

From Bodies to Borders and Beyond: Mutating Boundaries in *Logan*

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First introduced to the comic book world in 1963, the X-Men have since expanded into a global phenomenon with considerable cultural impact. One of the most famous superhero teams of all time, the X-Men are mutants—*Homo superior*, representing the next step in human evolution. Born with powerful abilities that stem from their genes, the X-Men strive for peace and equality between humans and mutants while also confronting anti-mutant bigotry. The politicized world of the X-Men has been interpreted as an allegory for many pressing social justice issues, and arguably serves as the driving force behind the series' lasting legacy.

In addition to toys, video games, and television shows, the X-Men have become the basis of a commercially successful film franchise produced and distributed by 20th Century Fox. First launched in 2000, the series currently consists of twelve films including three interconnected trilogies, with an additional film in post-production.¹ The X-Men film franchise distinguishes itself from the triumph and spectacle of other superhero narratives. Redefining the traditional superhero archetype set forth by Superman and raising deeper concerns than the vigilante justice meted out by Batman, the X-Men embody themes pertinent to the health humanities such as genetics, the mutant body, social discrimination, and—in the case of *Logan*—aging.

The tenth installment in the X-Men cinematic franchise, the 2017 blockbuster *Logan* garnered considerable critical acclaim and box office success.² The film takes place in 2029, a time when the X-Men have disbanded and mutants are on the brink of extinction. Professor Charles Xavier, once the wise and powerful patriarch of the X-Men

and headmaster of an academy for young mutants, is now suffering from a disease which has corrupted his telepathic abilities, while his protégé Logan/Wolverine has become increasingly weak and ill, his formerly limitless regenerative healing powers now impaired. No longer the superheroes they once were, they believe themselves to be among the last of the mutants. They live in hiding in Mexico with Caliban, a pale, ghostly mutant who can sense and track other mutants and is injured by exposure to sunlight.

Their grim, mundane lives are interrupted when Mexican nurse Gabriela López entreats Logan to protect a young girl named Laura—Logan's cloned mutant daughter who has escaped from the U.S. biotechnology corporation Alkali-Transigen, a company that has secretly been breeding and engineering mutant "weapons" in Mexico. When Gabriela is murdered and Caliban captured by the armed forces of Transigen, Xavier, Logan, and Laura embark on a deadly road trip across the Mexico-United States border in search of a mutant sanctuary called Eden, a haven in North Dakota that is rumored to offer safe passage to the north. By the end of the film, Xavier and Logan sacrifice their lives for Laura and the other escapees of Transigen, young mutant children who cross yet another border and flee into Canada.³

With its portrayal of the ailing mutant body and the permeability of geopolitical barriers, *Logan* builds upon traditional superhero tropes that deal with separation, division, and borders. As scholar Jeffrey A. Brown describes, "At its core, the superhero genre is about boundaries. . . . Specific plots are almost irrelevant; what the superheroes repeatedly enact for readers is a symbolic policing of the borders between key cultural concepts—good and evil, right and wrong, us and them. Intertwined with these abstract concepts are corporeal boundaries between male and female, mind and body, self and other, that are just as obsessively and problematically policed by superheroes as the literal borders between nation states are."⁴ *Logan*, however, represents a distinct break from the tradition that has characterized previous X-Men films and other superhero narratives, a disjunction underscored by the film's somber score, muted color scheme, and devastated protagonists. Indeed, the mutant superheroes in *Logan* are unable to effectively police such previously familiar boundaries, instead overwhelmed and burdened by the intersectionality inherent in contemporary political and bioethical issues.

The previous X-Men films question boundaries as well—between mutant and non-mutant human; between human and machine and animal; between peaceable and militant responses to prejudice; between

scientific research and scientific exploitation, and so forth, offering us the opportunity to confront the entangled issues of discrimination, power, and freedom. *Logan* continues and sharpens this trend, managing to feel far more real and far more visceral; indeed, the film reaches into our own lives to a greater extent than its predecessors by blurring the borders between various interconnected themes, such as disability, genetics, geopolitics, and race. The ailing figures of Logan and Xavier, for example, not only contribute to disability discourse in the X-Men franchise, but also, at times, exhibit boundless power and lack of control. This corporeal boundlessness is paralleled—and perhaps even driven by—Transigen’s biotechnological innovations and widescale eugenic practices that have brought mutantkind to the verge of extinction. The remaining few mutants are Black and brown, enslaved by corporate capitalism and anti-mutant bias; they in turn push against geopolitical borders and challenge American exceptionalism, envisioning a less restrictive, more socially just future.

In this paper, we use the concept of boundaries quite broadly in order to examine various intersections and frontiers, including the corporeal boundlessness of dying mutants, the transgressive genetic exploits of Transigen, the permeability of national borders, and the unbounded potential embodied by the remnants of mutantkind. The multi-vocal nature of our approach reflects the respective perspectives of our authors as well as the rich array of topical interpretive lenses which *Logan* invites. In addition to being a comic book adaptation, a superhero film, and another installment in the X-Men franchise, *Logan* offers us the opportunity to consider the boundaries between contemporary bioethical issues that are relevant in past, present, and future.

Corporeal Boundaries and Disability

As superheroes, the X-Men exceed the normative range of humans’ physical capacity—and as mutant superheroes, they also embody a potent force that crosses genetic and natural boundaries. In *Logan*, however, this boundary-crossing is compounded by the specter of illness and death. As Professor Xavier loses control of his psychic abilities and Logan suffers from his attenuating healing factor, they become a danger to themselves and others. In this section, we analyze such boundary-breaching in relation to disability theory, exploring the traumatic resonance of the mutants’ bodily deterioration.

Shunned by society and threatened with government-sanctioned oppression because of their mutant DNA, the marginalized X-Men echo

the struggles of people with disabilities and themes of identity politics. While it is true that these characters are *superheroes*—endowed with impressive “powers”—these abilities are typically accompanied by stigma and ostracism, and are associated with danger within mainstream society. Rather than reinforcing normalcy and labeling different bodies as deviant, however, the X-Men films place socially marginalized characters at the forefront of their own narratives and focus on mutants who must come to terms with their unique bodies. As disability scholars Sharon L. Snyder and David T. Mitchell describe, “[The X-Men films] take up disability as a core element of their storyline, as opposed to showcasing a series of freak encounters. . . . [T]rite attributions of the emotional life of disabled characters—vengeance, innocence, and barely forgivable motives born of tragedy—are swept up into a maelstrom of disability commentary and the plight of postmodern citizenry.”⁵ Opposing forces of social oppression and individual self-acceptance shape the entire cinematic franchise, playing a significant role in installments such as *X-Men: The Last Stand* (2006), in which a drug is developed that “cures” mutants of their “disease,” and *X-Men: First Class* (2011), in which a blue-skinned character adopts the ethos of “mutant and proud.” *Logan*, too, engages with disability discourse: Caliban, for example, is able to sense and track other mutants but is easily burned by sunlight, a weakness exploited by Transigen, while Laura, empowered with adamantium claws and a healing factor like her genetic father, is mistaken as mute because of her taciturn demeanor.

The X-Men are hardly unique in this regard; as José Alaniz argues in *Death, Disability, and the Superhero: The Silver Age and Beyond*, the very concept of the seemingly invulnerable superhero represents a human concern with mortality and the limitations of the body. The superhero is defined by its powerful abilities, pushing at the boundary of human capacity, brimming with “strength, control, unboundedness—an utter disavowal of fleshy fragility,” enacting an “erasure of the normal, mortal flesh” and compelling the viewer or reader to envision new possibilities of physicality.⁶ Yet whereas the majority of superheroes push and redefine bodily borders, mutant superheroes such as the X-Men also provoke a particular reexamination of *social* boundaries and hierarchies.⁷ According to Scott Bukatman, “The mutant body is explicitly traumatic, armored against the world outside yet racked and torn apart by complex forces within. The mutant body is oxymoronic: rigidly protected but dangerously unstable. In its infinite malleability and overdetermined adolescent iconography, the mutant superhero is a locus of bodily ritual.”⁸ The body of the mutant superhero is both

liberated and restricted, impacted by inner and outer forces: the uncontrollable biology that manifests itself in the form of superpowers and the unrelenting society that opposes any deviation from the norm.

While the superhero's "illusory promise of bodily integrity and transcendence" has already provided fertile ground for scholars exploring disability discourse and theory,⁹ the theme of mutancy specifically—linked as it is with genetics and biomedicine—adds another dimension to such interpretations. In some instances, the superpower itself "'overcompensates' for a perceived physical defect, difference, or outright disability[,] . . . replacing it with raw power" and transforming the superhero into a "supercrip," a term in disability studies which refers to the glorified person who has "overcome" the challenge of disability in particularly heroic fashion—itsself, as Alaniz explains, a highly problematic trope.¹⁰ Professor Xavier, leader of the X-Men, is perhaps the most famous example, gifted with epic psychic abilities that "compensate" for his use of a wheelchair. The metaphoric resonance of Xavier's status as a supercrip is notably explored in the film *X-Men: Days of Future Past* (2014), in which Xavier reveals that he can walk only when using a drug that suppresses his mental powers; he is "the ultimate supercrip" whose "disability and powers are inextricably linked."¹¹ In addition to examining the trope of the supercrip, Alaniz proposes the concept of the "borderline case," in which "the deformity or disability, far from hidden, presents as the superpower itself."¹² These borderline cases are uncertain and indeterminate, blurring the boundaries between good and evil, invisible and visible, and stability and instability with their "adversarial" bodies.¹³

Following in the footsteps of previous X-Men films, *Logan* builds upon this disability discourse while restructuring key concepts in relation to the boundaries of the mutant body. No longer a supercrip, Xavier supersedes the borderline case and becomes a "boundless" entity, a seemingly senile mutant whose powers are uncontrollable and devastating in their impact. He suffers from an unnamed neurodegenerative disease that corrupts his psychic abilities and—left unmedicated—produces traumatic psychic seizures that endanger those around him. Indeed, the film strongly suggests that Xavier inadvertently killed the X-Men—his own adopted family—during one of his episodes. Xavier, usually depicted as a stoic patriarch, is now infantilized and cared for by Caliban and Logan, who force Xavier to take medication that will subdue his telepathy. Xavier's situation in *Logan* is a recapitulation of one of the main plotlines from *The Last Stand*, though now with roles reversed: as mentor to the mutant Jean Grey, Xavier invades

her mind in order to save her from her destructive dual personality that dubs itself Phoenix, “a purely instinctual creature, all desire and joy and rage.”¹⁴ Xavier is convinced that Jean is incapacitated by her abilities, propelling him to psychically control her, arguably enacting a medical model of disability¹⁵—yet his intervention is seemingly justified, as when her powers are unleashed, a newly awakened Jean kills her lover, Scott Summers, as well as Xavier himself. Where Jean was once disabled by her alternate persona in *The Last Stand*, Xavier is now disabled by his psychic seizures in *Logan*.

Like Jean, Xavier becomes a “boundless” case whose superpower presents as a dangerous impairment. In *Logan*, Xavier’s telepathic abilities are so unpredictable that his own brain is classified as a “weapon of mass destruction” by executive agencies. In many ways, Xavier evokes characteristics of the borderline case, which “foreground[s] the ‘problem’ of excess, uncontrollable bodies, acting as generic destabilizing forces.”¹⁶ Xavier, however, takes this destabilization to a new extreme as he becomes an entity whose powers literally erupt from his body and torture others around him. Xavier erases the borderline and destroys all corporeal boundaries: his “energies that are normally unleashed only in battle now continually overspill [his] fragile vessel.”¹⁷ This boundlessness is devastating and fatal, but at the same time, also serves to emphasize Xavier’s enduring wisdom and humanity. Xavier’s fundamental power of love remains intact, becoming the driving force behind Logan’s redemption. He functions as Logan’s moral compass, offering him guidance and showing him the path to salvation by protecting Laura and the future of mutantkind. Similarly, although Jean Grey is conquered by her alternate persona, she is still able to recognize the inherent cruelty of Phoenix’s destruction and exercise her compassion; Jean sacrifices herself in order to save the rest of her family in *The Last Stand*, while Xavier dies for Laura’s future in *Logan*. Although destabilized by their excessive abilities, both Jean and Xavier redeem and reclaim their humanity. Indeed, both the boundlessness and lack of control accelerate to the point at which they destroy themselves in service of the greater cause.

Logan, too, offers a case of dissolving boundaries alongside Xavier. In the film franchise, Logan is essentially immortal, having been alive since the early nineteenth century—his regenerative healing powers enable him to survive any wound or injury, no matter how severe, which make him the perfect candidate for the Weapon X Program, a covert government research endeavor that gives him his iconic adamantium metal claws in a gruesome procedure depicted in

X-Men Origins: Wolverine (2009). Logan has long been “a subjected and colonized figure” of sorts, yet he has always been manifestly powerful.¹⁸ In *Logan*, however, he is nearly unrecognizable when compared to his previous filmic incarnations: no longer the virile and aggressive Weapon X, Logan is visibly weak, battered, and aged, his regenerative abilities in decline. With his healing factor impaired, Logan’s own adamantium skeleton has begun to poison him, leading to an excruciatingly prolonged decline as he self-medicates with alcohol. Logan’s own mutant abilities increase his mortal suffering: he outlives all of his companions and is unable to die quickly or easily because of his remaining healing factor. Thus his body becomes boundless in a new, vulnerable fashion, slowly yet constantly bleeding throughout the film. His suffering appears boundless and eternal, too, like Prometheus’s daily torture in which his liver is devoured by a bird only to then regenerate, allowing the punishment to recur the next day and the next. Logan’s eventual death arrives as an act of mercy for both him and the audience, who have followed Logan throughout his journey and witnessed his apparently limitless suffering. Only in death is Logan’s pain able to cease and his humanity restored.

Logan’s final battle involves him confronting his clone, the depraved X-24, engineered by Transigen as a mutant killing machine “without a soul.”¹⁹ A body that is at once similar and dissimilar to Logan’s own, X-24 represents the complete consummation of Logan’s scientific and corporeal colonization. Its incomplete consummation, on the other hand—the very *failure* of scientific interventions like his adamantium-laced skeleton and claws, and the green serum that offers a final boost of superhuman strength, but, if taken in too large doses, will kill him—is actually a liberation from his unwilling enslavement to technology. To construct X-24, Logan’s genetic material was stolen and manipulated without his consent, a process erasing the known boundaries of reproduction and reproductive ethics. That the climax of the film pits Logan against his evil clone serves as a reminder that Logan is defined by the scientific exploitations and invasive procedures that continually undermine his bodily autonomy. His death, then, in service of eradicating his clone, represents an end to the breaching of his bodily autonomy through “research” and cloning both.

In their respective declines, then, Xavier and Logan are stripped of their armor and split open, in a sense—flowing and boundless. This deterioration of the potent mutant body figures their disability as well, as the specter of unwelcome visible difference is a notable characteristic of disability. As Rosemarie Garland-Thomson writes,

“Even if disability is not apparent, the threat of its erupting in some visual form is perpetually present. Disability is always ready to disclose itself, to emerge as some visually recognizable stigmata, however subtle, that will disrupt social order by its presence.”²⁰ These characters’ own uncontrollable bodies become their worst enemies: whereas Xavier’s powers haphazardly erupt from his diseased brain and strike those outside his body, Logan’s powers are internalized, staving off metallic poison and painfully elongating his death. Xavier depends on medication that subdues his psychic seizures, while Logan relies upon alcohol in order to cope with his physical and mental torture—but for both these are only temporary salves. Thus, unlike traditional superheroes who represent “an utter disavowal of fleshy fragility,”²¹ Xavier and Logan become the very embodiment of fleshy fragility with their weakened bodies and turbulent abilities, a boundlessness that also accentuates their inherent mortality. If the figure of the superhero is a response to human concerns about the body, then *Logan* delves into this anxiety in order to reveal the trauma of boundlessness as well as the endurance of humanity.

Contemporary Genetics and Personal Boundaries

In his 2007 work on eugenics in science fiction cinema, David A. Kirby argues that many science fiction films, including the X-Men series, “portray for the public what is essentially a debate over an abstract entity, the nature of human heredity.”²² More recent X-Men films have engaged with this debate by embodying legitimate anxieties about the influence of genetic engineering. In this section, we analyze how the biotechnology corporation Alkali-Transigen not only fosters the near-extinction of mutantkind in *Logan*, but also clandestinely manipulates genetic mutancy for its own corrupt gain. In doing so, the film invokes contemporary anxieties concerning the potential effects of genetic research and technology.

While the X-Men franchise usually portrays a world in which mutancy is widespread, *Logan* departs from its predecessors by taking place in an era in which it has nearly been eradicated. Although *Days of Future Past* begins with a similar concept, showing mutants imprisoned in concentration camps as Sentinels seek out and destroy the remaining X-Men, *Logan* depicts a world in which the gradual attenuation of mutants has already occurred in a less dramatic fashion alongside other societal and environmental shifts. We first learn of this context

through a radio program in which one apparent conspiracy theorist calls in to say, “Everyone’s asleep . . . Sleepwalking between the ice caps, pornographers, poisoned water, mutants . . . It’s all connected.” The caller is quickly dismissed by the radio host, who retorts, “It’s 2029. Why are we still talking about mutants?”²³ Yet by the end of the film we learn that this change was in fact “scientifically” orchestrated by Dr. Zander Rice of Alkali-Transigen, revealed as “the man who wiped out [mutant]kind” through his implementation of widescale genetic modification, including changes to food and water. If the film franchise intends for the audience to identify with its mutant protagonists, then the eradication of mutants in *Logan* propels the viewer to seriously consider the consequences of genetic modifications and other technological and social shifts that are taking place today. In addition, the gradual, covert, and conspiratorial nature of these changes in the world of the film signals the viewer to be alert to such changes in the viewer’s own world.

Interestingly, Transigen does not necessarily view its scientific interventions as a means to effect wholesale extinction of mutancy. After Donald Pierce, leader of the Reavers—Transigen’s band of enforcers—praises Rice for “wiping out” mutantkind, Dr. Rice is quick to clarify that “the goal wasn’t to end mutantkind, but to control it.” He explains, “I realized we needn’t start perfecting what we eat and drink. We could use those products to perfect ourselves, to distribute gene therapy discreetly through everything from sweet drinks to breakfast cereals, and it worked. Random mutancy went the way of polio.”²⁴ Like Magneto’s villainous plan to induce widespread mutation in *X-Men* (2000), Transigen accomplishes its goals by manipulating mutancy rather than eradicating it. Such interventions echo nineteenth-century eugenicist Francis Galton’s view that since man was now “endowed with a little power and intelligence, he ought . . . to awake a fuller knowledge of his relatively great position, and begin to assume a deliberate part in furthering the great work of evolution.”²⁵ Indeed, as Kirby notes in his account of eugenics in science fiction films, the scientific impulse towards bodily perfection through some form of eugenics has been present ever since Galton coined the term in 1883; yet it was “the developments in genomics, genetic engineering, and reproductive biology in the 1980s and 1990s [that] have placed the eugenic goal of correcting and perfecting the human genome within our reach.”²⁶ Thus when Dr. Rice speaks about perfecting and controlling the human body, he is following in a long line of historical scientific researchers who have attempted to do just that.

Indeed, Dr. Rice soon progresses from controlling random mutation in a widespread disseminated form to controlling mutation in the form of weaponized mutant bodies, transgressing ethical and genetic boundaries in order to produce weapons for the military-industrial complex. Dr. Rice's efforts are ultimately consummated with the creation of X-24, an entirely subjugated body whose mutation and maturation are dominated by biotechnology. In *Logan*, all of these interventions remain clandestine, compelling the audience to reflect on our tacit acceptance of real-world practices that are similarly invisible. Thinking not only of preimplantation genetic screening, selective abortion, and the increasing role of pharmacology in regulating behavior, but also of the gene-editing technology CRISPR, the audience is left to wonder whether their own genes are also subject to exploitation, manipulation, and even extinction.²⁷

While Dr. Rice strives for the most extreme of these outcomes, there are countless ways scientific and business interests today are altering our environment and the foods we consume. For example, there is currently debate regarding the genetic modification of allergenic plants so as to reduce the symptoms of allergy sufferers.²⁸ These hypoallergenic plants would be useful to people who otherwise have to avoid allergens in food or pollen,²⁹ yet the ecological impact is impossible to fully predict; the classic Frankensteinian specter of unintended consequences is ever-present. These uncertainties are made all the more unsettling when genetic modification is "distributed discreetly," as Dr. Rice describes in the film—and indeed, the relative secrecy of scientific research and the proper degree of societal oversight are key themes in contemporary bioethics. From its depiction of Will Munson—a farmer who is being pushed off of his land by GMO (genetically modified organisms) corporations—to Dr. Rice, the "mad scientist" who compares his eradication of random mutancy to that of polio, *Logan* takes on Ellen-Marie Forsberg's challenge to remain mindful of value pluralism when evaluating the ethics of using GMOs like those of the agrochemical company Monsanto, or in this case, the "transgenic" alterations made by the fictional Transigen.³⁰

Another example of such tension in *Logan* is the public suspicion about the water supply and its role in ending mutancy, first in the stifled outburst of the "conspiracy theorist" mentioned earlier (apparently correct in his suspicions) and later with the subheading of a newspaper article that asks, "Is something in the water?" Later, of course, Dr. Rice explicitly takes credit for altering "what we eat and drink"—but again, this is not a public statement. This issue in

the film echoes real-world controversies about drinking water quality and fluoridation, a public health measure which has been widespread in the United States since the 1940s and has been, at various times, the subject of skepticism and debate as well.³¹ Indeed, while many in the dental health community argue that fluoridation has significantly decreased the amount of tooth decay in predisposed communities, offering “the most effective method of reaching the whole population irrespective of any other ways of getting access to dental care,” some studies raise suspicions about its putative effects, from developmental disorders to infertility.³² Fluoridated water has even “been shown to be mutagenic, i.e. to cause chromosome damage, and interfere with the enzymes involved in DNA repair”—a fear, or possibility, echoed by the suggestion that the water supply in *Logan* has altered the genes of the public.³³ Such connections between historical concerns and the fictional themes of *Logan* serve to bridge the world of viewer and film, enacting the potential consequences of scientific interventions. Moreover, the fact that fluoridation concerns have ebbed in recent years speaks to the tendency for the public to accept technological change over time, growing less wary of potential consequences.

By shedding light on the societal and individual effects of different forms of genetic modification, *Logan* challenges its audience to bear witness to biotechnological advances that are often overlooked. Indeed, fictional films play an important role in the public’s awareness of such issues; as Meyer, Cserer, and Schmidt point out, “by proposing concrete, although fictive examples and stories, films certainly intervene in the public debate and may, consequently, influence their audience’s position in ethical and social issues raised.”³⁴ In creating a narrative in a setting that is much more familiar to the viewer than the typical *X-Men* film, *Logan* allows the audience to speculate about the potential effects of genetic modifications for good or ill. And by highlighting potentially unseen powers and presenting these scientific issues to a global audience, *Logan* invites us to engage more actively with the ethical considerations of this contemporary debate.

The United States and National Borders

In this section we explore the significance of the U.S. geographic borders in *Logan*. They are both porous—reflecting the reach of international corporate capitalism into Mexico—and impermeable, as is apparently the case at the Canadian frontier. The film’s re-figuration of

national boundaries reflects an evolving conception of American ideals in the superhero genre, with a timely interrogation of the narrative of American exceptionalism.

The superhero genre in the United States traditionally reflects and engages with both the ethos of American values and the myths of American exceptionalism. As Alaniz describes, the superhero comic represents “a rich ‘mirror universe’ of American society,”³⁵ with superheroes themselves creating a “shorthand not only for American popular culture, but for American values and their perception as . . . fascism as well.”³⁶ The X-Men, in turn, offer an alternate microcosm of American society; with their ethnically diverse members from across the globe, they embody a multiculturalism that exemplifies the integration of American ideals.³⁷ This theme is particularly relevant to the film franchise, in which the X-Men are portrayed as a primarily American team rather than the multinational collaboration depicted in the comics.³⁸

Nevertheless, in both media, these diverse X-Men are a band of outcasts who seek to reform and improve American society. In their fight for progress, freedom, and individuality, the mutants embody the resistance against fascist dystopias. As Matt Yockey writes, “The mutant body stands in generic social difference within the national collective[,] . . . simultaneously acknowledging and accepting difference as a central tenet of the utopian enterprise of the nation.”³⁹ The comics and films often engage with American history and symbolism as well: the final battle in *X-Men*, for example, takes place at the Statue of Liberty, while the climax of both *X2: X-Men United* (2003) and *Days of Future Past* involve a confrontation with the President of the United States. Visually, thematically, and symbolically, then, the X-Men are firmly rooted within the matrix of American culture. From this standpoint they are poised to interrogate its adherence to stated ideals of inclusivity, diversity, and the battle against tyranny.

Logan, however, depicts neither U.S. landmarks nor the U.S. government in any meaningful capacity. Instead the nation is one which has wasted away, epitomized by the young white men who drive alongside the U.S.-Mexico border chanting “U.S.A! U.S.A.!” in the film’s opening scenes—present only in ugly jingoism (beyond-uncanny timing, as the film was released precisely six weeks after President Donald Trump’s inauguration). Indeed, an unethical breed of corporate capitalism dominates to the extent that the significance of the U.S. as a nation-state has waned considerably and does not function as a positive symbolic presence—perhaps an accurate portrait

of our present reality, or the inevitable consequence of neoliberalism, depending upon one's view. Here the permeability of the U.S.-Mexico border gestures toward what Gloria Anzaldúa terms "*la crisis*"⁴⁰ and betrays the power of unchecked private enterprise: the American biotechnology company Alkali-Transigen can reach into Mexico, finding Logan, Xavier, and Caliban hiding in a decaying smelting plant in Juárez—a bleached skeleton, casualty of the global economy—and can conduct its weaponized mutant-breeding program in Mexico City, easily traversing both geopolitical and genetic boundaries, as its name implies (*trans-i-gen*). In its exploitation of Mexican bodies such as the mutant children and their mothers—"Mexican girls who no one can find anymore," according to Gabriela López⁴¹—Alkali-Transigen is a neocolonial force, "the worst kind of imperialism," as Kwame Nkrumah describes, representing "an attempt to export the social conflicts of the capitalist countries."⁴² Similar to Transigen's illicit operations in Mexico, "the result of neo-colonialism is that foreign capital is used for the exploitation rather than for the development of the less developed parts of the world."⁴³ In *Logan*, mutantkind is only one of the victims of such neocolonialism.

When the children flee across the Mexico-U.S. border, they evoke the path of immigrants fleeing persecution and seeking a new home—a prototypical narrative of the United States. One might expect them to experience the classic X-Men struggle for survival and justice, stories which, according to Rayna Denison, "have always been about marginal characters . . . used to critique American society."⁴⁴ In Yockey's words, "As physically different bodies within the physical space of the nation, the mutant calls into question their political legitimacy in the eyes of the non-mutant. In this way we see the utility of the mutant superhero as a stand-in for immigrants—or for groups labeled 'different' on ethnic or religious grounds—in American society."⁴⁵ Yet, significantly, this struggle does not play out within the U.S. in *Logan*, and the film does not resuscitate a narrative of a U.S. which ultimately—often after much struggle, and always imperfectly—embraces diversity and protects those who are threatened against harm. Instead, the mutant children in *Logan* remain unseen, illegitimate in the familial sense (born of "special seeds in bottles"), in the scientific sense (referred to as "failed experiments" by their creators), and in the political sense, unworthy of protection by U.S. government and society. For *Logan* is not a recapitulation of the previous X-Men stories, and the children are not figured as immigrants—instead, they are slaves.⁴⁶ As Dr. Rice tells a Transigen nurse: "Do not think of them as children. Think of

them as *things*, with patents and copyrights." They are property, a form of capital, kept in captivity in a colonial outpost, exploited or disposed of as necessary. The children arrive in the U.S. not to fight for their freedom within American society but in order to escape it, following the same trajectory as some slaves did in the American South, traveling northward in a modern-day Underground Railroad to find liberation in another nation: Canada.⁴⁷

The rumor of Canada as a safe space for mutants, in fact, originates from a collection of superhero comics detailing the heroic exploits of the X-Men. The mutant children of Transigen eagerly read these stories, tales which describe the mysterious location of Eden as a temporary sanctuary. Logan dismisses Eden as pure fantasy, "bullshit" that offers a distorted version of reality—but by the end of the film, he is shocked to discover that Eden does indeed exist in North Dakota. If the superhero comic, as Alaniz explains, offers "a rich 'mirror universe' of American society," then the metafictional superhero comics in *Logan* also offer the children hope—hope for a place that fosters inclusion and tolerance.⁴⁸ The climactic battle that takes place in Eden at the cusp of the Canada-U.S. border, therefore, becomes the politicized nexus of mutancy, the mutant body, and purported American ideals. The journey toward Eden suggests some sort of return to a natural, more innocent state separate from the rest of the U.S., an escape from Transigen's genetic exploitation. Logan's sacrificial death in the idyllic forests of Eden—his literal and metaphorical fall—offers the children a new beginning as they flee to Canada and move beyond the realm of Eden, transcending geopolitical strife and traumatic colonization. It is perhaps fitting, then, that Canada is never depicted in the film, existing instead off-screen as a mythical promised land. The children's escape into a country where Alkali-Transigen has no power not only consummates the escapee slave narrative, but also enacts a restoration of geopolitical boundaries by the end of the film. The U.S. flagrantly exploits national borders in favor of neocolonialism and corporate power, but the very existence of Canada as a nation untouched by American corruption guarantees the mutant children freedom and safety.

In its narrative of mutant children seeking freedom from the U.S. and its exploitive corporate reach, *Logan* dismantles the myth of American exceptionalism, and such historical resonance is figured in its deliberate use of the 1953 film *Shane*, which figures prominently in *Logan*. As an exemplar of the distinctly American genre of Western films, *Shane's* protagonist fights for American values of freedom and righteousness, sacrificing to free farmers (echoed by the Munson

family in *Logan*) from the clutches of nefarious rancher-thieves. Yet the homesteaders' putatively lawful claim to their land is of course forged by European settlers' expropriation and genocide towards Native Americans. In reenacting the premise of *Shane*, *Logan* exposes the myth of American freedom by depicting the endpoint of a nation founded upon genocide and slavery: a land in which the race of mutants is destroyed and non-mutant humans are subjugated to capitalism, controlled by corporate forces and unseen genetic modification in their food and water. With the destruction of American ideals a fresh beginning seems possible, and Logan's sacrificial death in the forests of Eden ultimately allows mutantkind to start anew, giving the children an opportunity to forge their own path in his own homeland, Canada. As the Mexico-U.S. border dissolves in the face of corporate capitalism, the U.S.-Canada frontier becomes curiously inviolable, restoring a safe haven for the children and guaranteeing the future of mutantkind.

Race, Gender, and Futurity

The lasting popularity of the X-Men may lie in its allegorical flexibility, its firm message of tolerance and acceptance, or both. Mutancy has served as an allegory for various forms of Otherness, but in all incarnations of the X-Men, "[t]he Other is not represented monolithically and consistently; instead, it is a shifting signifier, a moving target that blurs the boundaries between in-group and out-group, dominant and subdued."⁴⁹ This capaciousness has made the X-Men an all-encompassing metaphor for internally diverse marginalized communities who face pressing social justice issues, including those facing ableism, homophobia, and most notably racism. In this section, we examine how *Logan* departs from its filmic predecessors and breaks boundaries with its depiction of race and gender. Furthermore, we discuss how *Logan* addresses medicine's historical exploitation and abuse of racial minorities and provides an avenue for social justice.

Created by Stan Lee and Jack Kirby, the X-Men comic book series was first published in 1963—yet most readers forget that this incarnation was largely a failure, nearly unrecognizable from contemporary depictions of the X-Men. The original run, with its cast of all-white characters, struggled to gain popularity and attract sales, after which it was discontinued in the late 1960s. The X-Men series, however, soon reappeared in 1975—after the African-American Civil Rights Movement—under the direction of Len Wein, Chris Claremont,

and Dave Cockrum, along with a more diverse group of superheroes and a social consciousness that arguably contributed to its success. As Ramzi Fawaz argues, "In the case of the original *X-Men*, the failure to explicitly articulate mutation to race, gender, and sexuality evacuated the political purchase of the category by leaving it an empty placeholder for a variety of real-world difference. . . . By expanding the racial, geographic, and gender makeup of the mutant species to include characters and identities previously ignored by the series, the new *X-Men* articulated mutation to the radical critiques of identity promulgated by the cultures of women's and gay liberation."⁵⁰

Although race is the most common paradigm used to understand the *X-Men*—certainly within the fan community—this interpretation comes with certain flaws, inconsistencies, and troubling implications. The white characters of Professor Xavier and Magneto, for example, have long been viewed as representing civil rights activists Martin Luther King, Jr. and Malcolm X, respectively. This provocative allegory is not only imperfect, but also contributes to white hegemony and the erasure of Black bodies in the *X-Men* franchise.⁵¹ Indeed, "[t]o appropriate these philosophies onto the bodies of white mutants is to both whitewash these struggles and to do very little to challenge the structures of power themselves."⁵² Furthermore, by chronicling the heroic exploits of white male heroes, the comic book series misuses its own metaphor and even allows white male readers to "appropriate a discourse of marginalization."⁵³ Following this critique, rather than advocating tolerance and empowering racial minorities, the *X-Men* franchise paradoxically depicts a whitewashed narrative that may even contribute to reverse racism.

These issues are manifest in the films as well. By placing white characters at the center of its films, the *X-Men* franchise "distan[ces] its struggle for equality from the civil rights struggles that it liberally borrows from."⁵⁴ As Jason Smith argues, the *X-Men* films appropriate a civil rights narrative and adopt a "white racial frame" that "values and privileges the white racial category over other racial groups."⁵⁵ The white racial frame is primarily achieved through the character of Logan, who represents the white savior and embodiment of hegemonic masculinity. Logan is perhaps the most iconic member of the *X-Men*; besides Deadpool, he is currently the only *X-Men* character to headline his own solo films, which include *X-Men Origins: Wolverine* (2009), *The Wolverine* (2013), and *Logan* (2017). For the audience, Logan becomes "an anchor point for a majority of the action scenes and a protagonist for most of the *X-Men* films' plots."⁵⁶ With his muscular frame and

aggressive behavior, Logan represents “nostalgia for a morally absolute brand of dangerous masculinity.”⁵⁷ These characteristics are present in *Logan* as well: although weak and aged, Logan is still the titular character, adopting the role of a white Western outlaw raging against authority and injustice.

Whereas Logan is the most prominent character in the X-Men film franchise, his fellow mutants of color are relegated to limited roles. Nonwhite characters are often depicted as villains: Magneto’s Brotherhood of Mutants in *The Last Stand* is largely composed of racial minorities, while an Egyptian mutant called En Sabah Nur serves as the primary antagonist in *X-Men: Apocalypse* (2016). When nonwhite mutants do appear as allies of the X-Men, they are usually sidelined with minimal screen time. The Black mutant Darwin, for example, is the first character to die in *First Class*, while Storm, a powerful Black mutant and matriarch in the comics, has a significantly reduced role in the films.⁵⁸ The disparity between the depictions of white and nonwhite mutants in the film franchise is most noticeable in *Days of Future Past*, which explores the concept of futurity by taking place in two different timelines. While Logan travels back in time to 1973 in order to rewrite history with the help of white mutants, the remaining X-Men join forces with a group of nonwhite mutants at a Chinese temple in the dystopian future. In the climactic final battle against the Sentinels, every single mutant of color—including Storm—dies protecting the temple, while virtually all of the white mutants survive. As the Brazilian mutant Sunspot tells the X-Men in an alternate version of the film called *The Rogue Cut*, “You’re asking us to sacrifice our lives for a future we might not even be a part of.”⁵⁹ The deaths of only the non-white mutants “feels particularly uncomfortable in a series based on the value of diversity and the wrongheadedness of prejudice,” and also contributes to the white racial frame and erasure of people of color in the future.⁶⁰ By the end of both versions of the film, in which history is rewritten and the dystopian tomorrow averted, Storm is the only mutant of color shown to be alive in the alternate future. Indeed, the fate of Sunspot and the other mutants of color in the new timeline is never explained. Although *Days of Future Past* creates a time-bending narrative complete with “endless possibilities and infinite outcomes,” the film is ultimately limited in scope, reinscribing racial minorities in liminal roles and denying them access to a better future.

Logan, however, addresses the white racial frame by blurring ethnic boundaries and including pivotal characters who are also racial minorities. The mutant children are multiracial and multi-gendered,

composed of Black and brown boys and girls—essentially human chattel owned by Transigen, as we have discussed, subject to inhumane tests and experiments in order to transform them into weapons. The corporation not only seeks to euthanize the mutant children, but also kills Mexican nurse Gabriela López and the Black Munson family who attempt to defend their mutant guests. This explicit suffering and persecution of bodies of color by Transigen echoes the long history of scientific exploitation of racial minorities and medical justification of such abuse.⁶¹ By depicting these mixed-race mutants as sympathetic protagonists who are victims of the military-industrial complex, *Logan* moves the issues of race and social justice from troubling allegorical interpretation to the forefront of the narrative.

By the end of *Logan*, the deaths of Xavier and Logan—white patriarch and son—ultimately sacrifice the masculine emphasis and white racial frame that have shaped the X-Men franchise. While Logan's death for the mutant children's sake incontrovertibly enacts a white male savior trope, it also represents an act of paternal love that subverts the "singular, biological, and essential notion of traditional white maleness" with which he has often been associated.⁶² The death of Wolverine, in fact, allows Laura—a female mutant of color who is just as capable as her white male progenitor—to finally assume his mantle; after all, Laura is the one who successfully kills the evil clone X-24 during the film's climax. Laura's role as a powerful mutant who becomes Logan's successor is a refreshing twist in the X-Men film franchise, especially since previous depictions of female mutants often involve them being disempowered or existing as objects of desire.⁶³ In a world without Logan, his daughter Laura—young, female, and Latinx—becomes the embodiment of boundless potential.

With Xavier and Logan sacrificing their lives, the film shifts the white racial frame in order to move towards a multiracial and multi-gendered future. The conclusion of *Logan* is essentially the opposite of that of *Days of Future Past*: rather than showing white mutants survive at the expense of characters of color, *Logan* depicts a future in which the mutants of color succeed and survive. The journey of these multiracial children—from Mexico to Canada, danger to safety, persecution to liberation—ultimately echoes the possibilities of racial and social reimaginings proposed by "visionary medicine." A radical epistemological framework that combines speculative fiction and racial justice, visionary medicine advocates for "a type of practice that breaks from medicine's racist and colonialist past, a type of practice that recognizes and commits to addressing present-day injustices and

imagining more just futures for all" through the "disrupt[ion] [of] traditional boundaries of difference."⁶⁴ The final shot of the film is particularly powerful in this light, focusing on Logan's grave as the children cross the border into Canada, unbounded and unrestrained, in search for a better life free from oppression. Thus the film recapitulates the sacrificial narrative of *Shane*, but now in the service of multiracial and multi-gendered children rather than a group of white homesteaders (who themselves have stolen the land from Native Americans). Indeed, the struggle for racial justice which the X-Men franchise so heavily evokes crosses a crucial boundary in *Logan*; by sacrificing the white racial frame predominant in the series, suffering Black and brown bodies inherit the future and represent the sole hope for mutantkind.

Conclusion

In his 2006 analysis of *The Last Stand*, radio journalist Mike Pesca argues that although the climactic finale presents a mirror on contemporary social issues, the film still holds this reflection at a distance. Summarizing a claim made by other critics of the genre,⁶⁵ Pesca concludes that "the escapism of super heroes and flaming cars, or just watching any story in two dimensions, makes it hard for us to truly engage in a debate, no matter how well presented."⁶⁶ More than a decade after the conclusion of the original X-Men film trilogy, *Logan* offers a response to this critique by taking as its setting a world that is eerily similar to our very own. Rather than providing an escapist superhero spectacle, *Logan* presents a grounded reality laden with pressing social, political, and bioethical themes. The film's sense of self-awareness is particularly reminiscent of comic book stories that began to appear following the mid-1950s, a period of time known as the Silver Age. Although Benjamin Woo argues that terms such as "Silver Age" and "Golden Age" are misleading and unable to properly demarcate historical eras, they continue to play an integral role in fan culture and market discourses.⁶⁷ As Charles Hatfield describes, "Silver Age superhero comics differed from their Golden Age forebears in that they exhibited self-consciousness about the genre—that is, a historical memory and reflexive self-awareness, an understanding that superhero comics constitute a discrete genre with an experienced audience and with conventions that are at once generative and restrictive."⁶⁸

Building upon traditional superhero tropes of corporeal and social boundaries, *Logan* engages with them in new ways, often effecting

new models and inverting old tropes. Moreover, *Logan* demonstrates that contemporary issues such as disability, genetic modification, geopolitics, and race are interconnected and intertwined, their boundaries permeable and porous. The ailing mutant body is juxtaposed with Transigen's biotechnological innovations and eugenic practices, which in turn push against geopolitical borders and challenge American exceptionalism. Likewise, the shifting matrix of geopolitical barriers parallels the mutant body's ability to redefine racial boundaries and change the future. Indeed, any single interpretive stance is insufficient and reductive; although we have divided our paper into respective sections dedicated to a specific theme, these boundaries must be breached, as each topic cannot be fully examined without invoking the others.

Similarly, with its pervasive reflexivity, the film breaches personal boundaries and refuses to relieve the viewer of discomfort or implication. Perhaps the film becomes a cyborg in and of itself, a film that is more than just a film, an entity composed of what Donna Haraway describes in "A Cyborg Manifesto" as "transgressed boundaries, potent fusions, and dangerous possibilities which progressive people might explore as one part of needed political work."⁶⁹ Indeed, *Logan* is redolent with topical political messages that must be recognized and examined, a fact acknowledged by the film's own cast. As Patrick Stewart, who portrays Professor Xavier, stated at the 2017 Berlin International Film Festival, "We are affected by the changing times. You present your part as a person influenced by the times. . . . If people want to take messages from this film, then we have done a good job."⁷⁰

As a staple of popular culture, X-Men narratives such as *Logan* both reflect and inform our understanding of superheroes, power, and health. The individual responses evoked by the film can be used as a powerful educational tool as well as a means of reevaluating personal views and prejudices. These tales offer us the opportunity to become more aware of how boundaries are constituted in our own society, experience, and reality. The X-Men franchise has always been imbued with allegorical resonance, but the world of *Logan* comes closer to the world of the spectator than previous films. *Logan* crosses our own personal boundaries and evokes an uncanny closeness through its storyline and characters, causing us discomfort at our implication. As Haraway explains about the dueling natures of the cyborg, "This is a struggle over life and death, but the boundary between science fiction and social reality is an optical illusion."⁷¹ With its timely themes and pedagogical utility, *Logan* represents a cinematic achievement that com-

pels us to expand our horizons, broaden our perspectives, and better understand—perhaps even overcome—our own boundaries.

NOTES

1. The future of the X-Men film franchise is currently unclear given the 2019 acquisition of 21st Century Fox by The Walt Disney Company (Kit and Couch, “X-Men Franchise”).

2. Wittmer, “Why Critics.”

3. The 2017 film is loosely inspired by the events of the 2008 comic book storyline *Old Man Logan*, set in an alternate future in which superheroes have been vanquished by supervillains.

4. Brown, “Supermoms?” 78.

5. Snyder and Mitchell, *Cultural Locations*, 167.

6. Alaniz, *Death, Disability, and the Superhero*, 6.

7. Bukatman, “X-Bodies,” 68.

8. Bukatman, “X-Bodies,” 51.

9. Alaniz, *Death, Disability, and the Superhero*, 31.

10. Alaniz, *Death, Disability, and the Superhero*, 36.

11. Benham, “Reframing Disabled Masculinity,” 169.

12. Alaniz, *Death, Disability, and the Superhero*, 87.

13. Alaniz, *Death, Disability, and the Superhero*, 88.

14. *X-Men: The Last Stand*.

15. Ilea, “Mutant Cure,” 176.

16. Alaniz, *Death, Disability, and the Superhero*, 88.

17. Bukatman, “X-Bodies,” 68.

18. Bukatman, “X-Bodies,” 73.

19. *Logan*.

20. Garland-Thomson, “Seeing the Disabled,” 347.

21. Alaniz, *Death, Disability, and the Superhero*, 6.

22. Kirby, “Devil in Our DNA,” 85.

23. *Logan*.

24. *Logan*.

25. Burnett, “Mad Genetics,” 59.

26. Kirby, “Devil in Our DNA,” 83.

27. An online blog post by Synthego, a genome engineering company that provides RNA kits designed for CRISPR genome editing and research, considers “how CRISPR could create a new generation of X-Men superheroes.” The blog post muses, “[I]t is possible that CRISPR technology could be the route that would allow us to start selecting our own superpowers. . . . You may not be creating the X-Men, but you’ll be creating the mutants that will become the superheroes of your research!” (Gardner, “Real-Life X-Men”).

28. Schenk et al., “Influence of Perceived Benefits,” 263.

29. Schenk et al., “Influence of Perceived Benefits,” 264.

30. Forsberg, “Value Pluralism,” 95.

31. Dr. Rice’s fluoridation-like scheme in *Logan* is presaged by Brigadier General Jack D. Ripper’s monologue in the classic 1964 film *Dr. Strangelove*: “Fluoridation is the most monstrously conceived and dangerous communist plot we have ever had to face. . . . A foreign substance is introduced into our precious bodily fluids without the knowledge of the individual. Certainly without any choice.”

32. Ateş and Özer, "Ethical Approach," 173. Ateş and Özer cite a number of studies that detail the possible side effects of water fluoridation, which include fluorosis, hypothyroidism, neurotoxicity, and altered mental behavior and metabolism.
33. Ateş and Özer, "Ethical Approach," 173.
34. Meyer, Cserer, and Schmidt, "Frankenstein 2.0," 14.
35. Alaniz, *Death, Disability, and the Superhero*, 8.
36. Alaniz, *Death, Disability, and the Superhero*, 4.
37. Lyubansky, "Prejudice Lessons," 76–77.
38. Yockey, "Mutopia," 5.
39. Yockey, "Mutopia," 5.
40. Anzaldúa, *Borderlands*, 10.
41. Logan.
42. Nkrumah, *Neocolonialism*, xi–xii.
43. Nkrumah, *Neocolonialism*, x.
44. Denison, "(Trans)national X-factor," 67.
45. Yockey, "Mutopia," 9.
46. Dr. Ben Carson, Secretary of Housing and Urban Development in the Trump administration, referred to slaves in the United States as "immigrants" in March of 2017, provoking intense critique for denaturing the historical reality of slavery. Dr. Carson later retracted the usage (Stack, "Ben Carson").
47. Speaking of the popular 2017 television adaptation of *The Handmaid's Tale*, author Margaret Atwood explains that "Canada has historically been the place you run away to. So that's why you run away to it in *The Handmaid's Tale*. People are running away to it right now, following an historic pattern" (Warkentin, "Margaret Atwood").
48. Alaniz, *Death, Disability, and the Superhero*, 8.
49. Bucciferro, "Mutancy," 211.
50. Fawaz, *New Mutants*, 145.
51. Lyubansky, "Prejudice Lessons," 87.
52. Pasco, Anderson, and DasGupta, "Visionary Medicine," 248.
53. Shyminsky, "Mutant Readers," 389.
54. Smith, "Mutating Minorities," 185.
55. Smith, "Mutating Minorities," 182.
56. Smith, "Mutating Minorities," 189.
57. Shyminsky, "Mutant Readers," 397.
58. Cocca, "Containing the X-Women," 83.
59. *X-Men: Days of Future Past: The Rogue Cut*.
60. Cocca, "Containing the X-Women," 83.
61. In *Imperial Hygiene*, Alison Bashford also interrogates boundaries in relation to public health and colonialism, nationalism, and racism. She argues that these historical intersections took the form of "national borders, immigration restriction lines, quarantine lines, racial *cordons sanitaires* and the segregative ambitions of a grafted eugenics and public health," spaces that perpetuated "identities of inclusion and exclusion, of belonging and citizenship, and of alien-ness" (1–2).
62. Shyminsky, "Mutant Readers," 398.
63. Cocca, "Containing the X-Women," 86.
64. Pasco, Anderson, and DasGupta, "Visionary Medicine," 247, 250.
65. Bowden, "Why Are We Obsessed."
66. Pesca, "Are X-Men."
67. Woo, "Age-Old Problem," 269.
68. Hatfield, "Superheroes," 18.
69. Haraway, "Manifesto," 12–13.
70. Meza, "Hugh Jackman."
71. Haraway, "Manifesto," 8.

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