transferring consciousness entirely. The human user experiences life in the avatar body while their body remains technically alive back in the link pod. Due to his position as warrior (he’s unlike the other avatar-using scientists), Jake gains the interest and patronage of the *Na’vi*, giving him the chance to learn their ways under the guidance of the beautiful Neytiri. An essential part of Jake’s education is learning to ride the Pandoran horse-like quadrupeds and dragon-like flying animals by using a neural queue, a fundamental organ of *Na’vi* physiology and the Pandoran ecological system. As a former marine, however, Jake is under the command of Colonel Quaritch, who orders him to provide inside intelligence on the *Na’vi* and find a way to convince them to leave their Home Tree (so the RDA can mine the unobtainium underneath). Jake completes the rites to become a *Na’vi* warrior as he and Neytiri fall in love, but Colonel Quaritch and RDA boss Parker decide to evacuate the *Na’vi* by force. To defend the people and the planet he has come to love, Jake conquers and rides the giant *toruk*, earning a status as a *Na’vi* hero, and leads them to victory in expelling the RDA from Pandora.

The protagonist of *How To Train Your Dragon*, Hiccup, son of Viking chief Stoick the Vast, lives in the Viking village of Berk, where the villagers constantly battle the local pests: dragons who regularly steal their livestock. Hiccup is a hopelessly inept dragon fighter, and when his dragon-killing cannon brings

down a rare and ferocious type of dragon called a Night Fury, no one in the village believes him. Hiccup tracks down the trapped dragon, but he cannot bring himself to kill it. Instead, he cultivates a relationship with the dragon, who he names Toothless, even constructing a tail-fin prosthesis so the dragon can continue to fly after being injured by Hiccup's weapon. Through their friendship, Hiccup learns that the dragons are not stealing the Viking livestock to feed themselves. Rather, like a giant bee hive, the dragons are controlled by an enormous "queen bee" dragon they must feed in order to avoid being eaten themselves. As his relationship with Toothless develops, Hiccup is also going through Viking training in how to fight dragons, and so he uses his new knowledge of dragon behavior to excel in his classes. Eventually his secret is revealed, and Hiccup's father decides to use the now captive Toothless to locate and attack the dragons' nest with the goal of exterminating the dragons and ending the threat to the Vikings' livestock. Hiccup, Toothless, and the other young Vikings team up to defeat the queen dragon, resulting in Hiccup losing the bottom half of his left leg in the battle. Their victory and Hiccup's sacrifice inaugurate a new era for Viking and dragon societies, and the species learn to live harmoniously together in the village.

*Avatar's* Jake Sully and *HTTYD's* Hiccup resolve major cultural conflicts and their personal dilemmas by joining their bodies to animal and alien bodies and occupying the liminal state of the amborg. Working toward a successful prosthetic relationship teaches them that their quest to occupy a fully functional body is best served by searching outside of their society's ableist norms; through their actions they reject the definition of "the naturally whole and abled Body" as one that "has four fully functional organic limbs and is capable of bipedal locomotion" (Kurzman 381). Through their assimilation with other species, Jake and Hiccup occupy bodies that function through interreliance and interconnectedness, disrupting the boundaries between the autonomous self and other. Their problem bodies provide them with the opportunities to form these prosthetic relationships and to thrive in an embodiment that exists beyond the ableist myth of an impermeable, bounded self. The introduction of the animal or alien body as part of a prosthetic relationship with the human body allows for disability to function as a reimagining of both the human and the able body.

Stripped to their most basic form, the plot lines of both films are remarkably similar: a young man ends a conflict between two disparate groups through his ability to empathize with the alien viewpoint enabled by a prosthetic relationship. As such, both films engage with anxieties over prosthetic technology and anxieties about future possibilities for the human body as part of an amborg body. In each film, prosthetic relationships with animal and alien bodies are portrayed as a positive way to extend the body (in direct opposition to the more popular SF visions of a mechanized or weaponized future body). The choice to

engage in disability discourse through the figure of the prosthetic relationship is a literal consideration of the lived experience of problem bodies, as well as a consideration of the problems future or alternative bodies could pose to normative definitions of able-bodiedness and human being.

### **Avatar: Wholeness through Connection**

The role of disability in *Avatar* seems, at first glance, overwhelmingly negative, functioning only to advance a story of problematic exceptionalism and rehabilitation. A focus on the prosthetic relationship, however, reveals a potential critique of the dis/abled binary, which challenges the idea of Jake returning to an originary bodily wholeness at the film's end. Regardless of the society or environment he occupies, Jake Sully is a problem body: there are no spaces where his body belongs. His physical disability is immediately identifiable through his wheelchair, the first prosthesis Jake relies on in the film. As we watch him capably maneuvering around the base in his wheelchair, his disability does not fully explain his ex-marine status. It is made clear, however, that the ableist prejudices of the military keep him from being accepted and employed within that group as a soldier. As Jake rolls down the ramp of the landing ship and toward the base building, two guards watching call him "meals on wheels" and say "that is just wrong." These derogatory terms invoke the harmful stereotype of disabled bodies as a drain on an able-bodied society, articulating the belief—a sense of disgust even—that his bodily difference is unacceptable and perhaps even immoral.

Though the other groups in which Jake has to integrate do not discriminate against him because he is disabled, they do, in similar ways, object to his non-normative presence. Dr. Grace Kelly, the head scientist, resents that Jake is there instead of his twin. He might share the right DNA, the right body in a biological sense, but Jake's lack of scientific training leads the scientists to assume he is not that intelligent. At least initially, Jake is a problem body in the avatar program's lab space, where intellectual ability, specifically genius, is the defining norm (and, ironically, it is this difference that allows him to succeed where the scientists have failed). Likewise, though his avatar body may look *Na'vi* and has no discernible physical disability, the *Na'vi* distrust his false embodiment as a "dreamwalker," indicated by the avatar's different smell. And while Jake's avatar body does function, it is not considered able by *Na'vi* standards: to them, he appears as an adult body with an infant's ability.

Jake's use of prosthesis differentiates him from the other characters in the film, however, only insofar as his reliance on it is more consistent: most of the inhabitants of Pandora, native and human, rely on some sort of prostheses to navigate the environment. Human bodies are disabled by the Pandoran



environment—they require masks, specialized vehicles, or avatar bodies in order to move around on the planet. While some of these assistive prostheses, like gas masks, are usually considered a nonthreatening technology, any technology that allows humans to function on the planet is a tool that enables the oppression of the *Návi* and the destruction of Pandora. The AMP (Amplified Mobility Platform) suits specifically, most notably operated by Colonel Quaritch, come from a long line of weaponized prosthetic suits that represent an anxiety about future bodies and their increased technological, specifically military, ability. Steffen Hantke, in his article “Surgical Strikes and Prosthetic Warriors,” reads the “prosthetic combat suit” of Robert Heinlein’s *Starship Troopers* (1952) in terms that are startlingly applicable to the AMP suits of *Avatar*: “The integration of the body with the machine, controlled by a human mind that has internalized military discipline after extensive basic training, is complete and harmonious. Technology functions as an unproblematic extension of the human body, which, in turn, functions as an unproblematic extension of an abstract political rationale, which, again, functions as a pragmatic extension of sheer common sense” (498). These relationships are unproblematic for the RDA, the colonel, and the soldiers under his command. For the scientists, the *Návi*, and the thoughtful viewer, the AMP suit is definitely problematic, as it turns the body into a killing machine. This “complete and harmonious” killing machine is in direct contrast to the *Návi* practice of prosthetic relationships that promotes harmony and interconnection between living things (not technologies).

Pandora’s ecology offers a radical contrast to the individual organic organisms we see on Earth, as the planet’s sentient organisms, other animals, and plants are connected and communal. Though it is not a fully developed narrative within the film, Grace and her staff of scientists believe they can prove Pandora’s ecological uniqueness with empirical data. In an attempt to explain why the destruction of Home Tree would be so devastating to the *Omaticaya*, Grace says, “There is some kind of electrochemical communication between the roots of the trees, like the synapses between neurons [ . . . ] It’s more connections than the human brain [ . . . ] and the *Návi* can access it and upload and download data.” Though the *Návi* do not offer a scientific understanding of the phenomenon, their lived experience as part of a living network defines their culture. Jake explains to his video log that one of the most important and difficult parts of his *Návi* education is “trying to understand the deep connection that these people have to the forest. [Neytiri] talks about a network of energy that flows through all living things. She says all energy is only borrowed, and one day you have to give it back.” The *Návi* experience this ecological connection philosophically and physically through their neural queues (which extend like long braids from the backs their heads). They can use their queue to connect with the long,

glowing, filament-like leaves of the *dandetiger* trees to access the global network of the Pandoran environment.

The native bodies of Pandora, flora and fauna, exist as an interconnected network, and as a result, the *Na'vi* lifestyle relies on the formation of prosthetic relationships. Though it is not explicitly explored in the film, we can assume that since the *Na'vi* have evolved with the ability to connect to a global network, this connectivity is necessary for their survival as a species (and, vice versa, their survival is necessary for the existence of life on Pandora). The most notable prosthetic relationship in the film occurs between the *Na'vi* and the animals that make up a significant component of their culture: specifically, the *direhorse*, the Pandoran equivalent of the equine species, and the *ikran* or mountain banshee, a large dragon-like creature. *Na'vi* and *direhorse* or *ikran* bodies form a prosthetic relationship that enables increased mobility for the *Na'vi*. The prosthetic relationships require not only mental commands from rider to beast but also an empathic bond between the *Na'vi* and the animal. Cultivating the ability to form such a bond with a *direhorse* is Jake's first lesson in becoming a *Na'vi* warrior. Neytiri instructs Jake to "feel her. Feel her heartbeat. Her breath. Feel her strong legs," before saying that he "may tell her what to do, inside." Jake must become intimately familiar with the animal before he can take advantage of their prosthetic relationship to accomplish even the simple task of riding the *direhorse* as she walks forward. As a prosthetic relationship where both bodies are more equal agents, bonding with an *ikran* is a significant part of *Na'vi* culture: it is the rite of passage required for acceptance as a hunter and full member of the clan. An *ikran* bonds for life, they will only fly with one hunter, and the *Na'vi* and *ikran* choose each other. The *ikran* are wild, not domesticated, however, and so the bond between the bodies must be sealed immediately without prior preparation or consent on the part of the *ikran*. Linking neural queues with an *ikran* and surviving the initial flight demonstrates one's ability to fully participate in the Pandoran network. In the ceremony that follows Jake's first flight and successful bonding with an *ikran*, the *Na'vi* form an interconnected circle around him, symbolizing his inclusion in the hidden ecological network.

Recognizing the centrality of the prosthetic relationship on Pandora, I interpret Jake's success in saving the *Na'vi* and defeating the humans as resulting not from an innate ability or exceptionalism but due to his ability to engage with prostheses and his willingness to redefine himself and his body through connections with both the planet Pandora and its fauna. Because the *Na'vi* understanding of embodiment is so radically different from the human, Jake succeeds in part because of his experience with disability. As a paraplegic, Jake is familiar with the prosthetic through the use of a wheelchair. His transition from able-bodied to disabled already modified his understanding and practice of embodiment. It is possible that Jake's immediate facility with the avatar—a high-tech

biological prosthesis—can be attributed to this lived experience. Jake’s ability to assimilate then into *Na’vi* culture is assisted by his status as a problem body. While not articulated in the film, it is possible to read Jake’s lived human experience as supporting the view that there is more than one type of functional body. The centrality of the prosthetic relationship and the global network on Pandora therefore complicate any straightforward narrative of rehabilitation.

Ultimately, Jake is the hero of the movie because of his ability to form prosthetic relationships—he embraces amborg status and modifies his body, privileging a new body that is defined by mutual interdependence (over the power of the autonomous self). After the destruction of Home Tree, Jake makes a desperate attempt to ride the *toruk*, but, as with the *ikran*, he must be accepted by the animal body. When Jake appears at the Tree of Souls on the back of the *toruk*, the most fearsome flying predator on Pandora, he is no longer Jake Sully, but “*Toruk Maktó*,” Rider of the Last Shadow. His prosthetic relationship with the *toruk* changes his embodiment both physically and culturally; his human designation is erased, his identity now established not by his individual embodied self but by the prosthetic relationship he has cultivated with the *toruk* and therefore with Pandora. Jake’s prosthetic relationships place him as an able-body in *Na’vi* society, allowing him to defeat the RDA and preserve the interconnectivity that defines Pandoran life.

Bodies on Pandora engage in a variety of prosthetic relationships that make it impossible to think of bodies as completely autonomous and delineated entities. No body on Pandora is whole in the sense of “having all its parts or elements; having no part or element wanting; having its complete or entire extent or magnitude; full, perfect” (*Oxford English Dictionary*). Being a “whole” *Na’vi* requires successfully crossing boundaries between self and other to form empathic bonds with other subject-agents. The *Na’vi* body is not present in its entire extent or magnitude—it is not whole—without its prosthetic relationships. The more accurate definition of whole, then, becomes “something made up of parts in combination or mutual connection; an assemblage of things united so as to constitute one greater thing; a complex unity or system” (*OED*). The whole *Na’vi* body, which at the film’s end includes that of Jake Sully, is best represented by their amborg embodiment as they ride a *direhorse* or *ikran*. When the emphasis is no longer located in the individual, and the wholeness or abledness of oneself is contingent on one’s part as an assemblage of mutual connectivity, it completely transforms what it means to be an able or disabled body. Through its prosthetic relationships, *Avatar* creates a thoroughly alien concept to human notions of autonomy. It forces the viewer to reevaluate ableist assumptions and puts forth a concept of prosthesis that is not simply a restoration of a disabled body to approximate able-bodied function but an entirely new type of body that refuses our dis/abled binary.

### ***How to Train Your Dragon: Better Together***

*Avatar* offers the viewer a radically different possibility for conceptualizing dis/ability through a world where subjects are defined by interconnectivity rather than autonomy. In *How to Train Your Dragon*, the protagonist Hiccup also explores prosthetic relationships, but unlike Jake, he does not leave his human body to do so. Hiccup appears, from the first, as a problem body, even though he does not manifest any physical disability. In Viking society, where “killing a dragon is everything,” Hiccup’s nonnormative embodiment prevents him from fully participating; he is short and scrawny, and can barely hold up a sword—an essential Viking tool—even using both of his arms. Hiccup’s dis-ability is made apparent through contrast with the other three main Viking characters: First is his father, Stoick the Vast, chief of the Vikings. True to his name, Stoick is a huge man: standing seven feet two inches tall with incredibly broad shoulders, bulging arm muscles, and a full, thick beard. Stoick even explicitly comments on his son’s inadequacy: “You are many things, Hiccup, but a dragon killer is not one of them.” The second Viking Hiccup is compared to is Astrid, a girl we can assume is about Hiccup’s age. While Hiccup is stuck inside the smithy during the dragon attack, Astrid, along with the other teenagers, is trusted with putting out fires while the adults fight the dragons. Though she is not much bigger than Hiccup, when they start dragon training it becomes clear that she is the best young dragon fighter in the village, and she usually appears holding, sharpening, or throwing her axe, a weapon Hiccup cannot lift.

Finally, there is Gobber, the smith and dragon training instructor, or, as Hiccup describes him, “the meathead with attitude and interchangeable hands.” While Gobber is visibly disabled—he is missing a leg and a hand and requires prostheses for mobility—he remains a fully functioning and able-bodied member of the village. We first see Gobber in the smithy with Hiccup, but as the battle turns against the Vikings, he limps out on his peg leg, fastens an axe to his arm stump, and tells Hiccup, “Mind the fort [ . . . ] they need me out there.” His missing limbs have not compromised his ability to fight dragons. Gobber’s ability to connect a variety of prostheses to his arm actually improves his performance of ideal Viking embodiment. For example, during dragon training, Hiccup is about to get blasted by a Gronckle (a type of dragon), but Gobber jerks the dragon’s mouth aside with his hook hand so it fires harmlessly into the wall; this would have been impossible with his original hand. While Gobber’s body may be nonnormative, it is not problematic; when using the right prostheses, having a “whole” human body is not a necessary part of being a Viking (which perhaps is a positive necessity in a world where physical disability appears to be a common “occupational hazard”).

Initially, Hiccup attempts to use a weaponized prosthesis to help him be a Viking and kill a dragon, because, as he tells Gobber, “I just want to be one of you guys.” His mechanized wooden canon, which throws a rope with rocks on both ends with great force, is similar to the AMP suit in *Avatar*: it is a technological innovation meant to extend the function of the body in order to facilitate destruction. While this machine allows Hiccup to overcome his physical limitations and bring down a night fury dragon—a feat that could make him one of the most successful Vikings in his village—it does not kill the dragon for him. When Hiccup discovers the downed and helpless dragon, his terror is palpable, and he tries to talk himself through the killing: “I’m going to kill you, dragon. I’m going to cut out your heart and take it to my father. I am a Viking. I am a Viking!” But despite his fierce desire to behave like a Viking, he fails because he cannot kill the dragon and instead lets it go free. Since Hiccup is unable to perform normative Viking behavior, he will have to learn to assemble a different kind of body that allows him to perform his desired ability. In *HTTYD*, as in *Avatar*, technology alone is not enough to allow the human body to achieve its goals, and the weaponized or mechanized prosthesis is revealed as an insufficient and limited possibility for human embodiment.

Hiccup’s transformation is catalyzed by the dragon’s (named Toothless) resulting disability. When Hiccup brings Toothless down with the rope, it takes off half of the dragon’s tail fin, which acts like a rudder, necessary for flight. Initially, Hiccup is content to cultivate a friendship with Toothless where he brings the dragon food and plays with him in the pit to which he is confined. This changes one night when Gobber tells the teens the story of when he lost his limbs. Gobber’s disability is explicitly juxtaposed to Toothless’s: “[I]t’s the wings and the tails you really want. If it can’t fly, it can’t get away. A downed dragon is a dead dragon.” While Hiccup and Toothless may initially bond over fish, their friendship is predicated on their shared identity as problem bodies, creating the impetus for them to form a prosthetic relationship for mutual benefit and survival. As Jake’s experience of difference played a part in his success in forming prosthetic relationships, Hiccup’s experience as social outcast also makes him open to alternate forms of embodiment and relationships with the other (in this case, a dragon).

Through his attempt to restore Toothless to able-bodiedness, Hiccup redefines and expands the relationship between Viking and dragon bodies. The night of Gobber’s revelation, Hiccup makes Toothless a prosthetic tail fin out of leather and metal. As soon as Hiccup fastens on the prosthesis, Toothless becomes alert, wiggles his backside, and takes off, with Hiccup still hanging on. Hiccup’s cry of “I did it!” appears to remind Toothless that he has a passenger, so he shrugs Hiccup off, and immediately crashes as the prosthetic tail cannot stay open on its own. As his training progresses, Hiccup also continues to improve

Toothless's prosthesis, creating a mutually beneficial prosthetic relationship with the dragon. He constructs a saddle and a foot pedal to operate the prosthesis, a safety line to keep himself in the saddle, and a chart to help him accommodate all Toothless's natural flying maneuvers. Their first successful flight starts out shakily; Hiccup has trouble mastering the foot pedal and maneuvers them into the rocks. Once they are both comfortable, Toothless cannot resist the urge to stretch his wings to the fullest extent, and as he rockets straight upwards into the sky, Hiccup falls off his back, and they both begin to plummet. Miraculously they reconnect in midair, and Hiccup is forced to throw his chart away. But he no longer needs it—the boy and the dragon have become one entity, and Hiccup's ability to operate the prosthesis appears almost instinctual. The mechanics of the device require that the two operate as one mind and one body, challenging the traditional boundary between self (Viking) and other (dragon). While there is no direct mental connection through an organ like the neural queue in *Avatar*, the act of flight creates an amborg, sealing the now physical bond between Hiccup and Toothless. It is essential to the prosthetic relationship that both bodies—Hiccup's and Toothless's—make a choice and exercise agency in their interconnection.

Hiccup's new relationship with Toothless places him far enough outside of traditional Viking embodiment to allow him to reevaluate the defining principle of his society: the war against the dragons. After they have cemented their interdependence, Hiccup has the opportunity to meet a group of Terrible Terrors, the smallest dragons. "Everything we know about you guys is wrong," he observes as a Terror curls up beside him like a domestic cat. *HTTYD*'s alternation between scenes of Hiccup at dragon training with those of him working with Toothless amplify that he is not, and will never be, a dragon killer, and, therefore, might never be a true Viking. However, because of his relationship with Toothless, he can pass as a Viking, masking his problem body and appearing as an able-bodied member of his society. Tricks like hiding a smoked eel on his body, knowing the right place to scratch, and distracting the dragons with the light reflected from a mirror are accidental knowledge gleaned from his experience with Toothless. While Hiccup uses these tactics to avoid having to become a dragon killer, the Vikings, limited by their one view of the relationship they can have with dragons, are impressed by his apparent domination of the dragons. The results Hiccup achieves are sufficient to make one of the other teens say to Astrid, "Wow, he's better than you ever were, even if he never uses his axe." And when Gobber says to Stoick on his return home, "Who would have thought it. [Hiccup] has this way with the beasts," we know that Hiccup's "way with the beasts" is the result of a new "way" altogether—a new way of experiencing embodiment through a prosthetic relationship.

In the end, because of his amborg connection with Toothless, Hiccup becomes the ultimate dragon killer. When he decides to act as a dragon killer, Hiccup chooses a true enemy—the queen bee dragon—and works for the good of humans and dragons alike. By defeating the giant “evil” dragon, Hiccup finally becomes an able-bodied Viking, relieving both dragons and humans of a harmful oppression and eliminating the conditions that caused their antagonistic relationship in the first place. Whereas Jake does not achieve a reconciliation between humans and the *Na’vi* in *Avatar*, possibly because of the intermediate body of the avatar, Hiccup’s innovation opens up new possibilities for Viking and dragon bodies, and inaugurates new potentialities for the relationship between Viking and dragon societies. Dragons become pets, not pests, and Vikings become dragon riders, not dragon killers.

After losing his lower left leg during the giant dragon’s death, Hiccup is also physically disabled. While his initial reaction is sadness, Toothless’s presence and eagerness to provide stability as he walks on his new spring-loaded metal leg give Hiccup the courage to walk out of the cabin. As they head to the door, the frame is of their matching disabilities: a missing left tail-fin and a missing left leg. When they step outside, Gobber presents Hiccup and Toothless with a new tail prosthesis, and as Hiccup gets in the saddle, it is clear that his new prosthetic foot is specially designed to work the pedal. Previously, Toothless was reliant on Hiccup in order to perform as a dragon, and now Hiccup must rely on Toothless to perform as a Viking. As part of a community of disability, Hiccup and Toothless experience a complete prosthetic relationship—together, they are whole. As Hiccup says about sparing Toothless’s life, “I wouldn’t kill him because he looked as frightened as I was. I looked at him, and I saw myself.”

### Conclusion

Fantastic narratives like science fiction and fantasy allow us to think beyond a traditional conception of prosthesis, combat anxieties over prosthetic technologies, and consider new possibilities for bodies. *Avatar* and *HTTYD* imagine a prosthetic relationship like the amborg body theorized by Gordon: a human/animal interface that functions through reciprocity and fundamentally changes each of the bodies joined. Asked to understand a culture that exists as part of an interconnected global ecology, Jake Sully in *Avatar* has to learn to form prosthetic relationships with animals as part of his assimilation into *Na’vi* life. This opens him up to a new, nonhuman possibility of embodiment that blurs the boundary between self and object. When forced to choose between obeying human orders and saving the *Omaticaya* people, Jake fully embraces *Na’vi* embodiment and becomes an amborg with the *toruk*. His ability to engage in this prosthetic relationship allows him to bring the *Na’vi* together and gives him

the power, through *Eywa*, to defeat the humans and save Pandora. In *HTTYD*, Hiccup wishes for a way to change his problem body and thinks the answer is to become a dragon killer through weaponized prostheses. However, like Jake, Hiccup learns that there are multiple ways to occupy a fully functional body. The complete prosthetic relationship between Hiccup and Toothless not only permanently changes each of their bodies and blurs their boundaries between self and other; it redefines more generally what it means to be a Viking and to be a dragon.

Featuring dramatic resolution through interreliant bodies, *Avatar* and *How to Train Your Dragon* employ disability and the concept of prosthesis to challenge the viewers' normative understanding of able-bodiedness and destabilize the ableist premise that whole bodies must function autonomously as a clearly defined self or subject. Jake's flight with the *toruk* and the strong bond, physical and mental, between Hiccup and Toothless also offer ways to move beyond the typical SF representation of mechanized or weaponized prosthesis (such as the AMP suit and Hiccup's canon). Through their amborg figures—created through prosthetic relationships—both films optimistically imagine better worlds where bodies are no longer defined by lack and dis/ability but by mutuality and reciprocity.

### Notes

1. While *natural* is itself a problematic term, in this instance it refers to the organic body one was born with.
2. This definition is influenced by the definition used by the editors of *Artificial Parts, Practical Lives* (33).
3. See work by David Serlin, Michael Davidson, and Vivian Sobchack.
4. The term *assistive* comes from Katherine Ott's introduction to *Artificial Parts* (21).
5. Gordon introduces the amborg in her 2008 article, but the language of her later article is more appropriate for this project.
6. I want to respect the work and lived experience of disability scholars such as Steven Kurzman and Vivian Sobchack, who have highlighted the need for awareness in scholarship of the lived reality of prosthesis.



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*Cure Narratives for the (Post)human Future*

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## CHAPTER 9

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# “Great Clumsy Dinosaurs”

## The Disabled Body in the Posthuman World

*Brent Walter Cline*

If Mary Shelley's *Frankenstein* can arguably be considered the first science fiction (SF) novel, then it is fair to say that SF has been interested in the practical and philosophical consequences of posthumanism since its inception. SF narratives have long explored the anxieties and promise of the posthuman, what Neil Badmington calls “an activation of the trace of the inhuman within the human” (171). For instance, in two influential texts in posthuman SF, Olaf Stapledon's *Star Maker* and Greg Bear's *Blood Music*, the next step in human evolution demands the divorce of consciousness from the physical body, so that the “inhuman” can help transcend the person into a higher plane of existence. In *Star Maker*, the nameless narrator becomes a disembodied person, able to span galaxies and unite with alien minds, which grant him expanded consciousness. In *Blood Music*, the entirety of humankind unites to an enormous organism that dispenses with the physical body but allows “participants” to retain their intellectual and emotional identities. The promise that such visions of posthumanism express toward the relationship of the inhuman and the human body is applauded by many critics within feminism and queer theory, perhaps most famously in Donna Haraway's essay on the cyborg. The interaction between the inhuman and the body destabilizes the ability to enforce normalcy, so that “ambiguity and difference are redefined to become signifiers of an inclusive posthuman embodiment” (Wolmark 76). While this questioning of essence is often seen as beneficial by those who seek to destabilize the enforcement of cultural normatives, there are foundations to the idea of posthumanism that necessarily interrogate the role of the human body in the formation of personhood. The consequences of this interrogation are perhaps best illuminated when shown in contrast to theories of personhood as demonstrated in disability

studies, which, like posthumanism, focuses on the issue of physical embodiment and identity. When visions of the future like *Star Maker* and *Blood Music* are examined through the lens of disability studies, the result of a posthuman evolution, rather than creating an inclusive environment of “ambiguity and difference,” devalues the reality of the body in creating human experience and defining personhood.

While disability theorists are not wholly united in their understanding of human identity, the body, abled or disabled, is universally understood to be an integral part of the definition of a human being. This is not to suggest biological determinism, however, so that a blind person would have a distinct, determinate experience due to blindness, or a mentally disabled person would have a distinct, determinate experience due to cognitive ability. Instead, it is to recognize the physical reality of the body, whether it results in discrimination, suffering, or even transcendence. To deny this reality is to “fail to account for the difficult physical realities faced by people with disabilities [. . .] [it] presents their body in ways that are conventional, conformist, and unrecognizable to them” (Siebers 57). The construction of the body is not an abstract, theoretical idea only, as recognized by those who live in chronic pain or are constantly reminded of the limitations of their impaired bodies. This recognition is crucial, as any understanding of the body must include a distinction between impairment and disability. Impairment is a real, physical fact. To deny so, as Tom Shakespeare writes, is to ignore that “even if social barriers are removed as far as practically possible, it will remain disadvantageous to have many forms of impairment” (202). Disability is the social problem that creates lack of access for those who have various impairments. Therefore the disabled body is an impaired body that does not have access to the privileges and freedoms of “normalized” bodies due to social construction.

To return then to posthuman texts such as Stapledon’s *Star Maker* and Bear’s *Blood Music*, the “unmodified” human body is understood as a primitive obstacle, as it prevents the seat of consciousness, the mind, from access to “the inhuman,” and therefore higher planes of existence. The normalized body is ironically the disabled body, which “pervades literary narrative, first, as a stock feature of characterization and, second, as an opportunistic metaphorical device” (Snyder and Mitchell 47). Personhood within both *Star Maker* and *Blood Music* becomes an idea contained completely within the consciousness of the individual, and the “unmodified,” disabled body becomes the metaphor of our struggles to emerge from an inadequate or compromised position. This rendering of the physical body as an anchor to evolution directly opposes ideas that the body, even in a disabled state (if not *because* of a disabled state), might be an avenue of transcendence itself, as when Susan Wendell writes, “The onset of illness, disability, or pain destroys the ‘absence’ of the body to consciousness [. . .] and forces us to

find conscious response to new, often acute, awareness of our bodies. Thus, the body itself takes us into and then beyond its suffering and limitations” (178). The posthuman claims of *Star Maker* and *Blood Music* deny that the physical body—including the disabled body—help create and expand our consciousness. The body is only an obstacle, and when consciousness is separated from that obstacle, greater evolution of thought and development of identity can occur.

This embodiment-as-disabled idea is perhaps even better understood when considering Carl Malmgren’s ideas on how (especially posthuman) SF worlds establish the path toward a more enlightened existence. It is fair to read the rhetorically disabled body in *Star Maker* and *Blood Music* as the barrier in Malmgren’s writing: “A frequently noted characteristic of much alternate society SF is the presence of the barrier, the physical dividing line separating the estranged society from the ordinary society [ . . . ] or marking the boundary of that society and the adjoining natural world. Now the barrier clearly figures significantly in the *story* of the fiction; the narrative is necessarily generated by penetration of the barrier (an actant moves from one topological space to the other), and the outcome of the story frequently hinges on the possible elimination of the barrier” (79). The human body, here always cast as a disabled body, must be eliminated so that the outcome of the story—the progression of human evolution—can occur. It is hardly coincidental that neither *Star Maker* nor *Blood Music* contains a true enemy or villain; the only real impediments to characters’ growth are the limitations their bodies inherently create. These bodies-as-barriers in *Star Maker* and *Blood Music* serve as a metaphorical signifier for the denial of access to the next step in human evolution, which involves the only necessary component of personhood: consciousness.

### Olaf Stapledon’s *Star Maker*

The unique place of Olaf Stapledon in the development of SF has been long documented. Vast in its scale and unprecedented in its depiction of the cosmos, Stapledon’s two major works, *Last and First Men* and *Star Maker*, are more likely to find their literary and philosophical influences from Dante and Milton than H. G. Wells and Jules Verne. Few writers seem to imitate Stapledon, but nearly all seem to be influenced by him. Both *Last and First Men* and *Star Maker* have been described as myths more than novels, including the positive connotations of immensity of vision, and the negative connotations of coldness and lack of regard for character development. In a 1947 lecture entitled “Science and Fiction,” Stapledon stated that the rules of the genre must have “psychological and spiritual relevance to human readers in the present through the construct of ‘Myths for a scientific age’” (Crossley 32). Works involving angels and gods belong to a medieval mind-set; for the modern mind where these things cannot

be true, new myths need to be created in order to provide explorations of the human essence and its relationship with the cosmos. In his study of the recreation of mythologies in SF, Casey Fredericks writes about *Last and First Men*, “No one, not even Wells, thought out the problem of the end of man so thoroughly on so extended a temporal range as Stapledon” (77). It is as though Stapledon’s vision of the genre was developed from the template of his two greatest works.

If, as Fredericks suggests, *Last and First Men* follows the development and finality of mankind more thoroughly than any other SF text, then *Star Maker* follows in such a magnitude of scale that the evolution of *Last and First Men* becomes cosmically little more than a footnote. Beginning on the British heather, *Star Maker* follows the disembodied travel of the unnamed narrator as he ascends from his terrestrial home and travels through the cosmos, observing different planets and planes of existence. As he moves from one world to another, encountering sentient beings described as arachnids, nautiloids, and plant men, he becomes a single member of a “cosmical mind,” whose other members include beings from the diverse worlds he has observed. Eventually, the narrator and his community of “awakened spirits” come into contact with the Star Maker, the creator-being that has designed and destroyed every cosmos “with the aloof though passionate attention of an artist judging his finished work; calmly rejoicing in its achievement, but recognizing at last the irrevocable flaws in its initial conception, and already lusting for fresh creation” (224). Like so much in his travels, the narrator’s experience into the consciousness of the Star Maker is unable to be fully expressed in language; he returns to his wife and home unable to fully express his encounter with the cosmos and its creator, yet nevertheless filled with a new regard to the significance of his terrestrial existence.

The idea of the posthuman in Stapledon is admittedly more subtle than will be shown in *Blood Music*, if for no other reason than the narrator’s journey is posited as more philosophical idea rather than reimagining of what life on earth might mean in a posthuman reality. While the journey ultimately leads the narrator back to the place he began with no access to realizing the change of existence he temporarily experienced, the very nature of this journey speaks to both the conception of what the posthuman might be as well as what our current bodily state means. For Stapledon, as will be the case with Bear (and is generally the case within all posthuman imaginings), the human body *will be* meaningless within future evolutions, suggesting that the present human body *is* at the very least a rhetorical, if not literal, barrier to that evolution.

One of the defining features of the narrator’s journey into the cosmos is that it is a movement in disembodied consciousness. Still having recently left the earth, the narrator realizes, “I myself was seemingly disembodied, for I could neither see nor touch my own flesh. And when I willed to move my limbs, nothing happened. I had no limbs. The familiar inner perceptions of my body, and

the headache which had oppressed me since morning, had given way to a vague lightness and exhilaration" (15). While he is still fully human, he has left any semblance of a physical existence. This physical existence, however, is how his prejourney existence is situated. The opening line of the book, in all its mythic power, is, "One night when I had tasted bitterness I went out to the hill" (9). Whether content in his physical embodiment or not, the narrator initially *needs* it for comfort. Still early in his travels, he wonders if he is dead or "doomed to hang thus for ever out in space, a bodiless view-point?" (20). His suggestion here while still within his own solar system is that such an existence would be a kind of limbo, if not outright hell. When he ultimately contemplates all he has been through, however, the physical world is shown to be a shadow of that which he experienced: "Now that I am once more on my native planet, and this ['superhuman'] aid is no longer available, I cannot recapture even so much of the deeper insight as I formerly attained" (22–23). The physical then is associated with the inability to retain that which the disembodied self was able to experience. Certainly, the narrator seems to suggest that the inadequacy of human language is partially at work in being unable to express his experience. At the same time, however, the "insight" the trip affords him is rhetorically contrasted with his physical existence; the narrator's journey may allow him to witness physical things, but it is nevertheless a journey of consciousness.

While the narrator's journey allows him to experience entirely new and indescribable things, the philosophical importance of the journey is less in the variety of diverse worlds he finds than it is in the joining into the consciousness of fellow travelers like himself. The narrator's first and most distinct traveling companion is Bvalu of The Other Earth. It is through Bvalu that the narrator is able to gain a greater insight into the Other Humans; their culture, their literature, their history, and ultimately their destruction comes not by means of external observation but by a mental coupling with Bvalu. As they begin their interstellar travel together, the narrator writes,

Our recent experiences had quickened our mental life, still further organizing our two minds together. Each was still at most times conscious of the other and of himself as separate beings; but the pooling or integration of our memories and of our temperaments had now gone so far that our distinctness was often forgotten. Two disembodied minds, occupying the same visual position, possessing the same memories and desires, and often performing the same mental acts at the same time, can scarcely be conceived as distinct beings. Yet, strangely enough, this growing identity was complicated by an increasingly intense mutual realization and comradeship. (67–68)

The importance of this increase of consciousness and peaceful solidarity in the midst of an overtly disembodied state is perhaps best revealed when compared



to the opening of the book, when the narrator describes his relationship with his wife: “There, under that roof, our own two lives, recalcitrant sometimes to one another, were all the while thankfully one, one larger, more conscious life than either alone. All this, surely, was good. Yet there was bitterness. And bitterness not only invaded us from the world; it welled up within our own magic circle. For horror at our futility, at our own unreality, and not only at the world’s delirium, had driven me out on to the hill” (8–9). On his terrestrial home there is an increase in “conscious life” and solidarity, just as there is with Bvalu. Whereas coupling with Bvalu leads to “intense mutual realization and comradeship,” with his wife it leads to a fainter triumph and a palpable negativity. Life on earth with his wife is a mere shadow of what he experiences with Bvalu, and crucial to this shadowy existence is that the bitterness encroaches from within and without, like a vague sickness rather than the assault of a malicious foe. With Bvalu, no such bitterness occurs; instead, it is the heightened state of existence that occurs when one disembodied mind joins with another.

While the most present as a character, Bvalu is only the first of the narrator’s companions in interstellar travel, and with more participants comes an even greater heightened awareness and peaceful solidarity. Although the narrator does describe a single time when there was a feud, the group of different disembodied organisms works nearly flawlessly toward a single goal: greater consciousness. As Robert Branham states about *Star Maker*, “all sentient beings are devoted to the pursuit of spiritual development” (249). Toward the end of the book, the narrator’s group of pilgrims on their way to see the Star Maker adopt entire galaxies into their community. The aim of this group is “to create a real cosmical community, with a single mind, the communal spirit of its myriad and diverse worlds and individual intelligences. [ . . . ] With grave joy we, the cosmical explorers, who were already gathered up into the communal mind of our own galaxy, now found ourselves in intimate union with a score of other galactic minds. We, or rather I, now experienced the slow drift of the galaxies much as a man feels the swing of his own limbs” (204, 5). The body here is only a means of expressing the fuller representation of existence that comes in the disembodied consciousness of the group.

This connection to one another in perfect harmony of consciousness is eventually reflected in the union with the Star Maker, a wholly intellectualized being. When the narrator approaches the Star Maker, the center of all existence, he is not welcomed by love or joy. The narrator states that at the moment of approaching the creator “all the longing and hope of all finite spirits for union with the infinite spirit were strength to my wings” (223). This ultimately is fantasy, however, as he is turned away, for the Star Maker “had made me not to be his bride, nor yet his treasured child” (223). While Stapledon purposely uses Judeo-Christian language for the Star Maker’s existence (e.g., “Let there be

light”), he is clear to show that this creator God is not interested in intimate relationships with its creations. The Star Maker is as horrifying as he is exquisite: he builds and destroys a cosmos with no regard for the individual consciousness of its participants. His only goal is to continue to learn, evolve, and become an even more “awakened mind” than he was during his early creations. We see then the goal of the community of interstellar travelers is reflected in the Star Maker himself; in this way, their mission is divine.

In no part of this text does Stapledon suggest that the body is evil. In fact, when the narrator sees the plant men, he witnesses a race that is destroyed by their inability to recognize the fact that they are both physical as well as spiritual beings, serving as a “warn[ing to] the future Galactic Utopia not to ignore details of its physical fleshly basis” (Waugh 215). Stapledon’s narrator eventually returns to the physical place of bitterness that he began his celestial journey. The body is reality, and even the mythic nature of a book like *Star Maker* does not deny this. What it does suggest, however, is that the mind, consciousness, spirit—these words are used interchangeably throughout the text—is the primary determination of a person’s identity. If the narrator’s entire journey of consciousness leads him to the Star Maker, then we can read this creator-destroyer god’s existence as a reification of the idea of personal identity. As the narrator travels, he increases awareness and heightened consciousness until he reaches his goal: the highest, most evolved being, which is pure consciousness with complete power over all that is physical.

As is the case in Greg Bear’s *Blood Music*, most posthuman SF will conclude with a vision of an actual posthuman existence. In *Star Maker*, however, the narrator has returned to his home. He is once again bonded to the barrier that is the human body. The entire book, however, is written as a philosophical myth, and this return of a terrestrial life speaks to Stapledon’s understanding of what the contemporary human body means to our identity. Within *Star Maker*, we really only have the *idea* of the posthuman. There is no access to a posthuman existence: no call for cyborgs nor script for what technology might bring us in the next century. The intergalactic journey of the narrator is mythical; there is no access to it in either the world of the text (for once it is over, the narrator cannot bring it back) or the world of the reader. The journey provides the narrator with an ideal, but not a prescription to create it. The human body is therefore rendered as a disabled body blocking access to what would be considered the “better” existence. Stapledon recognizes this and concludes his book with the idea that it is in the struggle within this rhetorically disabled body that meaning must be found. The body limits and becomes a barrier to a higher plane of existence, but the struggle within this universally disabled body creates meaning.

In the last pages of *Star Maker*, when the narrator has returned to his terrestrial body, he imagines seeing the world once more from overhead, and this

time sees the gears of war turning toward World War II. In attempting to understand how one faces such utter destruction, especially having seen the beauty of the cosmos, the narrator states, “Strange that in this light, in which even the dearest love is frostily assessed, and even the possible defeat of our half-waking world is contemplated without remission of praise, the human crisis does not lose but gains significance” (256). In the struggle to beat back war, as Stapledon did through his own pacifism, one finds meaning: “[T]he threat of death is what lends importance to life” (Smith 109). In the face of “ultimate darkness,” when our existence simply does not align with the idealized existence, one finds meaning in the struggle against our limits and boundaries. Throughout *Star Maker* these limits and boundaries are metaphorically found in the body, which through its very antithetical status with the mind in the text, becomes a disabled one, denying access to greater consciousness and heightened solidarity with others—what in this text may be considered the divine.

### **Greg Bear’s *Blood Music***

Although Greg Bear, a Hugo and Nebula Award-winning author, does not carry near the influence of Olaf Stapledon, *Blood Music* is perhaps more indicative of most posthuman SF than the philosophical, mythic *Star Maker*. Whereas in *Star Maker* the idea of the posthuman was explored and the rhetorically disabled body created limits that supplied meaning to our contemporary existence, in *Blood Music*, as in other posthuman works, limits are simply that: limiting. Nothing is created by those limits other than the obstacle to evolution, so when that obstacle is eradicated—or in this case intellectualized—new planes of existence occur.

Beginning as a published short story in 1983, *Blood Music* was turned into a novel two years later with much of the short story’s plot intact. A scientist named Vergil Ulam has been fired from his biotech employer for performing rogue experiments in trying to make “intelligent” cells that could become self-aware and able to learn new information. When Vergil is fired for his unauthorized work, he retains his prototype cells by injecting them into his own body. The cells, which he names noocytes after the Greek word for “mind,” begin to adapt in his body, eventually taking it over. Vergil’s health improves as the cells rebuild his body, eventually communicating with him. Vergil seeks help from his friend Edward Milligan when he realizes that he is “losing” himself to the noocytes. Edward realizes the potential catastrophe Vergil’s invention can cause, and murders him in hopes of ending the existence of cells that can adapt, absorb, and eventually control any organic matter. Edward’s action is too late, however: the noocytes have spread not only to Edward but to others. This is where the original short story ends. In the novel, however, the entire continent

is soon absorbed by the noocytes, which now appear as a continuous, fleshy organism. A few Americans survive, having been unpalatable to the noocytes for various, vague reasons. The second half of the book follows these survivors' isolated experiences, until the reader eventually learns that all those that have seemingly been killed by the noocytes have actually “joined” them. All consciousness still exists, allowing those who have been absorbed total freedom within the new “mother” organism to recreate their past, play out fantasies, or learn from others. Eventually, an entire “thought universe” is created where all is possible for those now a part of the noocytes.

Immediately there is much to remind the reader of *Star Maker*, perhaps most predominantly a disembodiment that creates increased consciousness and solidarity where the problems of the body—pain, limits, death—no longer exist. Nevertheless, the difference in this disembodiment is crucial to how *Blood Music* uses the role of the body as a disabling presence. The narrator in *Star Maker* simply does away with the body while he travels through the cosmos, whereas in *Blood Music* the body plays a crucial, permanent role in creating and sustaining the new evolution in human identity. When Vergil is first introduced to the reader, his physical impairments, while not striking in their uniqueness, nevertheless present him as an impaired individual: “He stood six feet two inches on very large flat feet. He was twenty-five pounds overweight and at thirty-two years of age, his back hurt him [and] he had high blood pressure” (5). In addition, Vergil is short sighted, marked by poor teeth, prone to sinus infections from allergies, and while perhaps due more to social causes than biological ones, is unable to impress women. When he injects himself with the noocytes, he does not do so in order to correct these problems. The injection is done solely so he can leave Genotech Laboratories with his own invention intact. Therefore we cannot say that Vergil begins experimentation with the noocytes in order to heal himself, but this is perhaps obscured by the fact that Vergil had no belief that anything like healing would occur because of it. The injection is seen as foolish even by Vergil's standards, but after a short amount of time healing does indeed begin. More than healing, even, as Vergil explains to Edward that he is being “rebuilt”: his spine is strengthened, his eyes repaired, and even his nipples, apparently due to their strictly ornamental function, are erased. The impaired body in *Blood Music* then is, while not the motivating cause to create the noocytes, nevertheless their “enemy” (a term more acceptable when we remember that the noocytes are conscious, self-aware organisms). They heal Vergil's body not because they are worried for Vergil's health or social status but because they themselves *become* Vergil's body, and thus in order to control and perfect themselves they do the very same to Vergil.

In his discussions with Edward, Vergil explains the noocytes as exploring his body as though it were a galaxy, using language of discovery and insight that

is devoid of parasitic connotations. This does not obscure to Vergil, however, that his very ontology is at stake when the noocytes, who communicate with him through his own brain, tell him they understand his means of awareness as well as his physical position in the larger space of the world. The separation of the body of Vergil and the body of the noocytes continually breaks down until Vergil, as well as all others, ceases to exist in his physical form. The human body is eventually absorbed into the collective body of the noocytes. This absorption is crucial in understanding the role of the body in the text, because the absorption is essentially a conversion from limited, bounded existence to one of total disembodied freedom. The noocytes are consciousness made flesh. Rather than there being any semblance of a split between the body and mind, the noocytes are consciousness with a physical form. Because they are essentially pure consciousness, there are no limits to their mental existence. Just as nothing can stop their physical progression in the book, nothing can stop their continual intellectual awakening into higher and higher planes of consciousness.

When the noocytes become a continental organism and have absorbed millions of people into their collective existence, the mental ability of those now within the organism becomes limitless. One of the few untouched Americans is a young woman from Brooklyn named Suzy, who wakes one day to find all New York City as a connected mass of flesh, including her mother and two brothers. Eventually, Suzy is able to talk to her mother and brothers, who try to convince her to be absorbed by the noocytes. On first reading, one is very much in the position of Suzy, unwilling to accept that this is not some body snatcher redux where the victim is seduced into a mindless existence. Ultimately, however, the promises of her family prove true. One brother states, "We can be a lot smarter now, if we want to be," while another says, "We don't even need our bodies" (270). Now that they are part of the noosphere, their capability is without barrier. Another character who eventually becomes absorbed by the noocytes, Michael Bernard, chooses to relive a regretful moment with a woman named Olivia. This time he is brave, speaking to her plainly, and the promise of happiness between them is unmarked by doubt or intrigue: when Olivia asks Michael to make her happiness remain permanent, the final words of the text attest to the inevitably positive outcome: "Nothing is lost. Nothing is forgotten. It was in the blood, the flesh. And now it is forever" (344). Part of the shock in reading *Blood Music* is realizing these final words are not sarcastic or tinged with a threatening force. Once the human body is abandoned for the noosphere, the existence of the individual contained within the thought universe is boundless while identity remains intact.

In the final moments of the short story version of *Blood Music*, Edward Milligan, who narrates the story, recounts the process of being absorbed by the noocytes, and the language suggests a powerfully negative impact on human

identity and personhood. Milligan states, “Our intelligence fluctuates daily as we are absorbed into the minds within. Each day, our individuality declines. We are, indeed, great clumsy dinosaurs [ . . . ] Years from now, perhaps much sooner, they will subdue their own individuality—what there is of it” (1194). While some positive aspect might be read through a nonhumanistic understanding of biological evolution, in regards to human identity this is clearly a negative response to the noocyte “invasion.” The end of the novel version, however, is the moment with Michael Bernard doing the impossible: reuniting with a lost love and changing his past mistakes. The novel *Blood Music* is not only an expansion of the short story but philosophically a different text in that the posthuman evolution through biological unification is not a threat but a promise of greater consciousness and unlimited freedom.

Initially then, the disabled body as seen through Vergil Ulam is repaired through the mechanism of posthuman evolution. Eventually, however, the body is eradicated without the identity of the person in any way changed. The echo of Gnosticism that appears throughout posthuman SF surfaces here, too. The body is real, but in no way linked to true human identity. The body simply acts like a cage, and if that cage can be eliminated, nothing of human identity is lost, while evolutionary progress of the true human identity is gained. The body is the barrier that prevents access to consciousness, and therefore the human body itself becomes a rhetorically disabled body. The only possible role the physical form might play in the posthuman is to provide a motivation to overcome our limits, without fear of what these limits may be keeping us from.

### Conclusion

In Robert Galbreath’s work on images of the apocalypse in SF, he writes, “Speculative fiction cannot avoid ambiguity in dealing with transcendence, for its message is simultaneously that humanity can and must rise above its own limitations and that humanity deeply wishes for salvation by something greater than itself” (55). For both *Star Maker* and *Blood Music*, this transcendence is the movement into pure consciousness. Echoes of a Christian apocalypse and paradise are foreign because here there is no need for a bodily resurrection; a Buddhist apocalypse and paradise are foreign because here there is no loss of the individual identity though the body has been disregarded. The “salvation by something greater than itself” is the evolutionary movement to an entirely mental existence.

If the body itself is opposed to a posthuman evolution and is made metaphorically into something disabled by posthumanism, then the actually impaired body is the reification of that opposition. Ideas of the cyborg as a positive force for the nonnormative perhaps need to be read with careful regard

to the evolution and eventual eradication of Vergil Ulam. His body is at first benefited by the cyborg entity of the noocytes: he is healed, socially included, and generally made more powerful. In the moment when Vergil throws away his glasses and sets personal records for sexual stamina, he seems to represent the machine and the human at their perfect symbiosis. His evolution continues, however, and his body is once again returned to disabled: that is, a useless barrier to limitless experience. While *Blood Music* does not seem to mourn this turn of events, instead suggesting the triumphant if not inevitable evolution of humanity, it does nevertheless suggest that the disabled body is the reified barrier that must be overcome. In Sherryl Vint's work on subjectivity and the posthuman, she writes, "The visions of the cyber posthuman, like those of the genetic posthuman, must recognize that what needs to be transcended in a move from humanism to posthumanism is not the human body but instead the narrow vision of humanity that has been characteristic of humanism as a discourse" (137). Yet so long as that "narrow vision of humanity" assumes that the body represents a barrier from higher planes of existence, the body will need to be transcended. As has been recognized countless times, SF is as much about our present as it is our future. If the devaluing and disabling of the body occurs in constructions of future visions of human identity, we may perhaps assume it occurs within the present moment as well.

## CHAPTER 10

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# Disabled Hero, Sick Society

## Sophocles's *Philoctetes* and Robert Silverberg's *The Man in the Maze*

*Robert W. Cape Jr.*

As the United States Congress adopted the Architectural Barriers Act of 1968, requiring public buildings be made accessible to people with disabilities, Robert Silverberg published *The Man in the Maze* (serialized 1968; novel 1969), about a disabled man who uses an alien labyrinthine city to shut out abled society. It was a literary reversal typical of the 1960s science fiction (SF) by the New Wave and other writers, who rebelled against—or reversed—the themes, style, and outlook of traditional SF, focusing on “inner” rather than “outer” space and character development and personal relationships over gadgets, exhibiting a pessimism that contrasted with SF’s earlier, optimistic worldview, and striving for a more elevated literary style (Latham, Merrick). In *The Man in the Maze*, Silverberg takes on the literary challenge of adapting an ancient Greek tragedy, Sophocles’s *Philoctetes*, for a science fictional, near utopian world that seems to embrace the 1960s ideals of free love, elimination of war, complete racial and sexual equality, and technology that can cure nearly anything. Adaptations of classical literature as implicit critiques of political, military, and equal rights themes were popular in that decade (Hall), but Silverberg takes his work in a new direction, reframing ancient notions of disability in *Philoctetes* to project contemporary debates about disability into a future that has seemingly eliminated it. In the process, ability and disability come to construct and problematize both individual and collective human identity for the past, present, and future.

Silverberg’s use of the *Philoctetes* myth has received little comment, and *The Man in the Maze* received no awards nominations, although Silverberg says, “I think it is one of my strongest books” (*Omnibus* viii). John Dean



compares the novel to Sophocles's play, focusing on the Sophoclean "sense of wonder" and "cosmic dissatisfaction" captured in a sophisticated SF story, and stressing differences in the protagonists' reintegration into society. In literature on Silverberg's body of work from the 1960s, scholars treat *The Man in the Maze* and other works briefly, stressing that the characters suffer pain that seems pointless and relentless, until *Nightwings* (1969) and *Downward Toward Earth* (1970), when the characters transcend their physical and psychological limitations (see Chapman, Claerson, Letson). The goal of these studies is to find integration and transcendence, or a "cure" for the disabilities, illnesses, and disfigurements the characters endure. Such a *telos* has been standard in literary criticism and may well be appropriate to classical literature (Rose). In *The Man in the Maze*, however, I argue that Silverberg changes not only the nature but the significance of disability as a reflection on society, and that Richard Muller, the protagonist, enacts and embraces (with difficulty) an identity of disability that is best understood in terms of the social construction of disability in the field of disability studies.<sup>1</sup>

Recent interest in using disability itself as a critical category to examine artistic expression and its relation to society owes much to redefining disability in the field of disability studies. Most important—and enabling—has been the shift from defining disability in purely medical terms, as an individual's physical impairment to be cured, to understanding it as a "symbolic network" of social practices and beliefs that define and impact all people. Tobin Siebers provides a standard account:

Unlike the medical approach, the emerging field of disability studies defines disability not as an individual defect but as the product of social injustice, one that requires not the cure or elimination of the defective person but significant changes in the social and built environment. Disability studies does not treat disease or disability, hoping to cure or avoid them; it studies the social meanings, symbols, and stigmas attached to disability identity and asks how they relate to enforced systems of exclusion and oppression, attacking the widespread belief that having an able body and mind determines whether one is a quality human being. (3–4)

Disability identity is now understood to be socially constructed, and Susan Wendell has eloquently delineated those aspects of self-identity construction as she argues for a comprehensive definition of disability that acknowledges the interrelatedness of illness and disability and the difficulties for disabled people to unlearn many of the stereotypes of disability that are common among nondisabled people (20–26). Yet, despite the fact that this understanding of disability is fairly recent, Tom Shakespeare has shown that definitions of disability in the 1960s were already moving toward the social approach, focusing on restricting physical barriers to access and on social/ethical obligations of the

nondisabled (19–25). Thus Robert Silverberg's meditation on disability and future society in terms of a traditional (ancient) understanding of disability, physical barriers, and ethical responsibility can be seen as participating in the 1960s *zeitgeist*.

Sophocles's *Philoctetes*, staged at Athens in 409 BCE, opens with the disabled hero, the compassionate friend of Heracles, living a squalid life on the desolate isle of Lemnos, having been abandoned by the Greeks as they sailed for Troy. Philoctetes had accompanied them until he transgressed on a sacred precinct and was bitten by a serpent. The wound on his foot festered and stank so violently that people could not bear it, while the pain caused him to cry out like an animal and interrupted religious rituals. The Greeks could not cure his wound, so they abandoned him to survive on his own, with only a bow given him by Heracles. Now, nine years later, the Greeks need the bow to finally capture Troy, so Odysseus and the young Neoptolemus have come to steal the bow from Philoctetes. Neoptolemus is a second main character of the play, illustrating how an honorable nature is compromised by Odysseus to trick the suffering Philoctetes (Austin). It is Neoptolemus's loss of innocence that accounts for much of the contemporary attraction to the play (Taplin). Resolutely denying his assistance once he has learned of the deception, Philoctetes is commanded by Heracles (in a typical *deus ex machina* scene) to sail to Troy with the promise of a cure and reintegration into Greek society.

Silverberg's *The Man in the Maze* follows the same dramatic arc until the end, which is bleaker in that the "sick" Muller is healed but does not care to reintegrate into society. Richard Muller had been an exceptional interstellar diplomat, a "great man" (16), an ambitious man who claimed that he would "move through the stars like a god" (53). He had been chosen to be the first human to make contact with aliens, on planet Beta Hydrae IV, because another alien race had been found and the rulers of Earth wanted good relations with the aliens nearest them (50–53). Muller lived among the Hydrans for a year but never truly communicated with them. When he returned to Earth, he found that the Hydrans had operated on him in a way that left him physically unchanged but somehow without the psychological shielding that masked his inner feelings. His raw emotions seem to spill out and cause people to become physically and emotionally ill. Unable to face the rejection of those he loves or thought he was helping (104, 108, 111–12), Muller exiles himself to the uninhabited and desolate planet Lemnos, where an ancient civilization had left a large labyrinthine city that no one had been able to penetrate. He enters it and lives there for nine years, until Charles Boardman (the Odysseus character) and Ned Rawlins (Neoptolemus) come to trick him to leave, for another alien race, the "radio beings," threatens to destroy humanity if humans cannot prove they are sapient, and Muller may be the key to stopping it. Muller is tricked, but still

decides to go on the mission, and is technically “healed,” but refuses to return to human society.

In Sophocles’s *Philoctetes*, emphasis is placed on the physical aspects of the hero’s wound, oozing blood and stench, as well as the pain it causes Philoctetes and the revulsion/pity it causes others (Sophocles 965–66; p. 351). As Odysseus says in the opening lines, “Here it was [ . . . ] that I once put ashore the Malan, the son of Poetas [ . . . ] whose foot was dripping from a malady that was eating it away; since we could not pour libations or sacrifice in peace, but he filled the entire camp with savage and ill-omened cries, shouting and screaming” (3–11; p. 257). Philoctetes suffers from spasms and has no cure for “the burning flux oozing from the ulcers of his louse-ridden foot” (696–98; p. 323); he can no longer stand upright (820; p. 337). His disability is defined by outward physical signs and is a matter for medical healing or divine intervention (Austin). Indeed, it fits the medical understanding of disability, which, according to Siebers, “defines disability as an individual defect lodged in the person, a defect that must be cured or eliminated if the person is to achieve full capacity as a human being” (3). In one of the few works to examine classical material from the viewpoint of disability studies, Martha Rose rightly qualifies the medical model for ancient Greece (3), but remains clear that Philoctetes’s disability is physical and personal, as is the cure that will restore him to society and normalcy (cf. Edwards).

In *The Man in the Maze*, Richard Muller’s disability is not physically visible and it does not immediately define him. He returns from Beta Hydrae IV, tired but physically fit, and in good shape, as guaranteed by the medical equipment on his ship and Earth’s “giant starport diagnostat” (78–80). Although he appears healthy, people around him begin reacting strangely: the pilot who first meets him on his ship crumples onto a bed, cannot bear Muller’s touch, vomits, sobs, and immediately experiences “acute depression” and “a sort of metabolic paralysis” (78–79); Boardman sweats, fidgets nervously, paces, and must administer a tranquilizer to himself (81); and Marta, his lover, tries desperately to be physically close to him, but he sees the pain in her eyes, and she admits that she can’t stand being near him (82–84).

Muller’s first response is to joke, “Christ, I hope I’m not carrying some kind of contagion” (79), and “I must have a very bad smell” (80). He allows others’ reactions to him to define him as infected or diseased, and he formulates his identity as a disabled person based on impairment and social exclusion (cf. Murugami). Self- and socially identified as an outcast, Muller exiles himself to Lemnos. He plans to commit suicide trying to get to the center of the maze, or at least achieve isolation (22, 123–25). Thus Muller adopts a socially constructed, negative identity of disability and proceeds through several stages of acceptance, self-pity, marginalization, and isolation (Wendell).

By refiguring the somatic disability of his Sophoclean source, Silverberg connects disability more closely with character and questions the ability of the body to reveal health. Indeed, in the future world of *The Man in the Maze*, medical advances have eliminated physical defects, so all bodies are healthy all the time. Humans obsess about physical beauty and have regular “shape-ups” to look young (14, 15, 45, 58–60, 76, *et passim*). Some even change their bodies for whimsical reasons, such as the people on Delta Pavonis IV, called Loki, who “meddled with their peripheral glucoreceptors to induce accumulation of body fat. It was a useless adaptation, unrelated to any problem in their environment; they simply liked to be huge” (102). Physical alterations beyond the normative body are not considered disability or deformity, but a personal style preference.

If physical disability does not exist as a medical condition, how is Muller’s direct communication of his raw emotions considered a disability or an illness? Rawlins reflects,

Muller carried, thanks to the Hydrans, a deformity of the soul in an era when deformity was obsolete. It was an esthetic crime to lack a limb or an eye or a nose; these things were easily repaired, and one owed it to one’s fellow man to get a shape-up and obliterate troublesome imperfections. To inflict one’s flaws on society was clearly an antisocial act.

But no shape-up surgeon could do a cosmetic job on what Muller had. The only cure was separation from society. A weaker man would have chosen death; Muller had picked exile. (113)

Muller’s “deformity of the soul” is his inability to keep the “muck” of his psyche from being seen. He is no more deformed in his soul than other humans, maybe less than most (15, 20), but he cannot conceal his raw emotions or cover over them cosmetically. His disability is an inability to hide his real self from those around him, thus being antisocial by revealing uncomfortable truths.

Showing his authentic self becomes a condemnation of a culture devoted to physical beauty and superficial relationships. References to Muller’s illness are inseparable from descriptions of how the true emanations of his feelings affect others, as when he says to Ned Rawlins:

And then I came back to Earth, Hero and leper all at once. Stand near me and you get sick. Why? It reminds you that *you’re* an animal too, because you get a full dose of me. So we go round and round in our endless feedback. You hate me because you learn things about your own soul by getting near me. And I hate you because you must draw back from me. What I am, you see, is a plague carrier, and the plague I carry is the truth. My message is that it’s a lucky thing for humanity that we’re shut up each in his own skull. Because if we had even a little drop of telepathy, even the blurry nonverbal kind I’ve got, we’d be unable to

stand each other. Human society would be impossible. The Hydrans can reach right into each other's mind, and they seem to like it. But we can't. And that's why I say that man must be the most despicable beast in the whole universe. He can't even take the reek of his own kind, soul to soul! (120)

Muller's disability is his inability to conceal the sickness at the core of human nature, the inauthenticity, the failure to communicate truthfully with one another. Muller's unmasked soul refuses to sustain normative human social relations and is thus branded as other, sick, disabled, deformed. The ability to see others' thoughts would reveal in humans their bestial inner nature. Such an ability, even in a small amount, would threaten to contaminate human society and render it impossible. Compared to the Hydrans, who communicate truthfully and have no interest in superficial appearances (they don't have mirrors, 76), humans are beasts.

By transforming the nature of disability from the physical sort in *Philoctetes* to a revelation of the flawed nature of mankind, Silverberg extends the significance of disability itself to define human nature. But in continuing the dramatic arc of Sophocles's play, how can Muller's disability save humanity? By revealing a more fundamentally flawed essential human nature, how can he succeed in his mission to the radio aliens: to show them that humans are "something more than beasts" (*Man* 169). Like Neoptolemus in Sophocles's *Philoctetes*, Ned Rawlins helps Muller understand that he has focused on only one aspect of humanity, the bad side, and his cynicism is sophomoric (150). Ned has a more balanced view of humanity: it is capable of evil but also of good. Muller begins to see the truth of this: "The boy had scored a palpable hit with that line about sophomore cynicism. It was. Am I really such a misanthrope?" (151) Ned can detect a change in Muller's feelings: "I can feel the flavor of your thoughts changing" (151). Muller is amazed: "No one ever told me he could detect meanings [ . . . ] only that it was painful to be near me" (151). Although he suspects Ned of lying, Muller begins to realize that he has been stubborn, that human nature has more than one side.

In the midst of his emerging understanding that humanity may not be evil and beast-like, Muller feels completely betrayed by Rawlins's complicity in Boardman's plans to send him to the radio aliens. He releases a "torrent of anger" (169). His reaction is the same as that of Philoctetes. Yet, when Boardman is about to carry off Muller against his will, Ned gives him a gun so he will be "in charge" (174). This parallels Neoptolemus's act of returning Philoctetes's bow to him when Odysseus tries to carry it off. The action is at a standstill: the hero now has power over the others and over his fate. Silverberg has reached the same crux as Sophocles. How can be resolved? In *Philoctetes* the demigod Heracles commands Philoctetes to relent and go to Troy with Odysseus and Neoptolemus, and be cured and reintegrated into society. But the *deus ex machina* option is not open to Muller. Silverberg

heightens the anticipation by having Muller point the gun at himself and squeezing the trigger, about to end humanity's hope with his suicide: "'No!' Boardman screamed. 'For the love of—'" (176). "God" should complete the phrase, and a god is the source of redemption in the Greek play, but Muller fills in another word instead, revealing that Ned had convinced him that humanity was not all bad, and that Muller, too, still had compassion and cared for others. Moreover, he had just seen the calculating, conniving, deceitful Charles Boardman volunteer to sacrifice himself if that is what it would take to get Muller to save the human race. Muller realizes that he will go of his own free will and for genuinely altruistic reasons, not the *hybris* he showed before. It is not a *deus ex machina* that will effect the salvation of mankind, but a thinking man, a *Homo sapiens*. Muller utters the word "Man."

Rawlins and Boardman bring Muller back to humanity by reminding him of compassion, hope, and self-sacrifice. To the extent that the Hydrans had "disabled" him, it was not through the uncontrolled expression of his inner feelings but by distancing him from other human beings, despite their flaws. Although not the ultimate resolution of the novel, Muller's completion of Boardman's exclamation, "For the love of—," with the word "Man" signals a type of "healing." He has realized the full complexity of his humanity: complete and free expression of emotion as well as compassion and understanding for his fellow human beings. Evidence of humans' sapience must include intelligence as well as a capacity for complex emotion. Muller's previous attempts to convince the Hydrans that humans are sentient by drawing the Pythagorean Theorem, speaking several languages, displaying the periodic table, and playing the flute seem to have failed (157–59). The Hydrans wearied of him and performed an operation so he could communicate his emotions more directly. Then they lost interest. Humans are not advanced enough, conceptually, to understand or be understood by aliens.

Nor have humans—or many other sapient creatures—been able to successfully navigate the maze on Lemnos. Except Muller. It was built millions of years earlier by a supremely advanced race of aliens and seemed designed to challenge intelligent species (22–28). Muller notices that corpses of animals were automatically cleaned away by the invisible mechanisms of the city, but those of sapient species who failed to reach the center of the maze were allowed to remain for others to see. He interprets it as a warning: "Those skeletons were part of the psychological warfare waged against all intruders [ . . . ] ABANDON ALL HOPE, YE WHO ENTER HERE" (28). By being the first person to reach the center of the maze, Muller proved he was more intelligent than the other humans and various aliens who had attempted the puzzle and failed. The only explanation for his ability to navigate the maze is the operation the Hydrans performed on him: his "disability" enables him to survive where "normal" sapient species have failed.

Understanding the maze becomes a key feature to understanding all aliens, making the "disabled" Muller uniquely abled. This becomes clear when Muller

travels to meet the radio being. He flies over one of the planets the radio aliens have taken over and notes the layout of the cities:

The original settlements appeared on his screen in violet, and the recent extensions in red. Muller observed that about each of the colonies, regardless of its original ground plan, there had sprouted a network of angular streets and jagged avenues. Instinctively he recognized the geometries as alien. There sprang to mind the vivid memory of the maze; and though the patterns here bore no resemblance to those of the maze, they were alike in their lack of recognizable symmetries. He rejected the possibility that the labyrinth of Lemnos had been built long ago by direction of the radio beings. What he saw here was only the similarity of total difference. Aliens built in alien ways. (183)

Muller understands labyrinths and complexity. Order, ease, logic, and purpose are masks, shields to protect against real knowledge and understanding that cannot be expressed in words. His experience allows him to navigate the final maze within the radio being's own enormous spacecraft: "As though walking the maze he passed through corridors and hatches, across interlocking compartments, over bridges that spanned dark abysses, down sloping ramplike debouchments into lofty chambers whose ceilings were dimly visible. Here he moved in blind confidence, fearing nothing. He could barely see. He had no vision of the total structure of the satellite. He could scarcely imagine the purpose of these inner partitions" (185). The purpose of the partitions is to provide one last set of barriers, one last alien challenge to meeting with them on anything like equal terms. And when they meet, the alien drinks up all his emotions, endlessly, wordlessly. Muller "felt his soul escaping through his pores" (185). Communication is achieved and the alien allows Muller to leave. The fate of humanity is unclear, but the characters seem to assume they have been spared, for the moment, and that the radio aliens realize that humans are indeed sapient beings.

In accepting the nobility and ugliness of human nature, the insignificance of physical and superficial forms, and that aliens need to be approached on their own terms, without imposing human categories of understanding, Muller comes to accept his "disability" and embraces his disabled identity not as impairment but as self-actualization of a true and complete self, a very modern understanding of disability and identity (Murugami). This acceptance and identity redefines him as something beyond human. This is demonstrated when Muller appears "healed" of his emanations, as Rawlins confirms (187), but he rejects the idea of rejoining humanity and decides to return to Lemnos. He achieves the healing Philoctetes desired, but not the social reintegration. He says, "I'm fit to consort with humanity again [. . .] But is humanity fit to consort with me?" (187). Muller is beyond humanity and now feels comfortable only in the alien maze (188),

calling it “home” (187). By embracing what was perceived as his disability, he becomes not merely a “healed” human being, but something else altogether. Ned understands that Muller is no longer completely human (189).

Silverberg’s SF meditation on the nature of disability and humanity in *The Man in the Maze* not only radically refigures a classical Greek tragedy but calls into question new attitudes toward disability in the 1960s. In the midst of the disability rights movement that was itself part of the decade’s heady social movements for civil rights, women’s rights, and student rights (Percy), Silverberg posits a society where all disability is eliminated. He does not elaborate the point or extend it in a positive direction, for much of 1960s SF posits utopia masking dystopia, but in some ways he approaches, I believe, Susan Wendell’s vision of a future where disability is valued as difference:

What would it mean, then, in practice, to value disabilities as differences? It would certainly mean not assuming that every disability is a tragic loss or that everyone with a disability wants to be “cured.” It would mean seeking out and respecting the knowledge and perspectives of people with disabilities. It would mean being willing to learn about and respect ways of being and forms of consciousness that are unfamiliar. And it would mean giving up the myths of control and the quest for perfection of the human body. (84)

It is especially her extrapolation about “being willing to learn about and respect ways of being and forms of consciousness that are unfamiliar” that seems to align with the SF vision of Silverberg. Yet the world of *The Man in the Maze* has not achieved such enlightenment. Advances in medicine and science have only eliminated superficial disabilities. The forced association with aliens, “forms of consciousness that are unfamiliar,” reveals the essential flaw in human nature. For most of the novel, Muller and the other characters view his change as a sign of his personal impairment. Through his isolation in the alien maze, itself a sign of his extraordinary ableness, Muller realizes that the operation the Hydrans performed on him reveals the sickness of humanity itself. It takes a disabled hero to show that society is sick. When he embraces his essential humanity, ugliness and all, he is no longer viewed by others as disabled, but his new identity is no longer that of a human being. Disability itself is inalienably human.

### Note

1. Space does not allow further exploration of the relationship between Silverberg’s *The Man in the Maze* and other twentieth-century versions and adaptations of Sophocles’s *Philoctetes*. I intend to treat this topic in another essay. For general information, see Austin, Hall, Mandel, Taplin, and Wilson.



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## CHAPTER 11

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# “Everything Is Always Changing”

Autism, Normalcy, and Progress in  
Elizabeth Moon’s *The Speed of Dark*  
and Nancy Fulda’s “Movement”

*Christy Tidwell*

There are nearly as many definitions for science fiction as there are people writing about it, and consensus is hard to come by in the field; one common idea, however, is that science fiction (SF) is a literature of change. As such, SF looks to the future and emphasizes narratives of progress or, conversely, dystopian narratives of progress distorted or interrupted. Many well-known SF texts have focused on technological progress, from the beginnings of SF through the Golden Age, cyberpunk, and beyond. In the mid-twentieth century, the kinds of progress included in SF expanded to include social and cultural progress as well as technological advancements. Progress in SF texts is therefore marked not only in scientific advances but also in socio-political change. Some issues and inequalities remain unaddressed within SF, however; despite the passage of the Americans with Disabilities Act in 1991, ableism continues to be prevalent both in the real world and in the stories we tell about ourselves and our futures. Sarah Einstein argues in “The Future Imperfect” that “[t]here is too little SF written that envisions a fully accessible, universally designed future” and indicates a need for more consideration of disability in SF and a more thorough imagining of the future of physical difference. Outside SF, on the other hand, Ian Hacking has noted that within the last decade autism stories have flourished “when they were virtually nonexistent a quarter century ago” (632). Where, then, are the stories of disability (and autism in particular) in SF? How do these stories represent progress, both technological and sociocultural? What sorts of progress are privileged within SF stories about disability and autism? And how do these narratives of progress

function to either challenge or reinforce assumptions about normalcy and disability? Two recent SF narratives about autism—Elizabeth Moon’s *The Speed of Dark* (2003) and Nancy Fulda’s “Movement” (2011)—can help to answer these questions through their representations of autistic protagonists, engagement with the politics of the medical model, and reliance on the language of movement and progress.

Elizabeth Moon’s *The Speed of Dark* is notable for its intimate portrayal of autism in the central character of Lou Arrendale, an autistic man in his thirties. The book is set in a near future world where autism has been virtually eliminated, and Lou belongs to the last generation of adults who still have autism since “[r]eversing genetic autism in the infant or brain damage that resulted in autisticlike symptoms in the small child has now become common” (35). Lou exists between outdated and current treatments and “improvements in early intervention, in teaching methods, and in computer-assisted sensory integration exercises had given him the ability to find good employment, live independently, deal with the real world on near-equal terms” (52). Because of these social and medical changes, Lou has been able to adapt to the world around him and live a relatively happy and productive life, at least until he is faced with the possibility of an experimental procedure that might cure him of autism.

Nancy Fulda’s “Movement” is also set in the near future and features a protagonist, Hannah, who has been diagnosed with autism—in this case, a fictionalized version of autism called temporal autism. Temporal autism is described as a disorder affecting the experience of time that appears to be “the result of a recent mutation” (60) and that features “a disinclination for speech” (59). The central tension of the story, as in *The Speed of Dark*, is whether or not Hannah should try a new procedure that could potentially cure her autism, giving up her current abilities and joys for the possibility of different and more normal abilities and joys. Further complicating the issue is Hannah’s age; she is a teenager who lives at home with her parents, which means that the decision about the cure not only is her decision but reflects her parents’ desires as well.

Significantly, both texts are largely told through first person present-tense narrative, which gives the reader intimate experience with the disorder and helps create a fuller understanding of autism. Moon’s representation of Lou as authentically autistic, fully human, and easy to empathize with has led to widespread praise for *The Speed of Dark*. Reviewers have described the novel as “well-crafted, captivating,” and “awe-inspiring” (*Sci-Fi Weekly*) and, more specifically, call Moon’s portrayal of Lou Arrendale a “subtle, eerily nuanced character portrait” (*The Washington Post Book World*) that gets at “the core of autism” (Clara Park, author of *Exiting Nirvana: A Daughter’s Life with Autism*) and that is “spectacular—the reader, through Lou’s inner thoughts, will truly feel that he is a *real person* and not just a clever literary construct” (*Scifidimensions*).<sup>1</sup> In

addition to receiving largely positive reviews, *The Speed of Dark* was nominated for the 2003 Arthur C. Clarke Award and was awarded the 2003 Nebula Award for Best Novel. These responses from readers and reviewers illustrate the power and value of Moon’s engagement with autism, and I cannot but believe that Fulda’s similar presentation of Hannah in “Movement” has contributed to the positive response to her story and its current nomination for a Nebula Award.

Autistic people are often associated with aliens or compared to nonhuman characters like Spock from *Star Trek* or Data from *Star Trek: The Next Generation*. Temple Grandin, for instance, famously said to Oliver Sacks that “[m]uch of the time I feel like an anthropologist on Mars” (qtd. in Sacks 295).<sup>2</sup> This tendency to see autistic people as aliens, androids, or outsiders expresses the felt distance between autistic and nonautistic people and supports Deborah Barnbaum’s argument that “[a]utistic and non-autistic people are equally among—but not of—each other. Their ways of thinking are equally opaque to one another” (12); however, emphasizing this opacity and separation can have negative and dehumanizing consequences. The first person representation of both Lou and Hannah counters this opacity, giving the reader the opportunity to see the world through their eyes and create the kind of connection that is difficult in the real world.

An additional benefit of the first person present-tense narration is that, as Stuart Murray argues, one of the primary strengths of *Speed of Dark* is that it allows the reader to *listen* to Lou. This is important for readers’ understanding of the autistic experience, but Murray goes on to argue that there are broader consequences of listening as well: “We might care less about causes if we knew exactly what it means to live with autism. We might be less sweeping in our assumptions about cures if we had a sense of what the condition entails” (*Representing Autism* 211). Listening in this way helps to create empathy for people with autism rather than potentially misguided sympathy. Furthermore, placing the autistic voice front and center diminishes the fear of difference associated with autism. Murray writes that “we might *better* understand the links between autistic and non-autistic humanity if we approached the subject with less fear. To some degree, this book has shown that we try to banish this fear when we turn autism into narrative” (*Representing Autism* 211). Listening to autistic voices (even fictionalized ones) is therefore a politically charged act and is at least as important to challenging and changing attitudes toward autism and disability as the content of what is said.

Listening to the autistic person him or herself also counters the medical model of disability: “The dominant assessment methods of autism, concerning either research or diagnosis, have developed procedural structures whereby ‘results’ can be ascertained by using case study principles. The potential here to, in Ralph James Savarese’s words, ‘lose the person in the condition’ is all

too obvious” (Murray, “Autism Functions”). In *The Speed of Dark* and “Movement,” the case study is further challenged by the characters’ response to doctors. Although doctors’ voices are privileged in our culture and in such medical discourse, their voices are contradicted and outweighed by Lou and Hannah’s vivid descriptions of their experiences of autism. The immediacy of the present tense narration also brings the person to the forefront instead of the condition; readers are not only hearing Lou and Hannah’s voices but also being invited into a moment-by-moment experience of their lives. In this way, by using literary techniques and storytelling to give readers a *chance* to listen in this way, by as much as possible placing the reader in the autistic person’s mind, fiction is a valuable tool that allows the nonautistic reader to see the autistic mind more clearly and transparently.

Readers gain more than a firsthand look at the experience of autism in these texts, however; Moon and Fulda also incorporate significant challenges to several stereotypes about autism by providing readers with autistic protagonists who are intelligent, independent, able to relate to other people, living rich emotional lives, and struggling with questions of morality. Both Lou and Hannah correct the misperception that autism is a form of mental retardation. Even Lou’s psychiatrist believes that Lou is “actually nearly illiterate and barely verbal” and, Lou reports, “talks to me as if I were a rather stupid child” (2), but Lou demonstrates his intelligence repeatedly. The most significant illustration is in his ability to teach himself advanced neurobiology. He says, “I was almost sure I would not be able to figure out what the books said. But it is actually easy. I think I could have completed a college degree in this if I had tried. All my advisors and counselors told me to go into applied mathematics, so I did. They told me what I was capable of, and I believed them. They did not think I had the kind of brain that could do real scientific work. Maybe they were wrong” (165). It appears that they, no matter how well-intentioned they may have been, *were* wrong. Lou is highly intelligent, able to learn if given the chance. Fulda’s Hannah is even more easily misunderstood. Because of her very different experience of the way time passes, Hannah often does not respond immediately or at all to questions. When asked a question at one point, she thinks, “Neither yes nor no seems appropriate, so I do not say anything. Words are such fleeting, indefinite things. They slip through the spaces between my thoughts and are lost” (59). Her family members and her doctor do not understand this, though, and assume that her silence reflects her abilities: “They do not know I am listening. They think that, because I do not choose to respond, I do not notice they are there” (58). Readers can easily see Hannah’s intelligence in her complex ideas, but others, those not privy to her thought processes, cannot. Hannah therefore confirms that “an autistic person who is unable to speak does not necessarily have nothing to say” (Bauman xiv) and calls into question definitions of

intelligence that cannot account for “a child who struggles to do up her shirt buttons, or use pronouns correctly, yet can describe or illustrate vivid emotional or cognitive states” (Murray, “Autism Functions”).

Lou in particular also addresses the issue of autistic self-sufficiency or functionality. As Crenshaw, Lou’s boss, demonstrates, most people believe that autistic people “don’t have what it takes” and “don’t understand the first thing about how society works” (13). Statistics seem to bear this out, showing that “only 12 percent of those with high-functioning autism or Asperger’s syndrome had full-time jobs” whereas “49 percent of people with other disabilities and 81 percent of people who are not disabled were in employment in 2003” (Tammet 147). However, Lou is productive and highly functional: “It is hard to explain what I do, but I know it is valuable work, because they pay me enough to afford the car, the apartment, and they supply the gym and the quarterly visits to Dr. Fornum. Basically I look for patterns” (6). Moon’s presentation of Lou as a functioning autistic man both defends against the idea that autistic people are helpless and unable to live full lives of their own and also, at least briefly, questions the idea of function as the central issue.

At the same time, however, this focus on functionality is problematic. Stuart Murray argues that allowing “the quality of life debate [to] become enveloped in the language of function clearly limits the possibilities of allowing those with autism meaningful expression or agency” by boiling the potentiality of autistic people down to “what are clearly utilitarian processes” (“Autism Functions”). Focusing on functionality also elides the various dependencies of nondisabled people, too. Mukhopadhyay writes, “Who is truly independent in this world? A farmer who grows food is dependent on a baker, a barber, a doctor, and so on. A doctor is dependent on other people of different professions in order to survive. I am dependent and will be dependent on certain caregivers and therapists. Those caregivers and therapists need people like me to earn their bread and butter and draw their salaries. So no one is doing any favors when choosing whatever his means of livelihood is” (215–16). Despite reinforcing this emphasis on functionality in some ways, Moon also questions the idea of function by refusing to define Lou solely as a worker. One of his friends tells him, “one thing nobody can do better than you is be *you* [ . . . ] you’re a person—an individual like no one else. That’s what’s good, whether you have a job or not” (150). This statement of his inherent goodness is an important message.

Moon and Fulda also challenge the idea of autism as the inability to develop relationships with others. For example, Stephen Dougherty argues that Lou’s fencing shows “how Lou [ . . . ] learns a sense of emotional *engagement* through fencing” (41–42). Lou also develops a meaningful relationship with Marjory, one of the other members of his fencing group. Although his psychiatrist “doesn’t expect [him] to have [a sex life]” (4), and even strangers remark on the

oddity or difficulty of his becoming romantically involved with anyone, Lou does have romantic feelings for Marjory. These feelings appear to be at least somewhat reciprocal as well, which, even though it is never acted on, counters assumptions about autistic people's relational abilities as well as the perception that people with disabilities are asexual and/or undesirable.

Bringing together issues of intelligence, functionality, and the ability to relate to others is the theory of mind, in which autism is thought to be primarily defined by the autistic person's inability to imagine what others think and feel. Lou, however, defies this over and over again. He says, "I do not think everyone else is alike in every way. She has told me that Everyone knows this and Everyone does that, but I am not blind, just autistic, and I know that they know and do different things" (3). And although he has trouble understanding why Don, a member of his fencing group, would want to hurt him and continues to believe that Don is a friend long after the reader has determined that he is dangerous, Lou shows an understanding of his autistic coworker Cameron's needs that many "normal" people might not—"I can almost feel the tangle of words filling [Cameron's] throat, making it impossible for him to speak. I know better than to speak for him. I speak only for myself, which is how everyone should speak" (11)—and is also able to extrapolate from Emmy's behavior and words what she thinks, saying, "I can tell she thinks this is what I think and that she thinks I am wrong, that Marjory is not in love with me. I am unhappy that Emmy thinks these things but happy that I can understand all that in what she says and how she says it. Years ago I would not have understood" (71). Experiments regarding theory of mind have shown that many autistic children are unable to successfully speculate on others' thoughts, but Lou's ability to do so raises important questions about whether those autistic children might be able to learn theory of mind. Placed in the context of the treatment Lou benefited from as a child and his comment that "[y]ears ago I would not have understood," this makes a strong argument that autism is not a static state and that acknowledging this possibility of change opens up significant possibilities for learning and development.

Because the lack of theory of mind is also at the root of some theorists' arguments that autistic people are not fully human, Lou's capacity here has important consequences. Martha C. Nussbaum argues that without certain "central human capabilities"—life; bodily health; bodily integrity; senses, imagination, and thought; emotions; practical reason; affiliation with other human beings; relation to other species and to nature; humor and play; and control over one's environment (Nussbaum 76–78)—human life is significantly diminished in quality. Nussbaum argues that these capabilities outline the responsibilities society has to its citizens, stating that "a society that does not guarantee these to all its citizens, at some appropriate threshold level, falls short of being a fully just

society” (75), but this list of capabilities also raises questions about how we as a culture respond to those who fall short of these essential human qualities. In response to Nussbaum’s ideas, Deborah Barnbaum asks, “[W]hat is the threshold at which a life is so impoverished that it fails to be a human life, and what is the threshold at which a life is a human life, but not a good human life?” (81). Furthermore, she writes, “With limited empathy, ability to mentalize, or theory of mind, can the person with autism possess the sense of affiliation that Nussbaum requires?” (82). In other words, is the person with autism human?

Moon and Fulda counter this dehumanization by portraying Lou and Hannah as flourishing and capable of making moral judgments. They do this first by including vivid descriptions from Lou and Hannah of their joys and pleasures. Lou says, “What I have in my head is light and dark and gravity and space and swords and groceries and colors and numbers and people and patterns so beautiful I get shivers all over. I still do not know why I have those patterns and not others” (224). His head—and therefore his interior life—is full and rewarding. At another point, Lou wonders, “If I had not been what I am, what would I have been? [ . . . ] Would the great complicated constructions of classical music have been so obvious to me at first hearing? I remember the first time I heard Bach’s *Tocatta and Fugue in D Minor* [ . . . ] the intensity of joy I felt. Would I have been able to do the work I do? And what other work might I have been able to do?” (151). This joy is surely a component of a flourishing human life, and, significantly, he attributes the quality of joy he has experienced to his autism. And Hannah, in “Movement,” describes the joy and beauty she finds in dance:

Mine is an endangered species in the performance hierarchy; a neoclassical variant that no one remembers, no one pays to watch, and only a few small groups of dancers ever mimic. It is solitary, beautiful, and doomed to destruction. I love it because its fate is certain. Time has no more hold on it.

When my muscles lose their strength I will relinquish the illusion of control and return to being yet another particle in the rushing chaos of the universe, a spectator to my own existence. But for now I am aware of nothing except my own movement and the energy rushing through my blood vessels. Were it not for physical limitations, I would keep dancing forever. (61)

Hannah’s experience of joy and beauty is also linked to her autism, analogous to and enhanced by it if not entirely caused by it.

Hannah and Lou’s descriptions of beauty and joy echo those in the writing of Temple Grandin and Tito Rajarshi Mukhopadhyay, both autistic memoirists. In *Thinking in Pictures*, Grandin writes of her visual abilities and acknowledges the fulfillment they provide her by saying, “I would never want to become so



normal that I would lose those [pictorial] skills” (180). And Mukhopadhyay vividly describes his synesthetic experiences of the world, writing,

I would sit on the swing with a head full of scientific concepts and ears filled with the sound of the wind. My heart would be filled with happiness as it expanded or contracted, perhaps to the rhythm of the swing.

What exactly did I perceive while I sat on the swing? I perceived happiness in the colors of the wind. (104)

Later, he writes, “When I realize my ability to interact with the shadows around me or the world of stories that appear to be forming behind a mirror, unbound by the laws of the physical world, when a little girl’s giggles color the walls and ceilings with rainbow foam when she is amused by my echolalia because I am a mirror to her words, I feel blessed for being what I am” (217). These are pleasures, like Lou’s joy in a particular kind of music, that grow out of their differently functioning brains, but the fact that these joys differ from those of nonautistic people does not invalidate them. In her “call for autistic integrity,” Barnbaum argues for the value of these “distinct personalities, preferences, and pleasures” (11), saying that it is a “mistaken assumption that the person with autism was not receiving pleasure from the items on his own list, such as bus schedules, prime numbers, or antique watches [ . . . ] To hastily conclude that any person would welcome a new set of items on his objective list, and eschew those items that have long given him pleasure, is to fail to recognize that individual as an individual” (198). Invoking pleasure as part of an autistic life can enrich nonautistic perceptions of autism as well as support a “call for autistic integrity.”

Moon and Fulda also recognize that at least some autistic people can behave as moral actors and can therefore be considered as members of society and complete human beings. Lou very clearly shows his ability to recognize immoral or unethical behavior. He is able to tell, for instance, when his supervisor at work, Mr. Aldrin, is lying to him and is also able to make an ethical judgment of that behavior: “The book said autistic persons are gullible and easily fooled because they do not understand the nuances of communication. I do not think lying is a nuance. I think lying is wrong” (135). Hannah also shows an understanding of moral behavior and a concern with whether actions are right or wrong. About being faced with the possibility of a cure, she says, “I am too young. It is not fair to ask me to make such a decision. It is also not fair if someone else makes it for me” (60). This complaint could only come from one who has a sense of right and wrong, fair and unfair, and it illustrates that even if Hannah isn’t sure what the right thing is, she is capable of considering moral issues and concerns.

Moon and Fulda not only challenge preconceptions of autism and disability, however, but also destabilize and decenter normalcy. One way in which this is achieved is through the autistic characters’ observations of the similarities between autistic and nonautistic, normal and abnormal, behaviors. Lou notes many ways in which “normal” people evince autistic behaviors, for instance. He observes that judgments of behaviors vary: “If [my psychiatrist] notices that I’m moving my head back and forth she makes a note in my record. She may even interrupt her phone call to tell me to stop. It is called stereotypy when I do it and relaxing her neck when she does it. I call it fun, watching the reflected light blink off and on” (3). He also notes Marjory’s hand movements: “She uses her hands a lot when she talks. A couple of times, she flaps them in the way that I was told is a sign of autism. I have seen other people do that, too, and always wondered if they were autistic or partly autistic” (244). If these behaviors are sometimes normal and sometimes not, Lou discovers, normal and autistic are not as separate as he had been taught to believe. However, noting this connection is recognized as a threat because of the cultural pressure to draw sharp lines between normal and abnormal. As Lou notes, “All babies are born autistic, one of our group said once. We laughed nervously. We agreed, but it was dangerous to say so” (39).

Moon, via Lou, grows ever more critical of this boundary-marking pressure. After Don attacks Lou, he is sentenced to have a chip placed in his brain to help control his negative desires and behavior, which prompts Lou to reconsider his own normalcy. He asks, “If I can seem normal without a chip and Don needs a chip, does that mean I am normal, more normal than he is?” (281). This emphasis on seeming normal shows that normalcy is, at least in part, performative. Lou can “seem normal” and thus he *is* normal—or he could be if he had not already been labeled autistic, if the label had not already been “stuck to [him] with professional glue [he] can’t pry off” (39). This label says that Lou is abnormal even though, as he discovers in his research on the human brain, his brain does exactly what it is supposed to do:

It is on the last page of that chapter that I find a sentence so overwhelming that I have to stop and stare at it: “Essentially, physiological functions aside, the human brain exists to analyze and generate patterns.”

My breath catches in my chest; I feel cold, then hot. That is what I do. If that is the essential function of the human brain, then I am not a freak, but normal. (175)

Lou is abnormal because he flaps his hands or rolls his neck, but he is normal because his brain, as the textbook says it should, “exists to analyze and generate patterns.” Normalcy, then, is culturally defined and has constantly shifting boundaries.

Both Lou and Hannah are also critical of nonautistic people's lack of understanding. *The Speed of Dark* begins, in fact, with Lou wondering at the ignorance of others—"What I haven't figured out yet is the range of things *they* don't understand. The normals. The reals. The ones who have the degrees and sit behind the desks in comfortable chairs" (1)—and making it clear that normal people do not have all the answers. In the following passage, their failures of observation are made even more vivid: "When I first went to get my state ID card, the form asked for eye color. I tried to write in all the colors in my own eyes, but the blank space wasn't big enough. They told me to put 'brown.' I put 'brown,' but that is not the only color in my eyes. It is just the color that people see because they do not really look at other people's eyes" (70). This reframing of the situation emphasizes what others refuse to see; this is worse than a missed opportunity and represents broader habits of mind that dismiss some kinds of information as worthless. Similarly, Hannah says about her mother, "She loves me, but she does not understand me. She thinks I cannot be happy unless I am smiling and laughing and running along the beach with other teenagers" (58). Despite seeing Hannah choose activities that she enjoys, her mother insists on believing that happiness lies in "smiling and laughing and running along the beach with other teenagers," which relies on a refusal to see and accept what her daughter shows her. This kind of lack of understanding can be harmful if pursued.

Even more significantly than asking readers to redefine normalcy, Moon and Fulda also ask readers to *reevaluate* normalcy. After watching his supervisor kowtow to a higher-up, Lou wonders, "Are normal people afraid of other people like that? And if so, what is the benefit of being normal?" (116). One of the major drawbacks to being autistic in this world is the fear of being misunderstood, disliked, or mistreated, but if nonautistic people also feel that fear, then normalcy may not actually be that much better than autism after all. Also, Lou's description of the way he sees the world and what he pays attention to challenges the idea that the differences between his perceptions and normal perceptions are deficits: "I remember things like what percentage of cars in the parking lot are blue because I pay attention to color and number more than most people. They don't notice, so they don't care. I wonder what they do notice when they look at a parking lot. What else is there to see besides the rows of vehicles, so many blue and so many tan and so many red? What am I missing, as they miss seeing the beautiful numeric relationships?" (222). This redresses the habit of representing autistic people "in terms of what they *can't do* (empathize) rather than in terms of what they *can do* (systematize)" (Armstrong 59). Moon also reevaluates normalcy by creating villains who are outwardly normal. Crenshaw, who attempts to force the autistic employees into the research program, says at one point about his autistic employees, "I can't imagine anyone *wanting* to be like

that" (16). Although no one, whether autistic or not, seems to like him or think he is a good person, everyone acknowledges that he is normal. Similarly, Don, who stalks and attempts to murder Lou, is perceived as normal for most of the book. Just before attacking Lou, he says, "You're a *freak*, Lou—you understand what I'm saying? You're a freak and you belong in a zoo" (212). Don is, in the end, perhaps not entirely stable, but until he almost kills Lou he is given all the rights and privileges accorded normalcy. This association between villainy and normalcy is striking; there are differences of opinion and personality within the disabled community, but there are no villains there.

Fulda takes this revaluation of normalcy even further. Instead of seeking out connections between normalcy and autism, Hannah focuses almost entirely on the limitations of normalcy and the value of difference. In one example of this, she describes her grandparents' perception of her brother's use of the Vastness (a more immersive form of the Internet, it seems). While connected, his body appears to have been abandoned and their grandparents do not understand: "They do not know that the drool pools at his cheek because it is hard to perceive the faint messages from the body when the mind is ablaze with stimuli. They see the slackness of his face, the glassy eyes staring upward, and they know only that he is far away from us, gone somewhere they cannot follow, and that they think must be evil" (62). Hannah does not accept their judgment of him, however. She says, "Their frustration mystifies me. I do not understand why old people expect the younger generations to hold still, why they think, in a world so full of tumult, children should play the same games their grandparents did" (62). Hannah argues that their judgment is a regressive denial of the positive possibilities of change: "[H]e is using a higher percentage of his neural tissue than anyone born a hundred years ago could conceive of" (62).

These challenges to stereotypes and revaluations of normalcy offer some answer to Sarah Einstein's concern regarding the scarcity of disability stories in SF. Aside from the positive effects of both authors' challenges to stereotypes about autism and normalcy, though, the big issue is the cure. Will Lou and Hannah choose to be cured or to remain the way they are? Moon and Fulda resolve this question in very different ways, and these differing resolutions highlight the strengths and limitations of SF in dealing with issues of disability.

One strength of both texts is their active consideration of the benefits and limitations of a cure. Lou asks, "[W]hat would it be like to not be worried that people think I'm crazy when I stutter or when I can't answer at all and have to write on my little pad? What would it be like to not carry that card in my pocket? To be able to see and hear everywhere? To know what people are thinking just by looking at their faces?" (37). He also acknowledges the emotional pain of being different: "Supposedly autistic persons do not care what others think of them, but this is not true. I do care, and it hurts when people do not

like me because I am autistic” (282). Being cured and made normal would eliminate this pain as well as offer more concrete benefits. As another autistic person considering the cure says, “If I’m normal, I will never have to go to a psychiatrist again [ . . . ] I can marry without a certificate of stability. Have children” (260). However, Lou also considers the ramifications of undergoing an experimental procedure that could significantly change who he is. He asks, “Do I have to choose between this work I know how to do, this work I’m good at, and being normal?” (37). Furthermore, many discussions of the cure include strong statements that deny its necessity (e.g., “I do not think I need to be healed, not of autism. Other people want me to be healed, not me myself” [273]). Ultimately, Lou cannot escape the fact that “Every difference is a difference” (246). For better or worse, there will always be consequences.

In “Movement,” Hannah’s thought process is reflected through analogy rather than directly. Her discussion of her shoes reflects her skepticism about the cure: “Other people do not see the shoes the same way I do. They see only the faded satin, battered so much that it has grown threadbare, and the rough wood of the toe box where it juts through the gaps. They do not see how the worn leather has matched itself to the shape of my foot. They do not know what it is like to dance in shoes that feel like a part of your body” (60–61). This description emphasizes the value that may not be obvious to others. With her shoes, as with her life as an autistic person, outsiders may not see the value, but Hannah does. Her eventual decision also grows out of her doubt about the technologies that her father, who is the primary advocate for the cure, holds so dear:

I hear the *zzzap* of father’s shoulder laser. Because I have not heard the whine of a mosquito, I know that it has targeted a speck of dust. This does not surprise me. In the years since father bought the laser the mosquitoes have changed, but the dust is the same as it was millennia ago.

A moment later I hear Mother swear and swat at her shirt. The mosquito whizzes past my ear as it escapes. I have been keeping track of the statistics over the years. Mother’s traditional approach to mosquitoes is no more effective than Father’s hi-tech solution. (62)

Why should she risk her life and its current joys when the technology is also unlikely to work?

Ultimately, Hannah’s decision is determined by the unseen but very real value she finds in her life, and she rejects what Barnbaum calls “the threat of being cured” (11). “I do not want new shoes” (63), she says, meaning, “I do not want the cure.”

It is at this point that the two texts diverge. In *The Speed of Darkness*, Lou chooses the cure. As a result, he must go through long rehabilitation, but he

is also given a life-extending treatment that allows him to essentially restart his life and achieve his childhood dream of being an astronaut. As Lou says, “I had to choose, and—like Lou-before—I chose to go on, to risk success, to find new friends, to be who I am now” (340). He chooses the risk, “letting go of the comfortable gravity, flying up out of that certainty into the uncertainty of free fall” (300), and the cure is presented as a triumph of Lou’s individual choice and of his potential.

Despite this positive representation, the book’s ending has been criticized by many readers. One reader, TJ from the blog *Book Love Affair*, describes his response to the end of the book: “The ending was like a blow. Had it been bittersweet or tragic by working with the meaning and life Moon had given Lou, I could understand; however, it almost feels like it’s all been a lie” (qtd. in Ottinger). Murray argues, for instance, “If ‘Lou-before’ is the character we have come to identify with throughout the novel, it is ‘Lou-after’ that we end with and, for all his clear happiness and accomplishments, it is impossible not to feel troubled by a story which has, in effect, removed a central figure precisely at the point he most engages our sympathy” (*Representing Autism* 210–11). This sense of the ending as a betrayal of Moon’s earlier stance is not uncommon.

In the end, Moon turns away from her critique of society’s limitations by allowing Lou to do what he wants and achieve his goals only by choosing to change himself; in this view, society needs not change as long as disabled individuals are prepared to change. Although Moon begins her book by dedicating it to her autistic son, her husband and “other parents of autistic children, in the hope that they also find that delight in difference,” and although there are many questions raised regarding the benefits of the cure throughout the book, the progression of the book’s plot from disease to cure undermines this emphasis on “delight in difference,” instead privileging normalcy and, despite its technological progressivism, developing a fairly conservative definition of human limits and possibilities. Thus the novel provides a technological vision of progress that is somewhat troubling.

“Movement,” on the other hand, develops a model of progress that is not built on technological advancement but on an increased understanding of autism and a focus on species change rather than individual change. Fulda eschews the drive toward healing, instead emphasizing the unique abilities and talents accompanying the protagonist’s autism. The protagonist, Hannah, sees herself not as broken but as evolving and progressing in her own way: “Everything changes. Everything is always changing [ . . . ] It should not be surprising that, on the journey from what we are to what we are becoming, there should be friction and false starts along the way. Noise is intrinsic to change. Progression is inherently chaotic” (63). Fulda’s version of progress, therefore, challenges normative definitions of human ability and emphasizes acceptance and even

celebration of difference. Hannah's observation of a flytrap illustrates this. She notices a "domestic variety gone wild" (59) that is beginning to change: "One flytrap, in particular, catches my attention. It has a magnificent blossom, larger and more colorful than any I have seen before, but the ordinary stem is too spindly to support this innovation. The blossom lies crushed against the sidewalk, overshadowed by the smaller, sturdier plants that crowd above it" (60). This vision of the flytrap as changing so dramatically and having "outgrown [its] own name" (60) reflects Hannah's experience, too, and argues for the value of evolutionary change. Hannah describes this as "a critical juncture in the evolutionary chain," saying "I want the flytrap to survive, but I can tell from the sickly color of its leaves that this is unlikely. I wonder, if the plant had been offered the certainty of mediocrity rather than the chance of greatness, would it have accepted?" (60). The flytrap is not expected to change itself to fit into larger expectations of flytraps; why, then, should Hannah change herself? There is some doubt about the fate of the individual flytrap ("It is too early to tell whether it will survive the day" [63]), but on the whole, Hannah's choice to remain autistic and reject the cure is treated positively.

Finally, as their titles indicate, both *The Speed of Dark* and "Movement" revolve around motion, change, and progress; however, they also indicate that they deal with these concepts quite differently. *The Speed of Dark* implies a linear trajectory, a measurable speed, while "Movement" leaves much more room available for chaos and nonlinear ways of thinking and being. Lou comments on the necessity and inexorability of change, noting, "I am changing already. A few months ago, I did not know that I loved Marjory. I did not know that I could fence in a tournament with strangers. I did not know that I could learn biology and chemistry the way I have been. I did not know I could change this much" (175–76). He also acknowledges the chaos of the world, saying, "[N]o matter how predictable I try to make my life, it will not be any more predictable than the rest of the world. Which is chaotic" (263). This acknowledgment, however, unlike Hannah's similar acceptance of chaos, leads to his attempt to control the chaos by taking a decisive action, saying, "I cannot not change. This is just [ . . . ] faster change. But I choose it" (305). When he does decide to embrace this change, Lou describes himself as "never com[ing] to the end, chasing the light" (340) and being "the first light touching a gulf of ignorance" (224). This emphasis on teleology makes movement and speed measurable and therefore limited.

Fulda's imagery consistently disrupts this teleological impulse, however, by emphasizing flow, transformation, and evolution and by valuing slowness over speed. Hannah's feeling for glass illustrates these ideas: "I have pressed my hand to the window. The glass feels cold and smooth beneath my palm. It appears motionless although I know at the molecular level it is flowing. Its

atoms slide past each other slowly, so slowly; a transformation no less inevitable for its tempo. I like glass—also stone—because it does not change very quickly. I will be dead, and so will all of my relatives and their descendants, before the deformations will be visible without a microscope" (59). This slow change has no particular goal, no right answer. Similarly, while dancing, Hannah describes the way "[t]ime stretches and spins like molasses, pulling me in all directions at once" (61). Again, Hannah values slowness and diffusion, which allows her to imagine a kind of progress for herself that is not based on a cure but on acceptance. Her decision not to try the cure is also built on this slow, evolutionary movement:

I am evolving, too, in my own small way. Connections within my brain are forming, surviving, and perishing, and with each choice I make I alter the genotype of my soul. This is the thing, I think, that my parents most fail to see. I am not static, no more than the large glass window that lights the breakfast table. Day by day I am learning to mold myself to a world that does not welcome me [ . . . ] I do not want to live small. I do not want to be like everyone else, ignorant of the great rush of time, trapped in frantic racing sentences. I want something else, something that I cannot find a word for. (63)

The evocation of evolution here is a reminder of the argument on behalf of the flytrap and its potential for species change as well as a reminder that she too can change, but on her own terms. The world, after all, "does not welcome [her]" (63) and so her choice allows her to live on her time and in her own way. Despite the fact that Moon ends with the image of Lou exploring the far reaches of space, Fulda actually provides an exploratory image of progress that is more akin to sociopolitical change (which is not always neatly organized).

The presence of these contradictory models of progress alongside vivid representations of disability and descriptions of stereotypes about autism reveal SF to be a promising but complicated site for explorations of disability. But as readers, do we, with Elizabeth Moon, imagine medical and technological progress toward a cure? If so, what are the results of these imaginings? Or do we, with Nancy Fulda, imagine evolutionary possibilities that would change not the individual but the species? Given these possibilities and their consequences, attention must be paid to how easily we apply narratives of progress to those of disability. Paul Collins writes that "[a]utists are the ultimate square pegs, and the problem with pounding a square peg into a round hole is not that the hammering is hard work. It's that you are destroying the peg" (225). Perhaps, then, the progress to be considered is not simply technological but social, in which the emphasis is not on normalizing the disabled but on making room for disability and difference within the culture.



## Notes

1. All reviews quoted are included as praise on or within the paperback edition of the novel.
2. This is quite widespread. Jim Sinclair describes autism as “being alien” and himself as “like an extraterrestrial stranded without an orientation manual.” Other examples of the association include *Women from Another Planet? Our Lives in the Universe of Autism* by Jean Kearns Miller, *Through the Eyes of Aliens: A Book about Autistic People* by Jasmine Lee O’Neill, *Homesick Alien and Other Reflections* by Sean Mangum, *Martian in the Playground: Understanding the Schoolchild with Asperger’s Syndrome* by Claire Sainsbury, and “Sex as ‘Spock’: Autism, Sexuality, and Autobiographical Narrative” by Rachael Groner. The connection recurs in books for children as well, as in *Jay Grows an Alien* by Caroline Levine and *Of Mice and Aliens* by Kathy Hoopmann.

## CHAPTER 12

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# Life without Hope? Huntington's Disease and Genetic Futurity

*Gerry Canavan*

Early in Andrew Niccol's 1997 science fiction film *Gattaca*, we witness the first moments of the life of Vincent Freeman (played as an adult by Ethan Hawke), beginning with his conception in the backseat of a Buick Riviera. "They used to say that a child conceived in love has a greater chance of happiness," Hawke's voiceover bitterly reflects. "They don't say that any more." In the near-future world of *Gattaca*, advances in genetic engineering have led to world of perfected designer babies, each one carefully calibrated to remove hereditary disease and maximize personal potential. Vincent's mother, in contrast to this now-common practice, "placed her faith in God's hands, rather than those of her local geneticist," and the result is a genetic profile prophesying a too-brief lifetime filled with suffering and hardship. Mere seconds after the birth, an analysis of Vincent's unaltered genome generates the list of maladies to which he has been doomed: "Neurological condition: 60 percent probability. Manic Depression: 42 percent probability. Attention Deficit Disorder: 89 percent probability. Heart Disorder: 99 percent probability. Early fatal potential. Life expectancy: 30.2 years."

As Everett Hamner has noted, this kind of ultradeterministic discourse around genomic science frequently shifts into a religious register, one that can be "traced to a sense of predestination found as far back as Genesis" (415). Such totalizing claims for the possibilities of genetic knowledge are significantly at odds with what actual genomic science tells us about the complex interplay of heredity and environment: "In the more recent incarnations, biology popularizers and sometimes overzealous scientists themselves speculate about 'the homosexuality gene,' 'the God gene,' or 'the happiness gene,' as if an element of

individual character as complex as sexual orientation, faith, or emotional disposition could be decided by a single microscopic on/off switch” (415).<sup>1</sup> *Gattaca*, for Hamner, is an especially exemplary expression of this scientifically inaccurate vision of genetic determinism; despite the film’s nominal critique of determinism at the level of plot, Hamner writes, “the [birth] scene so effectively encapsulates the determinism involved in many portrayals of genomics that viewers may lose sight of the critique. The more we learn about genes, the more absurd is this test’s disregard for environmental factors and individual will, but its instantaneous empiricism is nevertheless regularly transferred to the actual science” (420). In the popular imagination, the total genetic knowledge promised by the beginning of *Gattaca* is seen to be in some basic sense “realistic,” despite the fact that neither genes nor our diagnostic access to them function this way outside the world of fiction.

The actual limitations of genetic science, it seems, do little to detract from the intoxicating fantasy that our futures are encoded in our genes—and that this future might, through the application of science, be directly knowable in the here and now, today. Priscilla Wald has characterized *Gattaca*-style determinism through the grammatical perspective of the “future perfect” tense. The “biological determinism” associated with genetics, Wald writes, suggests a “preordained” future that is simultaneously still to come and already in the past: “[W]hat is inscribed in the genes was, is, and always will be” (698). As Wald argues, this exaggerative popular misunderstanding of genomic science “register[s] a response to changes in how science and popular culture imagine the nature of human being” (698), in which an erstwhile conception of radical “free will” has been increasingly crowded out by a biologism that sees the human (on the levels of both individual subjectivity and species-time) recharacterized as the epiphenomenal expression of an incomprehensibly long process of genetic exchange on a planetary scale.

As we adjust to this new, genomic interpretation of the human species, which threatens to reduce the entirety of human history to an infinite series of chance genetic recombinations, Wald suggests one way we might recover the possibility of human agency is through the positing of genetic engineering (698–99). In the very same moment that genomics seems to radically delimit human agency through reductionistic narratives of genetic determinism, then, it simultaneously reopens a new horizon for human agency through the possibility that we might rewrite the otherwise immutable laws of heredity through direct and deliberate intervention. In this reading genomic science as a whole becomes a version of Derrida’s famous *pharmakon*: that which kills (our sense of the free human subject) is paradoxically that which cures (by restoring to us the possibility of hope and self-creation; “Plato’s Pharmacy” 75).

This chapter explores this dialectic between pessimism/constraint and optimism/agency in science fictional treatments of a particular category of genetic information: single-gene disorders like Tay-Sachs, sickle cell anemia, and cystic fibrosis. Single-gene disorders defy attempts like Hamner's to nuance or qualify the rhetoric of genetic determinism—in sharp contradistinction to the complex interactivity of most genetic traits, here the possession of “a single microscopic on/off switch” turns out to be determinative after all. Indeed, in the case of the particular genetic disorder on which I will focus—the autosomal dominant disorder Huntington's disease—the *Gattaca* fantasy turns out to be quite literally true: a simple blood test, taken at or even before birth, can not only identify those who will inevitably fall sick from Huntington's but describe with startling accuracy the circumstances of their lifelong decline, including the likely age of emergence of symptoms, the progression of symptoms, and their anticipated life expectancy.

Huntington's disease, this is to say, registers a remarkable intersection between “science fiction” and “real life” that emerges out of genomic science—a point where possibilities that seem quite science fictional, even utterly fantastic, turn out to be dizzyingly real. Here, however, the relationship between disease and cure becomes quite complicated. Not only does the possession of the Huntington's gene condemn the carrier to developing the disease; the genetic relationship also seems to completely foreclose any techno-optimistic possibility of “cure.” Intervention is not imagined to be possible; the possessor of the gene is instead imagined to be simply doomed. Even in science fiction, a “cure” for Huntington's is generally imagined only prophylactically, in negative, in the form of eugenic interventions before conception—a cure that, from the perspective of the Huntington's carrier, is tantamount to the sad wish that they had never been born at all. The Huntington's carrier is imagined, we might say, to be in some basic way indistinguishable from their genetic profile; rather than producing the possibility of a scientific intervention that might cure a debilitating disease, these genetic narratives instead collapse any interpretive distance between the person and their genetic makeup. In the chapter that follows I trace the narrative treatment of Huntington's disease in several works across the science fiction and mainstream literary canons: Ian McEwan's *Saturday* (2005), Kurt Vonnegut's *Galápagos* (1986), Robert Sawyer's *Frameshift* (1997), and Octavia Butler's *Xenogenesis* novels (1987–89) and short story “The Evening and the Morning and the Night” (1987). My interest in these texts is in unpacking the assumptions about the value of human life that emerge in the face of a prospective genetic disability like Huntington's disease; through them I seek to understand the status of “hope” for lives that seem, from genomic perspectives both within and without, to have been rendered entirely hopeless.

### CAGCAGCAGCAGCAGCAG . . . : *Saturday*

Although descriptions of Huntington's sufferers long predate the nineteenth century, the first clinical description of the pathology of the disease came in 1872 from the doctor whose name the condition now bears, George Huntington.<sup>2</sup> Huntington was the first to recognize and categorize Huntington's as an inherited disorder; in an 1872 paper titled "On Chorea" delivered to the Meigs and Mason Academy of Medicine (when Huntington was just 21), he describes the condition in hushed terms that will still resonate with potential sufferers today:

The hereditary chorea, as I shall call it, is confined to certain and fortunately a few families, and has been transmitted to them, an heirloom from generations away back in the dim past. It is spoken of by those in whose veins the seeds of the disease are known to exist, with a kind of horror, and not at all alluded to except through dire necessity, when it is mentioned as "that disorder." It is attended generally by all the symptoms of common chorea, only in an aggravated degree, hardly ever manifesting itself until adult or middle life, and then coming on gradually but surely, increasing by degrees, and often occupying years in its development, until the hapless sufferer is but a quivering wreck of his former self. (Huntington)

Huntington's longitudinal study of families afflicted by the disorder in the East Hampton region of New York—using case history notes originally gathered by his father and grandfather—revealed that the disease bore an unusually strict relationship to heredity: "Unstable and whimsical as the disease may be in other respects, in this it is firm, it never skips a generation to again manifest itself in another; once having yielded its claims, it never regains them" (Huntington). The remainder of Huntington's paper catalogues the various symptoms associated with Huntington's disease, among them dementia, impulsivity, irrationality, emotional instability, suicide, severe weight loss, and the involuntary bodily movements (*chorea*, from the Greek for "dance") that gave the disorder its original name, *Huntington's chorea*.

The discovery of the gene for Huntington's disease in 1993 began to provide the start of an etiology for the disease. The Huntington's gene is located on chromosome four, in a region alternatively labeled HTT, HD, or IT15 (for "interesting transcription 15"). All humans carry two copies of this gene, one inherited from each parent; the gene codes for a protein labeled *huntingtin*, which is needed in neonatal brain development (though its function in adult life, if any, remains unclear). Each copy of one region of the gene contains some number of repeats of cytosine-adenine-guanine (CAG)—what differentiates the healthy HTT from the mutant Huntington's version is the number. A person

with under 28 CAG repeats is normal and will never develop Huntington's disease; a person with more than 40 repeats will definitely develop the disease at some point in his or her life.<sup>3</sup> The number of repeats also correlates to the severity of the eventual disease, as well as to the age of emergence of empirical symptoms; the more repeats, the earlier symptoms will emerge, and the worse the disease will be, with especially high numbers of repeats culminating in an especially tragic variant called *juvenile Huntington's disease*, which emerges in childhood.<sup>4</sup>

The exact mechanism by which Huntington's disease attacks the brain is not yet well understood. What is known is that the historical understanding of the disease's presentation—a lightning bolt out of the blue that suddenly strikes sufferers in middle adulthood—is somewhat misleading; in fact Huntington's carriers exhibit a slow diminishment of their cognitive faculties over the course of their adult lives, culminating finally in the emergence of “empirical symptoms” like chorea that can be measured and quantified by doctors. As best as doctors can ascertain, the strain of the huntingtin protein produced by the mutant HTT gene is toxic to the brain, slowly building up over time until a tipping point is reached and critical functions begin to be affected. In particular the disease attacks the striatum region of the forebrain, which is a kind of “executive suite” of the brain regulating both movement and impulse control. Whatever the precise mechanism, possession of a single Huntington's gene with sufficient repeats is enough to cause the disease; the disorder is dominant and (because it is not on one of the sex-linked chromosomes) can be inherited from either parent. Each child of an afflicted parent has a 50 percent chance of inheriting the disease.

For this reason Huntington's disease represents a particularly striking version of the strong genetic determinism suggested by *Gattaca* and critiqued by Hamner. Huntington's disease exemplifies a class of disability that up to now has not received a tremendous amount of attention in disability studies: *prospective disability*, the unhappy knowledge that while one appears healthy now one may (or will inevitably) become permanently disabled at some unknown point in the future.<sup>5</sup> With the development of a genetic test for Huntington's disease, a bizarrely science fictional situation has emerged in the real world for families at risk, insofar as their “destiny” has become literally knowable decades in advance (not just in the womb, but *before* the womb); genetic science here becomes in effect a type of time travel, an actual glimpse of one's own inevitable future. Because the effects of Huntington's disease emerge slowly and unevenly over the course of one's entire life, diagnosis with the HTT gene significantly rewrites one's sense of the past and present as well, deeply destabilizing the carrier's sense of their own subjectivity and personal history; many who discover themselves to be carriers feel they no longer are the person they had appeared

(or believed themselves) to be. And because Huntington's disease as yet has no effective treatment, much less a cure, technoscience can offer only a very painful *pharmakon*: it can absolve, or it can diagnose/doom, but at present it can do nothing else.

The tragic arc of Huntington's disease—from seeming health to total disability to young death in as little as a decade, typically beginning in one's 40s and 50s but sometimes much earlier—has inspired a popular fascination with the disorder that is incommensurate with its frequency in the population at large; although the rare disease affects only 5–10 people per 100,000 (with roughly 30,000 sufferers in the United States), it has become quite well known in the culture at large. The most famous real-life sufferer of the disease is the folk singer Woody Guthrie, whose death in 1967 from complications of Huntington's at age 55 after a steep lifelong decline popularized knowledge of the disease. Huntington's disease (HD) is now a staple of television medical dramas, appearing on episodes of *Marcus Welby, M.D.*; *E.R.*; *House*; *Private Practice*; *Scrubs*; and others.<sup>6</sup> Of these, only *House's* version of the story deviates from the standard Huntington's plot, which typically has the tragic “guest star” encounter the regular cast to receive their unhappy future and then vanish forever at the conclusion of the episode; *House's* Huntington's-afflicted character was not a guest star but a regular character, the young doctor Thirteen. However, from another perspective the typical “guest star” plot is fulfilled after all; the revelation of the character's genetic destiny provides the occasion for Thirteen's departure from the regular cast. As will become clear in the discussion that follows, Thirteen's “demotion” replicates on the level of form the abiding sense of alienation, even exile from the family of the human, that narratives about Huntington's disease typically produce on the level of content; once her prospective disability has been named, the character quite literally has no future on the series.

Ian McEwan's 2005 novel *Saturday* similarly captures—if at something of an extreme—the logic of exclusion that arises from the encounter between a medical “regular cast” and a Huntington's-afflicted “guest star.” Set in February 2003 against the backdrop of protests against the coming war in Iraq—protests that, from the “future perfect” perspective of the novel's 2005 authorship, necessarily prove futile—*Saturday* sits comfortably in “Fiction and Literature” section of the bookstore, safely protected from infection by “Fantasy and Science Fiction.” But I argue the book becomes science fiction—or at least *science fictional*—in its attempt to work through the strange time-travel logic of prospective disability.

Early in *Saturday* its neurosurgeon protagonist Dr. Henry Perowne has a minor accident with another driver, Baxter. Baxter and his two companions exit their vehicle and confront Henry, first demanding money, then becoming violent. Henry then suddenly recognizes in Baxter's uncontrolled movements the tremors and shakes associated with early-stage Huntington's (90–91). No

genetic test is needed; simply to see Baxter is enough. Consequently Baxter's entire destiny becomes laid before Henry, as in a science fiction:

Here's biological determinism in its purest form. More than forty repeats of that one little codon, and you're doomed. Your future is fixed and easily foretold. The longer the repeat, the earlier and more severe the onset. Between ten and twenty years to complete the course, from the first small alterations of character, tremors in the hands and face, emotional disturbance, including—most notably—sudden, uncontrollable alterations of mood, to the helpless jerky dance-like movements, intellectual dilapidation, memory failure, agnosia, apraxia, dementia, total loss of muscular control, rigidity sometimes, nightmarish hallucinations and a meaningless end. This is how the brilliant machinery of being is undone by the tiniest of faulty cogs, the insidious whisper of ruin, a single bad idea lodged in every cell, on every chromosome four. (94)

Baxter's illness has only just begun—but from Henry's anticipatory perspective it is as if it has already happened. From this moment on, Henry's relationship with Baxter is utterly transformed. Although the two men have only just met, suddenly Henry knows everything there is to know about Baxter, past, present, and future:

Henry has heard that early onset tends to indict the paternal gene. But that may not be right. There's nothing to lose by making a guess. He speaks into the blaze of Baxter's regard.

"Your father had it. Now you've got it too."

He has the impression of himself as a witch doctor delivering a curse. Baxter's expression is hard to judge. [. . .] When Baxter speaks at last, his voice is different, cautious perhaps. "You knew my father?" (94–95)

Now the impending fight is averted, and Henry has Baxter completely in his thrall: "They are together, he and Perowne, in a world not of the medical, but of the magical" (95).

Both Baxter and Henry share an overriding sense of hopelessness about Baxter's ultimate fate; Baxter himself allows for the possibility of effective treatment only "one day perhaps. After I'm dead" (98). But Henry's attitude toward the prospectively disabled goes rather beyond mere pessimism: "There's no way out for him. No one can help," he thinks (99). "At some point he'll find himself writhing and hallucinating on a bed he'll never leave, in a long-term psychiatric ward, probably friendless, certainly unlovable, and there his slow deterioration will be managed, with efficiency if he's in luck" (218). In Henry's cold, objective, scientific gaze, the temporal distance between Baxter's current state and the final procession of his disease becomes slimmer and slimmer as the novel progresses, until at last Baxter's entire life has telescoped into a single, endless moment of terrible suffering. The full expression of Baxter's Huntington's looms larger and



larger in the evaluation of his life until it seems to be the only salient fact about him: “Anyone with significantly more than forty CAG repeats in the middle of an obscure gene on chromosome four is obliged to share this fate in their own particular way. *It is written*” (217). In this vision all Huntington’s sufferers bleed together into a single undifferentiated mass—all Huntington’s sufferers are alike.

The result is a construction of Huntington’s disease that subtly but definitively pushes sufferers—and, by extension, presymptomatic carriers—out of the family of the human altogether. Still living, they are already imagined to be dead. This trajectory reaches its culmination in *Saturday*’s climax, in which events conspire to place a stricken, unconscious Baxter on Henry’s emergency room operating table following a failed violent invasion of Henry’s home. Now Baxter is no longer an individual at all, but pure object: “Once a patient is draped up, the sense of a personality, an individual in the theater, disappear” (255). Standing over Baxter in the operating theater, with omniscient, total knowledge of how his life will—*must*—turn out, Henry contemplates “Baxter’s unmendable brain” (263) and considers (in the absence of a longed-for “healing touch” [263]) that Baxter would simply be better off dead: “There’s no tremor in the hands, Henry notices. Sleep is the only reprieve. Sleep and death” (270).

Henry’s ultimate decisions to show mercy to Baxter—to save his life, and to insist to his wife and children that they not press charges—are driven ultimately by a negative desire to avoid “whipping a man on his way to hell” (288). The final, total evacuation of Baxter’s slim grip on life and personhood—already failing—remains nonetheless his “dim, fixed fate [ . . . ] he must unravel” (289). Before he left for the operation his wife begged Henry not to seek revenge (246), revealing later that she was thinking mostly of what *she* would have done in the same situation (274). In the operating theater Henry’s power over Baxter is total; he certainly could have euthanized him if he chose, and no one would have known. Henry’s final thoughts on why he made the choice to allow Baxter’s life to continue are darkly ambiguous: “By saving his life in the operating theater, Henry also committed Baxter to his torture. Revenge enough” (288).

### **Better to Have Never Been Born: *Galápagos* and *Frameshift***

And I declared that the dead, who had already died, are happier than the living, who are still alive. But better than both is the one who has never been born, who has not seen the evil that is done under the sun.

—Ecclesiastes 4:2–3

The dehumanizing, Othering gaze applied by Henry to Baxter, which reframes his life as torture, is just as commonly the way the prospectively disabled Huntington’s carrier views herself. “I feel like killing my brother,” Jean Baréma

writes in his Huntington's memoir, *The Test*, "Just as I would want to be killed when I become like him. An act of love. A death potion" (53). (Later, Baréma resolves to kill himself if he carries the gene, before he grows too sick [143–44].) Alice Wexler's Huntington's memoir, *Mapping Fate*, similarly swirls around questions of suicide, especially her mother's attempt shortly after diagnosis (61–62). Studies have shown the rate of suicide for Huntington's carrier's is consistently several times higher than the general population, with one study showing 7.3 percent of known Huntington's carriers committing suicide and another showing 27.6 percent of the afflicted population attempting suicide. The probability of suicidal despair is undoubtedly a major factor in the decision of the vast majority of at-risk persons to choose not to take the presymptomatic genetic test for Huntington's disease; facing a 50–50 coin-flip whose outcome will structure the rest of their lives, most people seem to feel they could not bear to know the truth.<sup>7</sup>

This anxiety—the agony of foreknowledge—is at the center of Robert J. Sawyer's *Frameshift* (1997), an early Genomic Age novel that attempts to imagine how the ability to know a person's medical destiny will alter society. Here, the results are quite dystopian: a sinister insurance company uses genetic profiling to murder clients it knows will eventually become disabled, *before* they can begin to file expensive claims. But *Frameshift's* interests in these questions are not just political; they are personal as well. The novel's main character (a geneticist, Pierre Tardivel) discovers on meeting his biological father as a young man that he is at risk for Huntington's disease. Upon discovering this fact, Tardivel's doctor immediately begins presuicide counseling, giving the young Pierre his home telephone number and begging him to call "if you're ever thinking of doing something rash" (37). But the attempted intervention does not stop Pierre from private fixation on "the only way out"; he is soon unconsciously running the edge of the doctor's card back and forth over his wrist, "as though it were a blade" (38–39). For years Pierre refuses to take the genetic test, choosing instead to simply assume he has the gene and resolving to accomplish as much as possible before he develops full symptoms (42–43); it is only at the urging of his girlfriend that he decides to take the test so that they know, one way or the other, before they are married. Being a geneticist, he is able to self-administer the test, stepping outside the usual therapeutic protocols designed to protect patients from depression and suicidal ideation. Unfortunately, his results are positive; he carries the gene, with a relatively high 79 repetitions (104–5).

Immediately on discovering his genetic fate, he breaks up with his girlfriend, insisting that they cannot possibly marry under the circumstances. Soon after, he relents, and they are married after all. But Pierre insists, and here he will not budge, that he cannot father a child. His justifications for this prohibition shift in the novel. First he worries about genetic anticipation, the tendency of the

number of repetitions in the mutant HTT gene to increase when transferred from father to child (106)—any child he had would be at high risk for juvenile Huntington’s disease. But even after he is offered the chance to safely implant only non-HD embryos in his wife via the then-new technology of in-vitro fertilization, he still refuses, first on the grounds that as a “lapsed Catholic” he finds the procedure disconcerting, and second that “I can’t in good conscience begin a new life that I know I’m not going to be around to see through its childhood” (114). He has no such compunctions about adopting, however, and indeed is perfectly happy for his wife to be impregnated by a sperm donor with the child they will raise together—suggesting some other psychology must be at work in his refusal of IVF.

This aspect of Huntington’s disease—the refusal of children—receives parallel treatment in Kurt Vonnegut’s million-year evolutionary novel *Galápagos* (1986). The novel concerns the next evolution of the human race into a species of smaller-brained dolphin-like creatures following the end of civilization, who descend from a small group of survivors of a crashed cruise ship on the Galápagos Islands (where Darwin first developed his theory of evolution). While the rest of the human race is rendered infertile by a virulent disease attacking women’s ovaries, the isolated group remains unaffected—and one million years hence they are the only humanoid life on Planet Earth.

There is only one male living on the island, the captain of the cruise ship, Adolf von Kleist. But he has no interest in reproducing because he is at risk for Huntington’s disease; both Adolf (who does not carry the gene) and his brother Siegfried (who does) have chosen not to reproduce for what Vonnegut’s narrator calls “admirably unselfish reasons” (89). “Of all the horrible diseases known to Mandarax”—a smartphone-like portable computer used in the novel—“Huntington’s chorea may have been the worst. It was surely the most treacherous, the nastiest, of all surprises.” The von Kleists’ father murdered their mother while in the throes of the disease, and each of the two brothers “had been expecting to go crazy at any moment, to start dancing and hallucinating, for twenty-five years now” (90). Adolf ultimately only reproduces when his sperm is surreptitiously stolen by his postmenopausal partner, who uses it to artificially inseminate several of the still-fertile women on the island without his consent. It was only “pure, gambling-casino [ . . . ] dumb luck” (89) that this act didn’t result in a near-universal penetration of Huntington’s disease in the next evolution of humans—and the book is clear that Adolf, even if he’d known the stakes, would certainly have refused to take the gamble, even at the cost of universal human extinction.

The drive to reproduce is incredibly powerful, on the levels of both biology and culture, leading Lee Edelman to note in *No Future: Queer Theory and the Death Drive* that “[the] Child remains the perpetual horizon of every

acknowledged politics, the fantasmatic beneficiary of every political intervention” (3). The centrality of the Child in heteronormativity has deep implications for study of disability as well. To lose touch with this circuit of reproductive futurity—not through personal choice, but with the totalizing force of a moral prohibition—is in a real sense to feel as though you have been cast out from history altogether. As with any other victim of eugenicist discourse, when we deem the Huntington’s carrier unworthy of continuation into the future, we diminish her very claim to personhood, to humanity as such.

That here the constraint is so commonly self-directed, caused by sad memories of a parent’s deterioration or the terrified anticipation of one’s own, multiples this painful sense of being cut off from futurity. As Susan Sontag notes in *Illness as Metaphor*, “Nothing is more punitive than to give a disease a meaning—that meaning being invariably a moralistic one. Any important disease whose casualty is murky, and for which treatment is ineffective, tends to be awash in significance” (58). The “significance” of Huntington’s produced by these narratives’ prohibition on producing children is, in essence, an assertion of the absolute worthlessness of the life of any Huntington’s sufferer—and the punitive character of this moralizing discourse becomes internalized in the at-risk subject as a fantasy of self-erasure, or even self-abortion.

This tragic fantasy has been active in each the texts I have discussed thus far, but it reaches perhaps its fullest expression in the early passages of *Frameshift* in which Pierre meets his biological father for the first and only time:

Pierre squeezed his hand. [. . .] “Do you have any other children?”

“Daughters,” said Henry. “Two daughters. Adopted. Dorothy—Dorothy couldn’t . . .”

Pierre nodded.

“Best, in a way,” said Henry, and here, at last he let his gaze wander away from Pierre. “Huntington’s disease is . . . is . . .”

Pierre swallowed. “Hereditary. I know.”

Henry’s head moved back and forth more rapidly than normal—a deliberate signal all but lost in the muscular noise. “If I’d known I had it, I [. . .] never would have allowed myself to father a child. I’m sorry. V-very sorry.” (32)

This encounter, I suggest, is the traumatic primal scene that undergirds Pierre’s shifting and inconsistent justifications for never fathering a child, even after the development of IVF intervention that would ensure any such child would *definitely* be free from the disease. Pierre takes up his father’s dying wish and refuses to reproduce under any circumstances—an interdict that, if applied to Henry counterfactually, would naturally have prevented Pierre’s own birth as well. To believe it would be better never to reproduce than to risk passing on

your “defective” genes is necessarily to believe it would be better to have never been born at all—it is to believe you should not (or do not deserve to) exist. In this way Pierre’s refusal of children looks as much like brutal self-flagellation as it does an ethics; what seems to be ultimately at stake for him is not the safety of any potential child but his own internalized shame, his tragic belief that he is unloved and unlovable as a result of his prospective disability. It is the task of the rest of the novel to heal Pierre, by convincing him otherwise.

### **No Cure, No Hope? *Adulthood Rites* and “The Evening and the Morning and the Night”**

In the middle book of Octavia Butler’s Xenogenesis trilogy, *Adulthood Rites* (1988), we find a rather different science fictional treatment of Huntington’s disease than those we have previously encountered. Butler’s Oankali are a three-sexed species of “gene traders” who wander the universe looking for other life forms with whom they might exchange genetic material; they have arrived on Earth following a devastating nuclear war and taken the few survivors into their spaceship to pursue an exchange. They are particularly interested in our cancers, which the Oankali find intoxicatingly beautiful; they believe the careful application of our pliable cancer genes will allow them untold possibilities for future experimentation.

Centuries later, with the earth repaired from the war, the humans are awoken from cryogenic suspension and allowed to return to the earth, where many choose to flee the Oankali encampments and attempt to live on their own. The Oankali have rendered all the humans they rescued infertile, pending their agreement to the trade; in a brutal “forced choice” that would be illegal under the United Nations Convention on the Prevention and Punishment of the Crime of Genocide, only humans that agree to mate with the Oankali, and therefore breed Oankali-human hybrids, are permitted to bear children. Over the course of the novel the Oankali are persuaded (through the direct intervention of several of the first hybrids) to relent on this absolutism and allow humans an opportunity to continue an independent existence as a species apart from the Oankali after all. They cannot offer the humans Earth, which is slated to be consumed and turned into a new Oankali spacecraft—but they can offer the humans a separatist colony on Mars.

To the Oankali this concession is in fact a grave sin; because the Oankali have an innate ability to read and modify the genome as easily as we can taste or smell, they can recognize in human beings a dire genetic flaw: the combination of high intelligence with hierarchical thinking (with the hierarchical thinking the older and more powerful of the two impulses). The Flaw, as it is called in the novels, functions in much the same way as Huntington’s disease: possession

of the Flaw (and all humans possess it) necessarily means eventual species-wide disaster. Our genetics are, from the Oankali perspective, self-toxic; we cannot help but destroy ourselves.

Over the course of *Adulthood Rites*, the protagonist, Akin, the early human-Oankali hybrid who has persuaded the Oankali to give the humans Mars, has a series of encounters with Tate, a human resistor who carries the Huntington's gene. Huntington's is a "nasty little disease," Tate tells him, "that should have killed me years ago" (117). Only the intervention of the Oankali while she was in captivity temporarily halted the disease's progression—but now their stop-gap measures are failing and she needs the intervention of the Oankali to fully replace the gene. Only her hatred and resentment of the Oankali for her capture and infertility is stopping her from seeking treatment. "Will you let someone correct your Huntington's disease genetically?" Akin begs her late in the novel, after treating her from a bad fall. "The disease had become active. It was active when I healed you. I thought perhaps . . . you had noticed" (267). Tate becomes very frightened at his news, believing (as would have been true in her pre-Oankali life) she has been told that she is doomed—but the miraculous Oankali possess the ability to turn off the gene and reverse any damage that has already been caused. The final argument Akin makes to compel her treatment is a version of the concern over reproductive futurity that paralyzed Adolf von Kleist in *Galápagos*: "You can't introduce this to the Mars colony. You know you can't. It would spread through the population in a few generations" (268).<sup>8</sup> This vision of universal Huntington's is enough; Tate relents, and agrees to treatment.

Of all the novels that deal with Huntington's that I discuss in this chapter, only *Adulthood Rites* allows the possibility of a cure, and this is a cure that is only quasi-scientific, based on the intervention of an essentially magical race of aliens who possess a literal version of the "healing touch" Henry longed for in *Saturday*. McEwan's novel's "realism," of course, denies such a possibility ever existing in the real world. This absolute insistence on pessimism is puzzling, and quite paradoxical; as *Saturday* itself rightly notes, Huntington's unique status as a single-gene disorder has not only suggested multiple promising treatment lines for gene silencing but also produced significant research funding in the hopes that what is learned about Huntington's can be applied to other, more complicated diseases.

This need to inoculate oneself against what *Saturday* calls "the lure of hope" (224)—even when such hope is actually quite reasonable—is just as strong (if not stronger) in *Frameshift*, where the proposition "Huntington's was terminal" is Pierre's "one unshakeable reality" (184). (This, in a novel in which genomic science has allowed for both the successful cloning of Neanderthals and a coding of the gene for telepathy!) Nothing in *Frameshift* ever presents Pierre with any hope that his disease might be cured; instead, the novel presents us with

a long and inevitable decline in the character's once prodigious abilities, culminating in the novel's closing pages with the tragic revelation of a Pierre who can no longer participate in (or even understand) his own life's work (336–38).

Huntington's disease, in short, tends to be presented in these science fictions with an overawing pessimism not commonly seen in other science fictional ruminations on disability—an absolutism that is out of sync even with real-world research into possible treatments. There are no cures allowed here, no miracle drugs, no possible prostheses. Indeed, in contrast to real-world genomics, in which genetic disorders commonly convey survival advantages despite their overall health drawbacks (like the increased resistance to malaria conveyed by carrying only one sickle-cell gene), Huntington's disease is generally imagined to offer no possible compensations whatsoever.<sup>9</sup> The Oankali find even cancer fascinatingly beautiful, but they barely possess the language to articulate their horror at Huntington's: "I found . . . something. [ . . . ] It was a [ . . . ] wrong gene" (117).

I conclude, therefore, with a science fictional attempt to think beyond this totalizing paradigm of inescapable, hopeless despair. Octavia Butler's "The Evening and the Morning and the Night"—first published in 1987, at the same time as her *Xenogenesis* trilogy—concerns a fictional syndrome called Duryea-Gode disease (DGD). Butler's own commentary on the story—which she considered her "most carefully developed story [ . . . ] from a hard SF standpoint" (McCaffery 22)—notes that DGD combines the progressive presentation of Huntington's disease with phenylketonuria ("a recessive genetic disorder that causes severe mental impairment unless the infant who has it is put on a special diet") and Lesch-Nyhan disease ("which causes both mental impairment and self-mutilation") ("Evening" 69). The result is an even more nightmarish symptomatology than even Huntington's, in which sufferers unpredictably "drift" and mutilate themselves or others; only a special diet can temporarily keep the symptoms at bay. Caused by side effects from a "magic bullet" anticancer drug called Hedeonco, DGD is even more heritable than Huntington's; *any* child conceived after treatment with Hedeonco will be born with DGD. (In this way DGD inverts the typical temporality of Huntington's; in the first generation, at least, healthy, unaffected parents give birth to afflicted children.) Most people with one DGD gene die before age forty; children born to parents who both have DGD experience more severe symptoms, as is the case with people born with two mutant Huntington's genes as well.

"The Evening and the Morning and the Night" begins much like the other Huntington's narratives I've discussed; specifically, it begins with the narrator's suicide attempt at 15 after her first visit to a DGD ward. "I won't describe the ward," Lynn Mortimer says, "It's enough to say that when they brought me home, I cut my wrists" (35). Soon after this, the narrator's father "drifts,"

brutally murdering her mother before killing himself. The story tracks Lynn as she goes to college on a “Dilg scholarship,” named for a foundation that runs convalescent hospices for last-stage DGD sufferers; befriending other DGD patients (including her eventual boyfriend, Alan), Lynn engages in many of the same debates about suffering, suicide, reproductive futurity, and self-erasure found in the other Huntington’s fictions. Both characters wrestle with the same sense of “bitterness and despair” that characterizes narrative depictions of Huntington’s suffering. “If the two of them had had any sense,” Alan says, speaking of his parents with echoes of Pierre Tardivel’s desire for self-erasure, “they would have had me aborted the minute my mother realized she was pregnant. [ . . . ] Hell, they should pass a law to sterilize the lot of us.” But Lynn’s attitude is more significantly conflicted: despite all her reservations about bearing DGD-positive children, she feels the eugenic solution would be “like killing part of yourself” (42).

But soon the story takes a turn. Upon visiting a Dilg ward to visit Alan’s dying mother, Lynn and Alan discover a presentation of DGD that is quite different from the one they have experienced in their own scarred pasts. Inside the immense Dilg mansion they find DGD sufferers whose lives are stable and whose symptoms are under control—who, indeed, are producing art and sculpture to be hung in galleries across California or who are busily inventing impressive new gadgets and devices for public use. “Our people work instead of tearing at themselves or staring into space” (48), explains the head of the retreat, a DGD sufferer named Beatrice. “Oh, yes, DGDs create things. At least they do here. [ . . . ] Here we can help them channel their energies. They can create something beautiful, useful, even something worthless. But they create. They don’t destroy” (48–49). In contrast to the typical late-stage DGD sufferer, who must be tightly restrained in order to prevent violence and self-mutilation, at the Dilg ward the patients are allowed to move freely (53).

Here at last we find a gap between individual and disease that has eluded us in other Huntington’s fictions. Here, the Huntington’s-cum-DGD sufferer is able to retain their vitality, their creativity, their personhood, despite their affliction—and so here we find the possibility of life *continuing*, rather than ending, with severe genetic disease. In fact this controlled mode of DGD turns out to have unexpected cognitive benefits—DGD sufferers are both more creative and more able to concentrate on work than noncarriers (55); the complex palmprint-voiceprint locks in the facility, for instance, turn out to have been invented by a DGD with an average IQ who didn’t finish college, purely from an obsessive, postsymptomatic desire to achieve his vision (65). In this alternative vision of Huntington’s, perhaps, we can hear an echo of the startling proposition suggested by Joe Klein in his recent biography of Woody Guthrie



that the progression of Guthrie's Huntington's disease may in fact have driven his prolific creativity:

And while it would be absurd to suggest that Huntington's disease made Woody Guthrie a brilliant songwriter, Dr. Whittier (and, later, Marjorie Guthrie herself) would wonder aloud if the disease hadn't worked like a drug on Woody, as a creative spur (in much the same that some artists use alcohol and other drugs), enhancing his natural rhythmicity, forcing the brain to continually rewire itself as cells died, forcing new, wonderful, and unexpected synaptic pathways to open (which also led to some unexpected and not so wonderful behavior), forcing the brain to become—in effect—more creative to survive. (Klein 462–63)

Indeed, in September 2012—directly paralleling Butler's story—the *Los Angeles Times* reported results of a new study showing that carriers of the Huntington's gene may actually have *increased* capacity for learning in the period before physical symptoms emerge.

The key to this remarkable reversal in the presentation of the disease is a second complication to DGD that is known only in Dilg wards; it turns out female children of double-DGD patients possess a preternatural, almost psychic ability to stabilize and even command other DGD sufferers. "It's a pheromone," Beatrice explains. "It's only when two irresponsible DGDs get together and produce girl children like me or Lynn that you get someone who can really do some good in a place like this." The Dilg ward more generally provides a context in which the life of the Huntington's carrier can be understood as something other than simple tragedy—as simultaneously a kind of (very complicated, very fraught) gift. Crucially, Beatrice suggests that Alan and Lynn choose not to have children, "in spite of our need" (61)<sup>10</sup>—framing the Dilg ward as precisely the sort of *nonreproductive*, queer space for futurity that Edelman offers as an alternative to heteronormativity in *No Future*.

In "The Evening and the Morning and the Night," then, Butler puts forth the possibility that has eluded so many of the other science fictional treatments of Huntington's I have discussed: that Huntington's need not be understood solely as a tragic, ultimately meaningless fall from grace, but a fully human life that can retain its own dignity and vitality despite hardship. "The people of Dilg are problem solvers, Alan. Think of the problems you could solve! [ . . . ] They're working, Alan," Beatrice enthuses. "The disease hasn't stopped them, *won't* stop them" (65). The Dilg ward—a community borne out of and built around shared struggle, shared suffering—offers DGD carriers the chance to retain their individuality, a "chance to live and do whatever they decide is important to them" (66). The Dilg compound is no utopia—and still no cure—but it is a chance, a hope, a life.

And such communities are by no means science fictions. Alice Wexler's *Mapping Fate* recounts her sister Nancy's visits to the Lake Maracaibo region of Venezuela, whose high incidence of Huntington's disease helped researchers isolate the gene. Locals call the disease *el mal de San Vito*, or simply *el mal*: the sickness (182–84). The area as a whole has of course suffered greatly as a result of the disease, both in the lives of individuals and in the “rejection of those outside, who stigmatized the entire community”—but Wexler reports the people of these communities understood that the disease was a hereditary illness, “‘in the blood,’ as they put it, not a punishment from God or a moral curse” (184–85). Nancy Wexler reports in her field notes that “She was struck, too, by the way in which people with Huntington's seemed to be better integrated into their communities than those in the United States, who were often overmedicated and hidden away in hospitals or at home” (186). The widespread risk in the community also significantly reduces the loneliness and isolation of being at risk; the experience is much more widely shared, and while still painful, the burden is partially lifted insofar as it is borne by all (198–99). In her follow-up to *Mapping Fate*, *The Woman Who Walked into the Sea*, Wexler recounts similar bonds of community and tolerance among sufferers of “St. Vitus's dance” in the East Hampton community in which George Huntington first identified the disease (49–50, 52).

The fictional Dilg compound and the real-world Lake Maracaibo and East Hampton communities make actual the reproductive nightmare posited and rejected by *Galápagos* and *Adulthood Rites*: Huntington's disease as plague, unleashed social contagion, running amuck across an entire community. But this supposedly unthinkable nightmare turns out to be quite livable after all; keeping in mind Wexler's observation that “this obviously pathological, genetically determined killer may acquire distinct meanings for different individuals, families, and cultures” (xxiv), we can find in these real and imagined communities an answer to the conviction that possession of Huntington's disease has only one possible meaning. Indeed, such places literalize Sontag's memorable notion that “[e]veryone who is born holds dual citizenship, in the kingdom of the well and the kingdom of the sick. Although we all prefer to use only the good passport, sooner or later each of us is obliged, at least for a spell, to identify ourselves as citizens of that other place” (3). In a subgenre of genomic science fiction filled almost exclusively with hopelessness and dread, “the kingdom of the sick” in “The Evening and the Morning and the Night” stands as a striking alternative to a dominant narrative of resigned and bleak despair, insisting instead that we maintain the wide gap between individual and illness, between sufferer and suffering—reminding us that disability is not the same as death.

## Notes

1. Barry Barnes and John Dupré have called the mode of genetic determinism Hamner critiques *astrological genetics*—as if a genetic profile might produce a kind of scientifically accurate horoscope—and note that the ongoing popularity of this fantasy in the face of its continual debunking demonstrates that “genomics/genetics confront us not just as practice and technology, and as knowledge and understanding, but as myth and ideology as well” (5–6).
2. More detailed accounts of Huntington’s discovery can be found in Douglas J. Laska’s “George Huntington (1850–1916) and Hereditary Chorea” and Alice Wexler’s *The Woman Who Walked into the Sea*.
3. The middle ranges represent intermediate stages of the disease. A person with between 28 and 35 repeats will not develop the disease themselves, but is at risk of passing the disease on to their children due to *genetic anticipation* (the tendency, here, of the length of the CAG repeat strand to grow longer in subsequent generations, especially when the gene is passed father to child). A person between 36 and 40 repeats is in a different gray zone; they may or may not express Huntington’s symptoms, depending on other life factors.
4. Even here, it should be noted, we find that the progression of Huntington’s disease is more complicated than the genetic determinist fantasy would suggest. The number of repetitions accounts for approximately 60 percent of the variation in onset and severity; other, largely unknown environmental factors account for the rest. Symptoms have been known to emerge decades apart even for people with the same number of CAG repetitions, even in siblings. For more information on this and other elements of the disease, see Walker, “Huntington’s disease.”
5. While prospective disability is of course related to the knowledge that every person who survives to senescence will inevitably undergo some diminishment of her mental and physical capabilities, it is important to note that prospective disability is no more reducible to “hyperaging” than any other disability. Prospective disability anticipates *deviation* from the assumed “normal” course of life, rather than its speeding up.
6. The disease even recently made an appearance in the fourth season of *Breaking Bad* as a glimpse into the backstory of Walter White, the show’s protagonist, whose father was revealed to be a sufferer. Interestingly, according to the timetable presented, White himself should also be at risk; the character’s claim that he was tested as a child, with negative results, is impossible given the chronology involved and sounds instead like a lie told to comfort to a frightened, grieving child. It remains to be seen whether this plot will be taken up further in the show’s final season.
7. Having finally undergone “the test” myself in early 2010, ultimately discovering I do not carry the gene, I can confirm from personal experience that the process of resolving your lifelong uncertainty over Huntington’s disease is its own form of deeply terrible existential misery.
8. Sontag again, “Any disease that is treated as a mystery and acutely enough feared will be felt to be morally, if not literally, contagious. Thus, a surprisingly large number of people with cancer find themselves being shunned by relatives and friends and are the object of practices of decontamination by members of their household, as if cancer, like TB, were an infectious disease” (6). This sense of isolation and

abandonment is commonly reported among those who discover they have the gene for Huntington's or even discover they are at risk.

9. Here, too, real-world science offers a much more nuanced view than science fictional science: a 2007 Tufts University study concluded that Huntington's carriers tend to have more children than noncarriers because the disease "may have beneficial health effects early in life," while a study published while I was writing this chapter in early 2012 suggested Huntington's carriers were at a 53 percent lower risk for developing cancer than the general population.
10. Beatrice's rejection of reproductive futurity as the ultimate criterion for human life suggests something like the queer futurity Edelman advocates in *No Future*.

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# Index

- able-bodiedness, 5, 8, 10–11, 62–63, 106–7, 115–16, 119, 122–27
- abnormality, 8, 39–40, 42, 55, 78–79, 105, 161
- Compare* normalcy
- advocacy. *See* disability rights
- agency, 12, 116, 125, 157, 170–71
- aging, 8, 67, 70, 163
- alienation, 29, 80, 117, 146–47, 151, 155, 168, 174
- aliens, 6, 22, 27, 30, 33, 77–78, 118–22, 145, 148–51, 155, 180–82
- ambiguity, 20, 131–32, 141
- amborg, 13, 116–18, 122, 125–26
- Americans with Disabilities Act (1991), 153
- AMP suit, 120, 124, 127
- amputation, 13, 38–40
- See also* prosthetic devices
- Anderson, Poul
- Call Me Joe*, 66
- android, 63, 66, 67, 155
- Architectural Barriers Act (1968), 143
- artificial intelligence, 81, 83, 84
- artificial limbs. *See under* prosthetic devices
- Asimov, Isaac, 67
- assistive technology. *See* prosthesis; prosthetic devices
- Attebery, Brian, 4, 8
- autism, 153–68
- autonomy, 68, 116, 118, 122–23, 127
- Avatar* (film), 2, 115–27
- Barr, Marlene, 3, 15
- Baudrillard, Jean, 76, 104
- Bear, Greg
- Blood Music*, 131–32, 134, 137, 138–42
- Benford, Gregory, 45
- Bionic Woman, The*, 13, 89–101
- blindness, 45, 98–99, 106, 132
- Blish, James, 67
- body (in theory), 5–6, 8–12, 15, 35, 40–41, 69–72, 75–78, 83, 85–86, 90–91, 93–99, 103–5, 110, 111–12, 116–18, 131–33, 141–42
- disabled body, 1–2, 4–12, 14, 38, 61–64, 122, 132–33, 137, 144
- Compare* able-bodiedness. *See also* disability studies; people with disabilities; problem body
- Bogdan, Robert, 54–55
- Broderick, Damien, 23
- Butler, Octavia
- Adulthood Rites*, 180–81, 185
- “The Evening and the Morning and the Night,” 182–84, 185
- Cheu, Johnson, 45, 62
- Chivers, Sally (with Nicole Markotic), 116, 117
- class, 22, 29, 32, 49, 67, 79, 81–82, 87, 106
- cloning, 64, 67, 68, 105, 181
- community, 1, 5, 14, 33, 81–82, 105, 126, 136–37, 163, 184–85
- consciousness, 27, 31, 49–51, 53–54, 69–70, 77, 117, 131–41, 151
- Corker, Marian, 61, 62, 64
- crip theory, 62
- cure (narratives), 2, 3, 5, 8–12, 25, 27, 29, 35, 37–38, 41–45, 47–49, 55–56, 62, 71–72, 77–79, 83–84, 89–94, 98, 110, 139, 143–48, 151, 154–55, 160–67, 170–74, 180–85

- cure (narratives) (*continued*)  
*See also* eugenics; genetics; neurological treatment; prosthesis; prosthetic devices; rehabilitation; technology
- cyborg, 8, 15, 38–39, 63, 65, 67, 89, 93–96, 99–101, 106–7, 116, 131, 137, 141–42  
*See also The Bionic Woman*  
*Cyborg* (novel), 77, 89
- Darth Vader, 103, 106, 108, 109–12
- Davis, Lennard J., 4, 30, 37, 39
- death, 41, 43, 96, 138–39, 147, 174, 176–77, 185
- Delany, Samuel  
*The Einstein Intersection*, 19–33  
*Empire Star*, 23
- Del Rey, Lester, 140
- Derrida, Jacques, 170
- deviancy, 2, 4–8, 30, 38–40, 61, 78, 85–86
- disability. *See* disability studies. *See also* impairment
- disability rights, 5–6, 19, 30–33, 62, 87, 143, 151
- disability studies (theory)  
 medical model of disability, 4–5, 9, 14, 20, 28, 42, 55–56, 61–63, 71–72, 75, 77–79, 83–86, 87, 144, 146, 154–56 (*see also* impairment)  
 scientific model of disability, 35, 42–43, 45, 46  
 social (constructionist) model of disability, 2, 4–5, 12, 25, 26–30, 33, 36, 38–39, 61–64, 72, 78–79, 85–86, 87, 99, 105, 132, 144–45, 146, 167
- disabled people. *See* people with disabilities
- Disch, Thomas M., 65
- discrimination, 20, 62, 67, 87, 132
- diversity, 20–21, 24, 28, 32, 99
- dystopia, 9, 48, 55–59, 68, 71–72, 151, 153, 177
- Edelman, Lee, 178–79, 184, 187
- Eisenberg, Larry, 68
- embodiment, 1, 2, 4–5, 8, 12, 26, 29–30, 61–63, 104, 113, 115, 118–19, 121–27, 131–33, 135, 139
- environment, 4, 10, 28, 66, 67, 81, 104, 107–9, 115, 117, 119–21, 144–45, 147, 158, 169, 170, 186
- essentialism, 20, 30, 62, 64, 65, 72, 83–85, 148, 151, 159
- eugenics, 15, 29, 36, 43–45, 46, 71, 75, 107–8, 171, 179, 183
- evolution, 44, 64, 67, 76, 131–34, 138–39, 141–42, 166–67, 178
- extraordinary bodies, 20–21, 29–30, 32, 35–45, 93, 101, 116, 151
- fandom, 1, 14
- Faulkner, William  
*The Sound and the Fury*, 50, 51
- feminist science fiction, 3, 4, 9, 15
- feminist theory, 13, 45–46, 91–92, 131
- Forrest Gump*, 51
- Frankenstein's monster. *See* Mary Shelley
- freaks, 35–45, 90, 108–9, 112, 113, 161, 163
- Fulda, Nancy  
 "Movement," 154–57, 159–67
- Garland-Thomson, Rosemarie, 8, 20, 30, 37, 38, 39, 46, 90, 92, 93, 105, 107, 108, 109, 112–13
- Gattaca*, 7, 9, 169–70, 171, 173
- gender, 27, 30, 32, 81–83, 91, 93, 95
- genetics, 1, 5, 8, 11, 22, 65, 67, 68, 75, 76–77, 79, 81, 105, 142, 154, 169–75, 177, 180–83, 185, 186
- Gibson, William, 77
- globalization, 80–83, 85, 86
- Gordon, Joan, 13, 45, 116, 126, 127  
*See also* amborg
- Graham, Elaine, 6
- Grandin, Temple, 155, 159–60
- Gunn, James, 4  
*The Immortals*, 67
- Guthrie, Woody, 174, 183–84

- Hall, James R., 143, 151  
 Hamner, Everett, 169–70, 171, 173, 186  
 Haraway, Donna, 65, 69, 93, 106, 131  
 Heinlein, Robert, 7, 66, 120  
 Hopkinson, Nalo, 3  
*House* (television show), 174  
*How to Train Your Dragon*, 115, 116,  
 117–19, 123–27  
 Hugo (award), 1, 36, 138  
 Huntington, George, 172, 185, 186  
 Huntington's disease, 171–87  
 hybridity, 61, 66–67, 69, 93, 96, 103–4,  
 107–13, 180–81
- identity politics, 20, 26, 29–31  
 illness, 6, 43, 78, 91, 101, 132, 136,  
 144–48, 151, 171, 175, 177, 179,  
 185  
 immorality, 67–68, 109, 131  
 impairment, 4, 8, 10, 14, 25, 27, 29, 31,  
 33, 37–38, 41–43, 55, 61–64, 65,  
 70, 72, 83–84, 87, 112, 132, 139,  
 144, 146, 150–51, 182  
 inclusion, 20, 22, 33, 67, 117  
 infanticide, 68, 108  
 intelligence, 47–48, 52–58, 64, 66, 68,  
 95, 101, 136, 141, 149, 156–58,  
 180
- Jameson, Frederic, 59  
 Jones, Gwyneth, 49
- Keyes, Daniel  
*Flowers for Algernon*, 47–59  
 Kincaid, Paul, 4  
 kingdom of the sick, 185  
 Kosut, Mary (with Jean Moore), 5, 9  
 Kurzman, Steve, 116, 118, 127
- Latham, Rob, 143  
 Le Guin, Ursula, 25, 44, 49, 68  
 Locus (award), 36  
 Longmore, Paul, 39–40, 41, 86, 106  
 Lucas, George, 103, 104, 106, 112  
 See also *Star Wars*
- Markotić, Nicole (with Sally Chivers),  
 116, 117  
 McCaffrey, Anne, 77  
 McDonald, Ian  
*River of Gods*, 77, 80–86  
 McEwan, Ian  
*Saturday*, 171, 174–76, 181  
 McLuhan, Marshall, 69  
 McMaster Bujold, Lois, 7  
 McRuer, Robert, 62  
 medical model. *See under* disability  
 studies  
 medicine (as practice), 31, 35–36, 42, 75,  
 84, 87, 151  
 mental health, 31  
 Merrick, Helen, 143  
 Merrill, Judith, 68  
 metamorphosis, 64–66, 71–72  
 Mitchell, David T., 57, 59  
 with Sharon Snyder, 4, 6, 7, 15, 44,  
 45, 59, 106, 116, 132  
 monstrosity, 2, 6, 7–8, 15, 41, 46, 67,  
 90, 106–7, 108  
 Moon, Elizabeth  
*The Speed of Dark*, 154–67  
 Moore, Jean (with Mary Kosut), 5, 9  
 Murray, Stuart, 40, 155–56, 165  
 mutation, 8, 22, 64–65, 67, 68, 79, 154,  
 172–73, 178, 182  
 mythology, 21–26, 29, 32, 64–66, 103,  
 106, 112, 113, 133–35, 137–38,  
 143, 151
- nanotechnology, 75  
 Nebula (award), 1, 36, 138, 155  
 neurological treatment, 37, 42, 47, 68,  
 70, 156, 169  
 Niccol, Andrew, 9, 169  
 Nicholls, Peter, 21  
 normalcy, 8–10, 12, 19, 21–23, 27–31,  
 33, 35, 37, 38, 41, 56–57, 61–65,  
 68, 71–72, 75–76, 79, 84, 90, 96,  
 99, 103, 105, 108–9, 131–32, 146,  
 149, 153–54, 158, 160–67, 173,  
 186  
*Compare* abnormality



- normate, 30, 107–8  
 Nussbaum, Martha, 158, 159
- Ott, Katherine, 127
- Parrinder, Patrick, 35  
 Peace, William J., 14  
 people with disabilities, 5, 8, 11, 24, 29,  
 44–45, 54–55, 99, 132, 144, 151,  
 155, 158  
   in film and television, 2, 8, 9–10,  
   106–7  
   in literature, 7, 27, 30, 40, 45  
   as science fiction fans, 1, 14  
 personhood, 28, 108, 111, 131–33, 141,  
 176, 179, 183  
 pity, 39, 56–57, 86, 146  
 Pohl, Frederik, 65  
 posthuman embodiment, 11–12, 93, 65,  
 67, 69, 131–42  
 posthumanism (theory), 6, 10–13, 69,  
 72, 131–34, 137–38, 141–42  
 postmodern, 23, 55, 69  
 Prendergast, Catherine, 56–57  
 problem body, 116–17, 119, 122, 123,  
 125, 127  
 prosthesis, 8, 10–13, 14, 15, 37, 39–40,  
 57, 58, 59, 61–63, 71–72, 75–86,  
 94, 101, 103–13, 115–27  
 prosthetic devices, 2, 10, 38, 41, 61, 108,  
 118, 119–20  
   artificial limbs, 29, 90, 91–96, 106–7,  
   109, 111, 123–26  
   *See also* wheelchair
- Quayson, Ato, 7, 15, 105, 113  
 queer theory, 131, 178–79, 184, 187
- race, 20, 25, 27, 30–32, 93  
 rehabilitation, 70, 76, 79, 85, 116, 119,  
 122, 164  
 religion, 64, 82, 113, 133–34, 137, 149,  
 169, 185  
 reproduction, 27, 44, 65, 68, 104, 169–  
 70, 179–80, 182  
 reproductive technologies, 15, 29, 44,  
 65, 76  
   artificial insemination, 29, 64, 65  
   *See also* cloning; genetics  
 robot, 42, 49, 63, 67, 70, 83, 95, 96, 98,  
 109  
   fembot, 95  
 Russ, Joanna, 3
- Sacks, Oliver, 155  
 Sawyer, Robert J.  
   *Frameshift*, 171, 176–80, 181
- science fiction  
   film scholarship of, 7, 15  
   as a genre, 2–4, 11, 14, 19, 20, 24–26,  
   30, 35, 41, 44–45, 49, 63, 65,  
   76, 131, 153  
   literature scholarship of, 7, 15, 19,  
   23–24, 45–46, 107, 131, 133,  
   141, 143  
   relationship to disability studies, 2, 5,  
   6–12, 33, 35, 41, 61, 63–64, 71–  
   72, 76–77, 144, 151, 153–54
- Scortia, Thomas N., 67  
 sexuality, 20, 27, 31–32, 169  
 Shakespeare, Tom, 46, 132, 144  
   with Miriam Corker, 61  
 shape-shifting. *See* metamorphosis  
 Shapiro, Joseph, 56  
 Shelley, Mary, 2, 7, 131  
 Shildrick, Margrit, 5, 8, 15  
 sickness. *See* illness  
 Siebers, Tobin, 4, 5, 6, 10, 11, 15, 93,  
 132, 144, 146  
 Silverberg, Robert  
   *Man in the Maze*, 143–51  
*Six Million Dollar Man, The*, 89, 90, 91,  
 92, 94, 95, 96
- Skywalker, Anakin. *See* Darth Vader  
 Skywalker, Luke, 107–12  
 Slesar, Henry, 70  
 Slusser, George, 24, 29  
 Smith, Marquard, 15  
 Snyder, Sharon L. (with David Mitchell),  
 4, 6, 7, 15, 44, 45, 59, 106, 116,  
 132

- Sobchack, Vivian, 127  
 social model. *See under* disability studies  
 Sontag, Susan, 179, 185, 186  
 Sophocles  
   *Philoctetes*, 143, 145–46, 148, 150, 151  
*Source Code*, 1, 2  
 Springer, Claudia, 94, 95  
 Squier, Susan Merrill, 44  
 Stapledon, Olaf  
   *Last and First Men*, 133–34  
   *Star Maker*, 131–38, 139, 141–42  
*Star Trek*, 9–10, 45, 155  
*Star Wars*, 103–13  
 Steinbeck, John  
   *Of Mice and Men*, 50  
 stereotyping, 3, 59, 119, 144, 156, 163, 167  
 sterilization, 44, 183  
 stigma, 4, 30, 31, 33, 38, 58, 61, 72, 83, 144, 185  
 Stiker, Henri-Jacques, 113  
 subjectivity, 11, 65–66, 69, 77, 94, 142, 170, 173  
 suicide, 5, 70, 91, 146, 149, 172, 177, 179, 182, 183  
 Suvin, Darko, 3, 15, 35, 48, 76  
 technology  
   as cure, 2, 10, 41–45, 47, 49, 77–78, 89, 92–95, 98, 103, 109–12, 115, 143, 163–67  
   definition of, 15, 86, 93, 104, 120  
   as dehumanizing, 58, 71, 80, 86, 90–93, 104, 111–12, 124  
   as transformative (of the disabled body), 8, 11, 38–39, 62–63, 75–77, 82–85, 89, 113, 164  
   *See also* cure (narratives); cyborg; prosthesis; prosthetic devices; reproductive technologies  
 technoscience, 62, 65, 69, 72, 75, 174  
 Telotte, J. P., 63  
 time travel, 66, 173–74  
 transcendence, 5–6, 11–12, 93, 131–32, 141–42, 144  
 Tremain, Shelley, 64  
 Tushnet, Lennard, 70  
 utopia, 78, 143, 151, 184  
   utopian enhancement, 64, 65, 72  
   utopian science fiction, 1, 6, 9, 10, 20  
 Varley, John  
   “Tango Charlie and Foxtrot Romeo,” 35–46  
 Vint, Sherryl, 11, 41, 46, 142  
 virtual reality, 69  
 Vonnegut, Kurt  
   *Galápagos*, 171, 178–79  
 Wagner, Lindsay. *See The Bionic Woman*  
 Wald, Priscilla, 170  
 Watts, Peter  
   *Blindsight*, 77–80, 85–86  
 Wendell, Susan, 6, 11, 99, 132, 144, 146, 151  
 Westfahl, Gary, 14  
 Wexler, Alice, 177, 185, 186  
 wheelchair, 2, 8, 9, 36, 115, 117, 119, 121  
 Wolfe, Bernard, 70  
 Wolmark, Jenny, 131  
 Woolf, Virginia, 49  
 World Science Fiction Convention, 1, 5