Biological Imaginaries:
Disability, Difference and The New Genres of the Body

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Abstract

This dissertation asks how biological matter and processes are translated into contemporary cultural forms. Challenging the ways in which biology has either been deployed to medicalize bodies and minds; or elided by those who argue that the body is a social construction, I explore works of art and literature that use biology as a catalyst for creative expression and political dissent. To describe this emergent arena of cultural production, I coin the term "biological imaginaries." I argue that biological imaginaries allow alternative conceptions of disability, alterity, and so-called normality to proliferate in our collective cultural imagination. More broadly, I present an urgent need to account for these inscriptions of the body at a time when collective action is tied to the conditions of a debilitating present.

Introduction:
Mapping Biological Imaginaries in Twenty-First Century Depictions of Bodily Alterity

In Spring 2021, I was invited to reflect on my body in a series of body mapping workshops at the University of Wisconsin-Madison. Body mapping is an art practice and non-medical method of exploring embodiment, devised in the 1970's by queer and feminist activists as a form of consciousness raising and healing justice.[1] In these workshops, we first learned about the history of this practice before creating and sharing our own maps. Part seminar, part creative workshop, part group therapy, the sessions were devised to "explore issues that may be difficult to discuss or categorize, and to bear witness to experiences that may be obscured," according to facilitator Kate Phelps.[2]

As we discussed our maps, we repeatedly confronted the challenges of representing these "difficult" or "obscured" elements of embodied life. For instance, many of us struggled to visually depict and verbally communicate our deeply felt sense of gender, sexuality, race, or ethnicity, the material depths of disability, the fluctuations of mental health, or the bodily toll of violence and discrimination. Part of the difficulty of representing these experiences, we concluded, was the friction between internal and external worlds that they generated. Although we agreed that our identities were, to some extent, socially constructed, we also wanted to probe beyond the surface and examine our literal interior lives. This desire to delve beyond the surface

[1] For an introduction to body mapping, see "4W Arts Exhibit Exploring Body Mapping with Dr Kate Phelps." *YouTube*, 15 March 2021, https://www.youtube.com/watch?v=8GytUO3N-SA. See also Adèle Jager et al. "Embodied Ways of Storying the Self: A Systematic Review of Body-mapping." *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*. Vol. 17. No. 2. 2016, http://openresearch.ocadu.ca/id/eprint/1206/1/Ludlow_Embodied_2016.pdf

[2] Kate Phelps and Delaney Dvorak. "Body Mapping Research with Kate Phelps and Delaney Dvorak." *Gender and Women's Studies at UW-Madison*, 29 September 2021, https://gws.wisc.edu/body-mapping-research-with-kate-phelps-and-delaney-dvorak/.

became visible in the images of internal bodily matter and processes that proliferated across our maps. With their depictions of burning hearts, spurting blood, exuberant genitals, colorful brains, and tangled guts, many of our maps emphasized the internal aspects of embodiment that typically go unseen yet profoundly influence the ways we sense, inhabit, and process the world.[3]

Body Maps from the UW Mapping Embodiment Project

[3] To view more body maps produced in these workshops, see "Mapping Embodiment." *4W Initiative at UW-Madison*, https://4w.wisc.edu/kate-phelps-body-mapping-project/.

These discussions helped me to crystallize the central concerns of this dissertation. As an art form, body mapping is similar to the cultural objects that I will examine in this project: personal narratives of embodiment that tend to explore marginalized experiences, experiment with aesthetic and narrative form, disrupt dominant (white, patriarchal, medical) views of the body, and elevate the role of the material body in social justice movements. As a method, body mapping spotlights the challenge of tracing the internal contours of embodied life, of giving shape to palpable but elusive physiological realities. My project focuses on writers, artists, activists, and other creatives who take up this challenge in our contemporary moment, crafting visual and verbal narratives that map the interior body anew.

Where body mapping is rooted in twentieth century social justice movements that responded to the silencing of marginalized people around matters of the body, the forms I consider in this dissertation address distinctly contemporary challenges. In response to twenty-first century conditions of swelling health crises and inequality coupled with rapid developments in biomedicine and biotechnology, I argue that artists and writers are repurposing biology as a vehicle for creative expression and political dissent. To describe this emergent arena of cultural production, I coin the term "biological imaginaries." Moving between different media and genres including auto/biography, poetry, visual art, and performance, I illuminate a growing archive that brings the visceral aspects of embodiment to the surface.

I define biological imaginaries as visceral representations of bodily alterity, which are realized through the aesthetic foregrounding of interiority. Biological imaginaries are characterized, firstly, by the representation of bodily difference on the level of biological materials and mechanisms: from writer Catherine Lord's narration of illness on the level of biochemical processes, to poet Aaron Apps' emphasis on gonadal imagery in his account of

intersex embodiment. Secondly, biological imaginaries subvert medical discourses. They do so via the appropriation of medical technologies like thermal imaging or blood drawing, the reappraisal of clinical records and medical histories, and the investigation of scientific lacunae that disproportionately effect marginalized people. Thirdly, biological imaginaries use biology as an unexpected frame for depicting the intersection of different embodied identities and experiences, as seen in writer Alexis Pauline Gumbs' meditation on the debilitating bodily impact of racial trauma over time or the visual artist P. Staff's consideration of the entwined effects of transgender and crip medicalization.[4] This third feature of biological imaginaries prompts my use of "bodily alterity" as an umbrella term for describing the entangled embodied states to which these cultural forms attend.

Broadly, I use "bodily alterity" to refer to a conglomerate of individuals who have been placed outside the norm, particularly those who experience disability, sickness, mental illness, racialization, transgender and nonbinary embodiment, and gender transitivity. [5] In bringing together multiple categories of non-normative embodiment under the rubric of "alterity", it also becomes necessary for me to acknowledge the norm as unsteady ground. While the quintessential norm has long been described as a white, cisgender, heteronormative, and patriarchal subject, here I approach the norm as a cluster of idealized versions of embodiment that is constantly shifting. In other words, all bodies are measured to different degrees against an

[4] Crip is a term that disabled people have been reclaiming since the 1970's. It is commonly as an ironic or provocative self-identification as well as a shorthand for more radical, anti-establishment, anti-identarian forms of disability theory, aesthetics, and politics. See Victoria Ann Lewis, "Crip" in *Keywords for Disability Studies*, edited by Rachel Adams, Benjamin Reiss and David Serlin. New York: New York University Press, p. 120-1

[5] My understanding of the norm is indebted to Rosemary Garland-Thomson's concept of the normate, which describes the quintessential liberal subject against whom an "array of deviant others" are defined. See Garland Thomson. *Extraordinary Bodies: Figuring Physical Disability in American Culture and Literature*. New York: Columbia University Press, 2017, p. 8.

array of impossible standards; marked with different degrees of normativity and alterity in ways that do not necessarily divide neatly into monoliths like "the norm" and "the other." The visceral is a key analytic in my project because it trains our attention on the deep-seated ways in which bodies can diverge from norms at any given time — from sudden waves of nausea or eruptions of anxiety to hormonal disruption or cellular damage over time. These visceral disturbances reveal the profound instability of bodily norms, especially those of health and wellness, as well as the unsteady ways in which bodies adhere to or slip outside these states. More specifically, then, I use "bodily alterity" to refer to states of being in which the body is palpably felt to upend or deviate from the norms of embodiment.

While the felt, material experience of diverging from the norm can certainly be liberating and thrilling, it can also be debilitating.[6] Biological imaginaries track the lived burdens of alterity on the level of the internal body, including the physiological impact of racism over time, the somatic registers of so-called mental illness, the hormonal unrest of gendered states, and the cellular transformation that accompanies both illness and treatment. In asking how artists and writers are representing the debilitating aspects of states like race, gender, disability, and sickness on the level of unruly bacteria, guts, and bodily fluids, my intention is not to draw simplistic analogies between these different categories of embodiment. Nor is it to state that we are "all the same" underneath the skin. Rather I seek to make sense of contemporary cultural forms that are depicting the experience of alterity as one that entails a heightened awareness of,

[6] Debilitation, as Jasbir Puar defines it, can trouble the distinction between disabled/nondisabled that has traditionally dominated disability studies. For Puar, bodies that might not be recognized or identify as disabled are always variously vulnerable in ways that may prevent them from thriving. Debilitation thus recognizes the ways in which the boundaries between disabled/nondisabled open and shift across time, location and context. See Puar. *The Right to Maim: Debility, Capacity, Disability*. Durham: Duke University Press, 2017.

and engagement with, corporeal vulnerability and the stubbornly material nature of biological being.

Among the artists who are deploying biological imaginaries to reckon with bodily difference, not all identify as disabled. However, disability studies functions as a crucial anchor in my project as a field that critiques corporeal and mental standards. At the same time, my use of the term bodily alterity is intended to trouble and expand the category of disability itself. In bringing cancer diaries into conversation with accounts of transgender medicalization (Chapter 1), considering the susceptibility of intersex people to medical exploitation and health disparities (Chapter 2), charting the debilitating effects of antiblackness and genealogical isolation precipitated by the Middle Passage (Chapter 3), and mapping the somatosensory pathways of mental illness (Chapter 4), I seek to theorize experiences that are not always brought together under the heading of disability. My selection of texts follows calls to account for what Robert McRuer has called "impairments not always adequately or easily comprehended by the signifier *disability*" (emphasis in original), as well as those whom Alison Kafer terms "the largest proportion of disabled people: those…[who] would claim neither crip identity nor disability."[7] Exploring depictions of diffuse embodied states which have variously debilitated the authors, artists, and activists under consideration, I argue that biological imaginaries mediate embodiment not as a set of neatly interlocking social categories, but as a tumultuous tangle of visceral experiences.

This unapologetic focus on the visceral is one way in which biological imaginaries pressurize disability studies and other theories of the body to grapple with the submerged aspects of alterity. Throughout this project, I use the term "visceral" to describe corporeally charged

[7] Robert McRuer. *Crip Times: Disability, Globalization, and Resistance.* New York: New York University Press, 2018, p. 19-20.

language and imagery. I argue that writers and artists are increasingly using viscerality to reckon with the internal components of bodily alterity such as alimentary disturbances, genetic changes, sensory processing, and psychobiological responses: the very *stuff* of carnal being. From memoirs that investigate illness via the unruly behavior of follicles and hormones, to performances that mimic the physiological manifestations of mental illness and poetry that tracks the impact of racism on respiratory processes, biological imaginaries also focus on the literal viscera as a site where internal and external worlds impinge upon each other. This impingement disrupts the assumption that the biological and the social are separate categorized — or that embodiment can be explained through a solely essentialist or constructionist lens.

By focusing on depictions of the body that are informed by biological data and processes, my aim is to furnish humanistic theories of the body with methods for reading biology that neither reify biological essentialism nor rest on the assumption that we are purely socially constructed creatures. In place of oppressive medical scientific discourses that have variously viewed race, gender, and disability as predetermined biological traits and have used medical biology as a tool of classification, humanistic scholars have historically emphasized the social construction of the body. Social constructionism is a framework that explores "how cultural, social, symbolic, or linguistic constraints govern and sculpt the kinds of bodies we have."[8] This schema has offered powerful rejoinders to biological essentialism, producing rich accounts of bodily difference and the malleability of social worlds. Yet the insistence that we are socially constructed beings, and that our transformation occurs solely in the domain of the social, has also resulted in an overcorrection. By equating biology with stasis, oppression, and determinism, scholars of bodily difference have mostly failed to explore what we might learn, salvage, or

[8] Elizabeth Wilson. *Gut Feminism*. Durham: Duke University Press, 2015, p. 3.

appropriate from scientific disciplines. As the feminist disability scholars Aimi Hamraie and Kelly Fritsch elaborate:

> Crip theorists have had limited engagement with the critical concept of technoscience, particularly as it is used in feminist STS [science and technology studies] to mean the productive and non-innocent entanglement of scientific knowing and technological making. This limited engagement has yielded an ahistorical position that science, technology, and medicine are anathema to crip world-remaking, ignoring disabled peoples' ongoing, creative, and open-ended appropriations of science, technology, and medicine.[9]

What, Hamraie and Fritsch ask, is to be gained from creatively engaging science, technology, and medicine from non-expert positions? While the authors are explicitly calling on those who study disability, their question resonates across humanistic fields in which science and technology studies often occupies the position of a specialty or subfield. Taking inspiration from such "subfields" including feminist science studies, BIPOC theories and critiques of science, and crip technoscience, my project brings the study of bodily difference into conversation with biology in order to showcase contemporary amalgamations of art and medical science that are already well underway. In place of using science to legitimize the humanities, I argue that biological imaginaries are shaping a critical, cultural orientation to the life sciences that subverts medical biology for the purpose of self-expression, embodied knowledge, and political critique.

In each chapter, I present case studies of texts that unfold biological imaginaries from different standpoints. While my objects emerge from a variety of perspectives, media forms, and genres, they can all be classified as visceral accounts of bodily difference that hijack the aims and methods of medical biology for the purpose of marginalized creativity and dissent. I start with a comparative analysis of artist, writer, and scholar Catherine Lord's genre-bending illness

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[9] Aimi Hamraie and Kelly Fritsch. "Crip Technoscience Manifesto." *Catalyst: Feminism, Theory, Technoscience* 5.1 (2019), https://catalystjournal.org/index.php/catalyst/article/view/29607/24772, no page number.

memoir *The Summer of Her Baldness: A Cancer Improvisation* (2004) and artist P. Staff's short filmic meditation on illness and gender transitivity *Weed Killer* (2017), which uses Lord's memoir as its script. I argue that Staff and Lord both draw on pharmacological data to consider the medicalization of sick and gender nonconforming subjects, and to critique the medical industrial complex from within. I then turn to poet Aaron Apps' reimagining of the 19th century intersex person Herculine Barbin's life and work, *Dear Herculine* (2015), an experimental piece of biographical fiction that salvages Barbin's story from inaccurate medical records and connects the historic medicalization of gender to the contemporary intersex health crisis. This is followed by a consideration of Alexis Pauline Gumbs' writing and community organizing, which reimagines the tenets of white racial essentialism. Focusing primarily on her prose poetry collection *Dub: Finding Ceremony* (2020) and her consciousness raising work with the Black Feminist Breathing Chorus (2014-), I argue that Gumbs uses biological imaginaries to contest the genetic essentialism that has come to define notions of Black collective identity in both scientific and discursive realms. Finally, I focus on a selection of performances that materialize the physiological aspects of anxiety and other "mental" illnesses that have long been overlooked in clinical and lay contexts. These performances – Jenny Slate's standup comedy special *Stage Fright* (2019), the untitled artistic collaboration between artist Hannah Black, designer Ebba Fransén Waldhör, and DJ Bonaventure (2016-18), and the interactive performances of the theatre troop Whisperlodge (2016-) – give shape to anxiety's complex bodily registers and seek non-medical strategies for managing these visceral effects.

This selection of texts is not intended as a definitive archive of biological imaginaries. Instead, it is designed to highlight a range of aesthetic strategies for mediating the experience of bodily alterity on the level of interiority. To achieve this, biological imaginaries pursue different

modes of aesthetic experimentation. These include the depiction of human organic matter (blood vessels, chromosomes, mitochondria, cilia) as agitated entities that actively encroach on daily life, the presentation of biological processes (breathing, sweating, excreting, sensory processing) as capricious forces that constantly rattle the illusion of secure bodily habitation and boundaries, and the appropriation of medical scientific objects (clinical reports, MRI scans, blood tests, body fluid samples). In addition, biological imaginaries experiment with form and genre by amalgamating visual and verbal auto/biographical narratives with medical scientific data, rhetoric, and histories. Thus, while biological imaginaries offer new aesthetic strategies for representing alterity, they also carve out fresh cultural arenas for critiquing medical biology. By combining auto/biography with investigations into medical scientific abuses, under-documented side effects, clinical oversights, and gaps in scientific research, my objects challenge dominant forms of scientific knowledge production and illuminate aspects of embodied life that have long gone under-researched and obscured. In this way, they work to render interiority collective and political at a moment in which we are all grappling, to various degrees, with the material impacts of a debilitating era.

An imaginary is a way of representing the world that comes to saturate cultural consciousness, to the extent that it transforms collective understandings of an issue or theme. As elaborate arrangements of biology in new cultural contexts, biological imaginaries provide incisive frames for understanding our contemporary moment of heightened physical vulnerability in the midst of health crises, environmental devastation, and worsening inequity. At a time when these circumstances are becoming more apparent for ever-growing numbers of people, the visceral realities of debility will also only become more widely felt. I argue that biological imaginaries can help us apprehend these states of precarity as they pertain to both individual and

aggregate bodies. Moreover, this mode of aesthetic production is filtering new ways to *respond* to these conditions through our cultural consciousness. In dispelling essentialism and critically navigating medical science, biological imaginaries work to reimagine the dominant discourses that regulate the body today. Detaching biology from oppressive frameworks like optimization, essentialism, and the mandates of health, these texts invite us to explore its politically and creatively invigorating potential. My dissertation responds to contemporary conditions by tracking how popular and avant-garde literature, film, art, performance, and other forms are circulating alternative accounts of embodiment through our cultural consciousness in order to cultivate deeper sensitivities to so-called normality, alterity, and the joys and challenges of being a volatile body in an uncertain world.

In the sections that follow, I continue to define biological imaginaries and clarify the shared features of texts in this archive, drawing on recent examples from visual art, literary memoirs, documentary film, and activism that mediate biology. I then contextualize my argument in relation to theoretical debates about biology within disability studies and other critical theories of the body. Here I focus on the need for scholarly models of bodily alterity that are neither purely medical nor social in nature. Reading for difference in all its biotic complexity, I argue, requires a method of analysis that pays close attention to the minute registers of the body but refrains from diagnosing or "solving" internal unrest. Lastly, I consider the political urgency of representing and reading for biology in our current historical moment — one in which we are being asked to optimize our individual bodies from the inside out even as the compounding effects of a deadly pandemic, racial and economic inequality, and environmental destruction are viscerally impacting an increasing number of bodies and demanding systemic solutions

Mediating Biology

In delineating an inward turn that is currently playing out in representations of the body, I seek to trace new modes of experimentalism as cultural production meets the life sciences. The collision of art and science has received steady attention over the past twenty years, most notably in the production and criticism of what has been called "bio art." This can be defined as art that repurposes the methods and materials of biotechnology, for instance by working with human tissue or the microbiome.[10] As an archive that emphasizes the liveliness of biology, biological imaginaries share some conceptual ground with the practice of bio art.

Take, for instance, a project titled *Collecting Cultures* that recently took place at the BioArt Laboratories, an interdisciplinary hub for artists and scientists based in the Netherlands. Between 2016-21, biologists collected bacterial cultures from the skin of over 12,000 human participants. Artists then used the colors and patterns of these anonymous samples flourishing on petri dishes to construct a series of swirling public murals, thus amplifying the "invisible world of fungi and bacteria" for passersby.[11] This public art project interrogates the notion of cultural identity: not as a clearly demarcated ethnic or national entity, but as a heterogenous assemblage of bacterial, fungal, and

Collecting Cultures, promotional image

[10] For more on bio art, see Eduardo Kac et al. "What Bio Art Is: A Manifesto", *Kac Web,* 2017, http://www.ekac.org/manifesto_whatbioartis.html and Kac (ed). *Signs of Life: Bio Art and Beyond*. Cambridge, MA: MIT Press, 2007.

[11] See "Collecting Cultures," *BioArt Laboratories*, July 23, 2021, https://bioartlab.com/portfolio_page/collecting-cultures/ and "Opening Collecting Cultures X Overbruggen, *BioArt Laboratories*, October 21, 2021, https://bioartlab.com/portfolio_page/opening-collecting-cultures-x-overbruggen/.

yeast cultures that live within and upon all bodies. Contrary to the essentialist idea that bodily matter is a predetermined entity that reveals stable truths about human identity, "Collecting Cultures" asserts diversity on a microbial level. The project does not attend to visible variation, but to the dynamic nature of brimming microbial worlds. This microscopic spectacle of diversity encapsulates a key principle of both bio art and the biological imaginary: that peering inside the body reveals not fixity, but multiplicity.

And yet, the internal body is never a neutral or utopian site. Investigations of the biological body become all the more fraught when the body in question has been used as scientific fodder, pathologized in medical narratives, demonized in clinical contexts, or otherwise exploited. One of the key themes that distinguishes bio art from biological imaginaries is the latter's explicit emphasis on decoupling biology from these oppressive practices, which continue to have a detrimental impact on bodies and minds but also limit our ability as humanistic scholars to grasp the creative capacities of biology. As biological imaginaries mine biology as a catalyst for creativity and critique, then, they also interrogate the ways in which looking inside the body involves facing dark histories and damaging frameworks.

Molly McCully Brown illuminates this duality in her 2020 memoir *Places I've Taken My Body*, an account of navigating the world with cerebral palsy. During a residency in Bologna, Italy, Brown visits the Anatomical Theatre at the University of Bologna. This was the birthplace of Western anatomy, where early anatomy courses were taught and some of the first sanctioned dissections occurred. Wandering the theatre, Brown contemplates a pair of wooden statues known as the *spellati*, who are sculpted without their skin to showcase their internal organs. These sculptures appear alongside other homages to medical progress:

> Next to the *spellati* there are carved statues of famous physicians (Hippocrates, Galenus) flanked by renderings of Apollo, several Catholic saints, and constellations named for figures

> from mythology. Humanity, science, and all of these conceptions of divinity conjured up together for some sort of communion in the service of understanding how it is we're made, and what to do with that. My own body feels skinless, rubbed raw. I imagine it, butterflied, on the marble table: brain and heart, liver and lungs, muscles and tendons all laid bare, all my brain's bad wiring in evidence, thickets of scar tissue every place a surgeon has reshaped me over the years.[12]

Prompted by the anatomical theatre's interior, Brown blends the history of science with mythological and spiritual tropes. The presence of saints and deities testifies to the mythic operation of medical science — in this case, the ways in which anatomy was positioned as the logical endpoint of a fabled quest to understand "how it is we're made." Like the countless corpses who were dissected in service to this effort, the author imagines her own physical form splayed on the surgical table. But unlike the immobile wooden *spellati* with their carefully peeled skin, artfully displayed rivulets of blood, and cross-sectioned viscera, Brown's own body map is disorderly and oblique. Her glistening viscera spills out, her neurological channels become tangled "wiring," her scar tissue clumps into "thickets." Although her visit to the anatomical theatre leaves Brown feeling exposed, her use of visceral language and imagery declines to either reproduce or surrender to the surgical gaze. Instead, *Places I've Taken My Body* offers an account of the countless ways in which Brown's physicality is continually reshaped and remade by both medical and non-medical forces.

The author's stay in Bologna coincides with a heightened period of bodily disarray. Alone in a strange city, she feels her pain mounting, her mobility becoming more limited, and her neurological symptoms more acute. Along with her numerous surgeries, these experiences testify to the profound fluctuations of "a perplexing and unstable body."[13] By centering uncertainty and instability as the only constants in her embodied experience, Brown rejects the anatomical gaze

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[12] Molly McCully Brown. *Places I've Taken My Body*. London: Faber & Faber, 2021, p. 66.

[13] Ibid, p. 13.

that seeks to solve the internal body and neatly stitch it up, to determine "how it is we're made" once and for all. Instead, she cultivates a biological imaginary by narrating embodiment as the constant rearrangement of matter and sensation.

Places I've Taken My Body becomes legible as a biological imaginary in its images of visceral profundity, as well as its evocative descriptions of bodily unrest and its fusion of memoir with medical scientific discourses. In this case, Brown draws on the history of medical science both to critique arcane scientific worldviews, and to shed light on the medical subjects of the past. She acknowledges that Bologna anatomists originally used the corpses of sex workers and criminals to perform dissections, thus laying the groundwork for modern surgery: "I owe the current shape of my body, almost every inch of mobility I've ever had, to scores of people taken apart without their consent."[14] Here the biological imaginary is adopted not only to illuminate the author's own corporeality, but to invoke other bodies who are marked by alterity.

Brown's pilgrimage to the birthplace of surgery, and her exhumation of these past abuses, resonates with a range of recent memoirs that unearth damaging medical precedents, interrogate the aims and methods of scientific research, and narrate visceral realities. For instance, Porochista Khakpour's *Sick: A Memoir* (2018) scrutinizes the contested profile of Lyme disease. Khakpour details the medical and cultural disbelief that circulates around this illness – particularly when it comes to her own embodiment as a queer Iranian American woman who is multiply marginalized in medical spaces – while starkly recounting its symptoms on the level of cellular, sensory, and cognitive fluctuations. Similarly, Arifa Akbar's *Consumed: A Sister's Story* (2021) recounts the author's sister's sudden death from tuberculosis (TB) and traces a family history of dislocation and debility in the wake of their immigration to Britain from

[14] Ibid, p. 67.

Pakistan. Within this ostensibly personal narrative, Akbar also profiles TB as a disease that is thoroughly romanticized in Western art and literature but continues to confound scientists and devastate underserved populations (in the United Kingdom, TB disproportionately affects people of South Asian heritage).

Recent personal accounts of debility and medical inequality often perform a critical and "non-expert" orientation to medical biological data. For instance, Esme Weijung Wang's 2018 memoir and cultural examination of schizophrenia, *The Collected Schizophrenias,* mines the author's mental states while detailing the medical scientific developments that influence her lived experience of illness. Wang is particularly interested in the changeable diagnostic criteria for schizophrenia. She charts a turn from assessment approaches popularized in the twentieth century (on account of the Diagnostic and Statistical Manual of Mental Disorders or DSM) to an emerging interest in the biological markers of mental illness in the twenty first century. Drawing on this emerging genetic and neurobiological research, Wang uses new theories of schizophrenia not to establish a definitive origin point for her disability, but to speculate on the interlaced personal and molecular histories that have shaped her singular experience of embodiment. In a visceral imagining of her own birth, for example, she writes:

> My head had lodged behind a bone in my mother's pelvis, which hints of an intergenerational transmission of trauma; stress causes the flooding of cortisol and other chemicals into the brain, and my newly immigrated, newly married young mother had her own psychiatric issues to contend with. Who knows what happens to the malleable and muddy assortment of fetal cells because of such strain?[15]

This passage indexes key features of the biological imaginary. Firstly, Wang takes a microscopic approach to interiority, zooming in on the exact positioning of a baby in the womb,

[15] Esme Weijun Wang. *The Collected Schizophrenias.* Minneapolis: Graywolf Press, 2018, p. 30.

the chemical and hormonal vacillations of the marginalized body, the porosity of mother and fetus, and the plasticity of "malleable and muddy cells." But this pinpointed perspective does not offer any steady truths about the nature of Wang's embodiment or the origin of her schizophrenia. While Wang invokes biological research in her intimate image of mother and child – including genetic evidence of epigenetic or inherited trauma among racialized groups and data that tracks cortisol-induced changes to a fetus – she uses a biological imaginary as a means of *speculating* on these visceral aspects of embodiment over searching for definitive answers. In this way, Wang resists a diagnostic framework while drawing attention to the numerous biological factors that may have impacted her own fetal development. In other words, she uses biological data to explore the liminal space of "what might have been", as opposed to pursuing an absolute origin story that has a purely biological basis. Here the biological imaginary is revealed as a stance or orientation towards scientific knowledge that treats scientific data seriously, but also contingently.

Lastly, and like Akbar and Khakpour, Wang uses biology as a frame for contemplating the intersection of multiple identities. The passage above draws together the biological toll of displacement and discrimination for her Taiwanese mother, the often-traumatic experience of birth for women (particularly women of color) in the U.S., physical pain, physiological change, and mental illness. Wang considers these facets of gender, ethnicity, physical incapacitation, and mental illness on a cellular register, drawing us deep inside the body to consider how these experiences unfold in obscure realms. The point, here, is not to frame these identities as solely biological entities. Rather, it is to question what we miss when we only focus on embodied experiences that have already calcified into recognizable social categories. Wang clarifies this point when she argues that emerging biological data might not only aid the management of

mental illness but pinpoint the social factors that influence it. Biomarkers like blood tests and brain scans, she writes, "may give us a better sense of what biological features mark susceptibility to already established disorders, as well as what types of stressors are most likely to transform those susceptibilities into illness."[16] Here Wang makes the speculation that is itself inherent to scientific research explicit. By appraising the mysteries of the interior body by way of personal narrative, she shows that these holes in research are not the purview of biologists alone.

The memoirs noted above are just a few examples in which accounts of alterity are mingled with scientific data and critique. One might also note autotheoretical works like Eula Biss' *On Immunity*, Anand Prahlad's *The Secret Life of a Black Aspie,* and Julie Rehmeyer's *Through the Shadowlands,* poetry collections like Sonya Huber's *Pain Woman Takes Your Keys* or Lucas Crawford's *Belated Bris of the Brainsick*, and graphic memoirs like Rachel Lindsay's *Rx*, Élodie Durand's *Parenthesis* or David Small's *Stitches.* These immersive representations of bodily alterity that simultaneously draw on and criticize medical science are not confined to contemporary literary production. In visual art that harnesses medical technology like Nola Avienne's fabric renderings of neuroimaging, Ajla R. Steinvåg's sculptural depictions of inflammation, and Sal Marx's photographs of clinical waiting rooms; in films that combine personal experience with scientific investigation like *Eggs Over Easy: Black Women & Fertility,* the investigation of chronic illness *Ill, Actually,* and the exploration of undiagnosed debilitating symptoms *Afflicted,* we are witnessing an explosion of cultural forms that use biology to confront the visceral, often agonizing aspects of alterity and to constellate an array of responses to medical science that neither jettisons nor pathologizes human biology.

[16] Ibid, p. 35.

To take a filmic example in more detail, Jennifer Brea's documentary *Unrest* (2017) wields a biological imaginary to record Brea's experience of myalgic encephalomyelitis (ME), also known as chronic fatigue syndrome. Struck by an array of neurological symptoms and pain after a brief viral illness, Brea originally began filming herself for the purpose of assembling an archive of symptoms to present to skeptical doctors. As her illness continued, she connected with members of the ME community who have been persistently disbelieved by doctors and underserved by medical research. Many of these conversations take place with both Brea and her interviewee in bed. Combining intimate personal testimony with appraisals of the medical industrial complex and scientific commentary, *Unrest* is a testament to the bodily devastation of ME as well as an investigation of the scientific neglects and clinical prejudices that worsen its effects. For instance, ME is the lowest funded disease by the National Institute of Health — due, Brea argues, to an ongoing perception that the condition is a modern incarnation of mass hysteria.

Despite decades of reports of viral illness outbreaks that closely resemble ME, there is little clarity or consensus on the condition. Brea uses a biological imaginary to visualize and narrate this uncertain status of the disease. For instance, one segment presents a a montage of clinical encounters including blood draws, scans, and physical exams. Over these medical images, Brea's voiceover elaborates:

> We know ME can be triggered by viruses and bacterial infections. But we don't know if the infection hides in places where it's hard to measure, like the brain, or if it's long gone, but leaves in its wake an autoimmune disease. There are now a handful of specialists, but most patients will never get to see one.

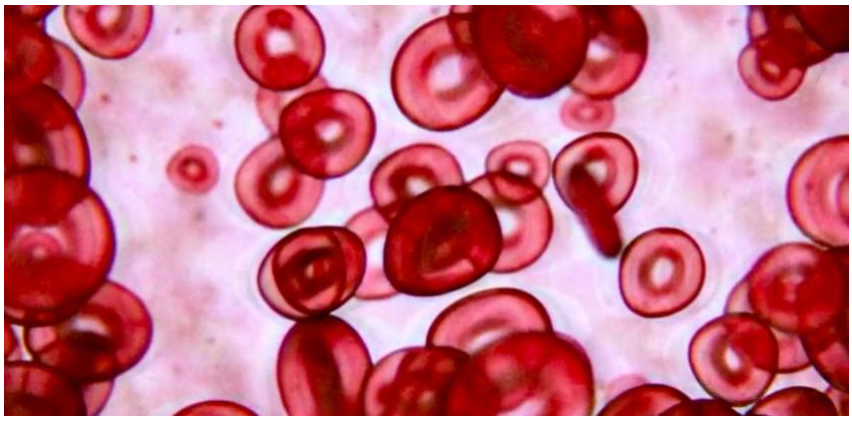
One of these specialists is the clinical immunologist Nancy Klimas, whom Brea consults and interviews in the film. As images of the internal body multiply across the screen, Klimas describes her breakthrough research into ME. Looking at the immune system of people with ME,

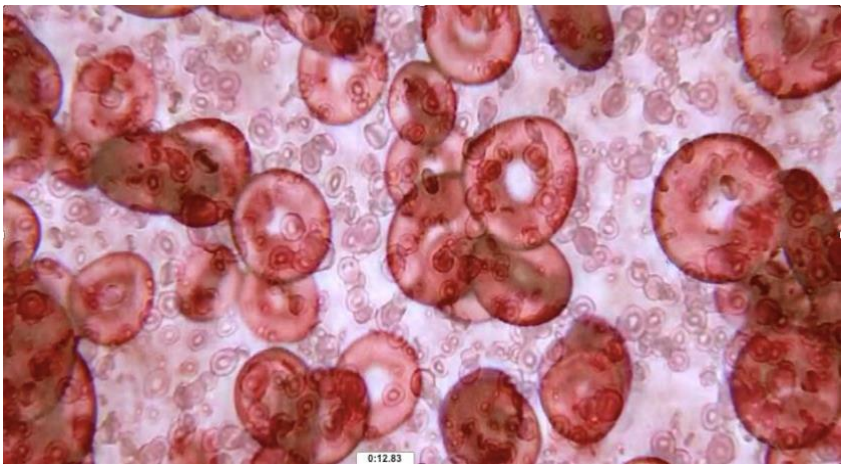
she found that their anti-viral cells became unable to resist infection and thus created a state of immune deficiency. Speaking to camera, Klimas continues in layperson's terms:

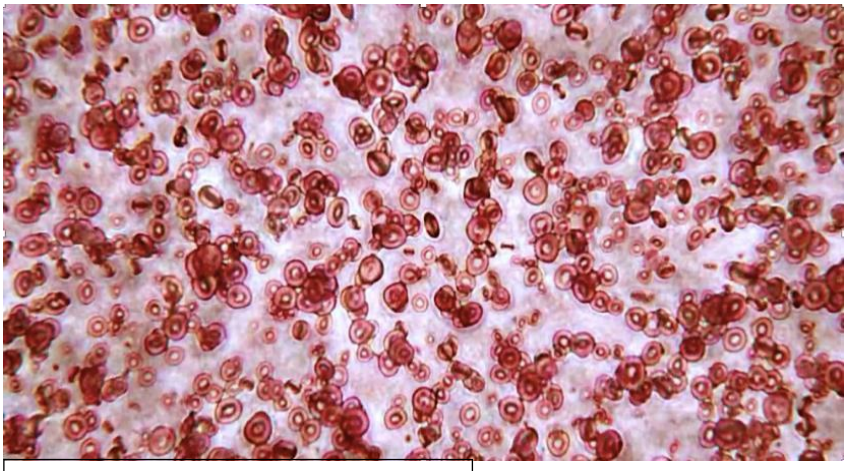
> Inside every cell, there's your energy making machine. It's called the mitochondria. So in this illness, each individual cell can have real problems capturing the things they need that your body uses to make energy like oxygen and glucose. At a cellular level, you become less and less effective. Like a wound-down clock.

As Klimas describes this metabolic functioning to Brea, biological images proliferate onscreen: antiviral cells flood the visual field, mitochondria take in and reject nourishment, cellular processes are animated and labelled. On one level, these microscopic visions of the body serve an educational function. There is purpose if not solace to be found, for Brea, in diagramming cause and effect (for instance, one part of the film shows her working on an enormous mind map of factors that exacerbate or improve her symptoms). On another level, these biological images of mitochondria and blood cells enables an awareness of how Brea's body is tangibly transforming beneath the surface in ways that the medical scientific community have broadly failed to recognize. Here the biological imaginary works as an aesthetic strategy for mediating nonvisible disability.[17] Again, Brea's accentuation of the interior body offers no easy answers: immunological inquiry into ME is ongoing, and barriers to scientific research remain.

[17] ME can be described as a nonvisible disability firstly in the sense that those who experience its effects are often obscured from public life: a quarter of people with ME are restricted to their homes or bed. Secondly, ME is a nonvisible disability dependent on people's varying level of mobility and use of mobility aids over the course of the illness.







Biological imagery in *Unrest*

As a work that relates personal and collective narratives of illness, confronts the oversights of medical science, and artistically illuminates emergent biological data about ME as well as the lack of research and information on managing the disease that aggravate its effects, *Unrest* epitomizes the ways in which biological imaginaries incorporate the methods of citizen science while keeping physiological states at their core. According to the Environmental Protection Agency, citizen science uses "the collective strength of communities and the public to identify research questions, collect and analyze data, [and] interpret results."[18] While the EPA relates this practice specifically to environmental preservation (and this is indeed relevant to some ME communities' inquiries into the relationship between the disease and environmental factors like mold), citizen science is a useful concept for understanding how biological imaginaries use embodied knowledge and non-expert engagement with medical science to challenge the scope of traditional scientific research more broadly.

Disability scholar and activist Leah Lakshmi Piepzna-Samarasinha reinforces this point when they argue that there are modes of doing "crip science" that assemble new modes of research and care, that detach medical science from top-down knowledge production, and that seek to manage rather than eradicate impairment Examples of crip science include "access hacks" for public buildings, comparing and sharing meds, establishing healing justice networks, and lobbying for better services[19] By claiming interpersonal dynamics and networks of care rooted in crip emotional intelligence as forms of science, Piepzna-Samarasinha speaks back to

[18] See "Basic Information about Citizen Science," United States Environmental Protection Agency: https://www.epa.gov/citizen-science/basic-information-about-citizen-science-0.

[19] Leah Lakshmi Piepzna-Samarasinha. *Care Work: Dreaming Disability Justice*. Vancouver: Arsenal Pulp Press, 2018, p. 69-70 and 96-98.

the long history of deriding disabled people's knowledge about their own bodies and offers a realm in which disability justice and citizen science intersect.[20]

In *Unrest,* Brea demonstrates another way in which biological imaginaries might be used to fuel citizen science by challenging the systemic dismissal of women's testimony about their own bodies. As a biracial Black disabled woman experiencing an illness that affects more women than men, Brea is particularly vulnerable to what Megan Moodie calls "the medical profession's long history of incorrectly attributing disease formations with a biological cause to women's psyches and emotions, the latest chapter in the long tale of 'hysteria.'"[21] By detailing the health establishment's failure to account for ME while using the scant scientific research available to speculate on her own body, Brea defamiliarizes the medical gaze that dismisses her while embarking on her own investigation of ME. This approach evinces two important tropes of biological imaginaries: the rejection of pathologizing narratives, and the salvaging of biological data for one's own ends.

Finally, *Unrest* asserts the activist dimensions of attending to biological flux. As Brea tracks the emergence of a social and political movement rooted in the lived experience of ME, she chronicles one of the ways in which chronically ill people are combining lived experience with medical scientific data about their own bodies to demand recognition and change. Throughout this dissertation, I will explore the ramifications of biological imaginaries for activist cultures and political advocacy by examining texts that asses the medical industrial complex

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[20] Crip science is indebted to Kim Katrin's idea of "femme science," or the tacit knowledge that flourishes among marginalized folks who use experiential knowledge to assist each other in a variety of contexts. See Kim Katrin. "Femme Science & Community Based Research," *Kim Katrin.com,* August 9, 2013. http://kimkatrin.com/queer-gifted-black/2013/8/9/femme-science-community- based-research.html.

[21] Megan Moodie. "*Unrest*: Gender, Chronic Illness, and the Limits of Documentary Visibility**."** *Film Quarterly* (2018) 71 (4): 9–15. https://doi.org/10.1525/fq.2018.71.4.9, p. 11.

from marginalized perspectives, rewrite dominant medical scientific histories, and explore the intersection of corporeality and activism. Across these examples, I seek to show how the most confounding behaviors of human biology – from erratic physiological processes to dynamic bodily matter – can galvanize embodied self-knowledge, artistic expression, and political refusal.

Theorizing Biology

This project's focus on interiority levels a conceptual challenge to those who have emphasized the social construction of embodiment over its material facets. Like other scholars of the body, I am critical of deterministic arguments that view embodied identity and characteristics as innate. However, I also believe that the well-worn practice of identifying how the social world shapes our bodies has a limited capacity to sustain and account for those who live out the visceral effects of alterity on a daily basis. In this section I therefore approach a model of bodily alterity that acknowledges the inextricability of the biological and the social. By incorporating biological data into materialist understandings of states like disability, race, and gender, I suggest that we can better understand not only for the material interactions of body and world but for the interactions unfolding *within* the body at any given time. I first take the social model of disability as a resonant example of social constructionist logic at work, before extending my consideration to other states.

The social model of disability functions as an emblematic, but not wholly representative, trope for understanding the false opposition between biology and sociality that dominates constructionist theories of the body. In response to medical models of disability, which frame disability as an innate pathology that can only be "fixed" by way of medical intervention, the disability rights movements in Britain and the U.S. rallied around the social model of disability

from the 1980's onwards. [22] The social model defines disability as a socially constructed response to impairment. In this framing, "impairment" describes physical features of the body that reside in the individual, while "disability" refers to the discrimination that lies in our surroundings. As one of the social model's earliest proponents Michael Oliver explains:

> The social model insists [that] disablement is nothing to do with the body. It is a consequence of social oppression. But the social model does not deny that impairment is closely related to the physical body. It is, in fact, nothing less than a description of the physical body.[23]

This characterization of impairment as a neutral descriptor of the body, and disability as a restrictive set of social policies and relations that is imposed *on* the body, is a useful one for destigmatizing disability, dismantling ableism, and removing barriers to equity. But by viewing impairment as a fixed feature of the body that is then "acted upon" by social forces, the social model also produces a strict dichotomy between a body that exists in a static state and an endlessly malleable social world.

Since the initial articulations of the social model, many disabled scholars and activists have countered that impairment should not be seen as a settled state but as a changeable embodied reality that interacts with the social world in numerous ways.[24] Today, the majority of disability thinkers do not endorse so clear a split between the physical features and the social conditions that shape the experience of disability. And yet, critical attention has continued to

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[22] For an overview of the medical model of disability, see Sayantani DasGupta. "Medicalization." *Keywords for Disability Studies*. New York: New York University Press, p. 120-1. For the first activist articulation of the social model, see "Fundamental Principles of Disability," by The Union of the Physically Impaired Against Segregation and The Disability Alliance (1976). Accessed through *National Disability Arts Collection and Archive*, https://the-ndaca.org/resources/audio-described-gallery/fundamental-principles-of-disability/.

[23] Michael Oliver. *Understanding Disability: From Theory to Practice*. Macmillan International Higher Education, 1996, p. 35.

[24] See, for instance, Tom Shakespeare's reconsideration of the social model in "The Social Model of Disability" in *The Disability Studies Reader*. New York: Routledge, 2006, p. 197-204.

concentrate on social norms over the concrete ways in which bodies stray from these norms. To take one example, Julie Avril Minich argues in a 2016 article that the methods of disability studies involve "scrutinizing not bodily or mental impairments but the social norms that define particular attributes as impairments, as well as the social conditions that concentrate stigmatized attributes in particular populations."[25] While I do not wish to wholly dismiss this aspect of disability methodology, I am struck by a lingering reluctance to scrutinize impairments in all their visceral intricacy.[26]

This reluctance begs the question: why do we continue to overlook impairments as repositories of meaning and sensation in their own right? Tom Shakespeare offers a telling explanation for this oversight when he writes that "to mention biology, to admit pain, to confront our impairments, has been to risk the oppressors seizing on evidence that disability is 'really' about physical limitation after all."[27] At the risk of re-pathologizing disability or reifying essentialism, disability scholars have generally trained their attention outwards. In contrast, I direct attention inwards by focusing on the internal contours of bodily difference and the challenge to representation they produce. In so doing, my intention is not to dismiss the social world but to index the ways in which the social world is absorbed and metabolized by the body, thus demonstrating some striking ways in which biology and sociality mutate and transform each other. Recently, materialist reckonings with disability such as David Mitchell, Susan Antebi, and Sharon L. Snyder's edited collection *The Matter of Disability*, Nirmala Erevelles' *Disability and*

[25] Julie Avril Minich. "Enabling Whom? Critical Disability Studies Now." *Lateral* 5.1, 2016, no page number.

[26] For more on the reluctance of disability scholars to scrutinize materiality, see Michael Feeley. "Disability Studies after the Ontological Turn: A Return to the Material World and Material Bodies without a Return to Essentialism." *Disability & Society*, p. 1-21.

[27] Tom Shakespeare. "A Response to Liz Crow." *Coalition*, September 1992 (1992): 40-42, p. 41.

Difference in Global Contexts, and Lennard J Davis' *The End of Normal* have detailed some ways in which the disabled body and the world impinge upon each other. I take these projects a step further by venturing deeper inside the body, asking how these impingements unfold on a cellular level. If we can recognize embodiment as a system of continual flux that goes beyond what is legible on the surface, I suggest that we can begin to see biological systems as just as relational, disruptive, and affecting as our social interactions.

Recognizing the wayward nature of biology can also help us to disrupt dominant ideas of gender as either an innate quality, or a solely social construction. While the field of feminist science studies has generated rich accounts of gendered embodiment as both a material and social entity, Elizabeth Wilson points out that the bulk of feminist theory remains staunchly antibiological: "despite its avowed interest in the body…feminist work is often reluctant to engage directly with biological data."[28] In her 2014 book *Gut Feminism*, Wilson responds to this reluctance by incorporating empirical evidence into feminist discussions of depression, focusing on specific biological operations like the gut's production of serotonin or the trajectory of SSRIs through the nervous system. For Wilson, these bodily registers offer feminists a firmer understanding of the interaction of mind, body, and social world without reinforcing determinism.

While Wilson's work offers a complex account of gender's psychobiological aspects, it also misses an opportunity to engage with diverse experiences of alterity beyond the category of gender. It is worth noting, for instance, that feminist disability scholars have been investigating the interconnection of body and mind for at least two decades. This is reflected in the widespread use of Margaret Price's term bodymind within crip communities and scholarship, which

[28] Wilson, p. 4.

maintains that the mind and body cannot be understood as separate entities.[29] Wilson's lack of engagement with disability studies becomes all the more curious when we recognize that her case studies of depression, eating disorders, and digestive disorders can all be viewed as disabilities with gendered connotations. Thus, while Wilson's blending of biological data and feminist theory offers a useful model for my own aim of bringing biology to bear on the study of bodily alterity, it also indicates a need to incorporate a more robust reckoning with debility and disability into materialist accounts of the gendered body. I will explore this point in more detail in my fourth chapter, in which I draw together feminist comedy studies, theories of the bodymind, and psychobiological data to demonstrate the ways in which gender, debility, and minded states interact with each other on a visceral level.

Similarly, I am interested in biology as a lens for contemplating the visceral nature of race in concert with other deep-seated embodied states. From Catherine Lord's appraisal of the coded whiteness of breast cancer in the U.S., to Alexis Pauline Gumbs' poetic meditation on the molecular effects of antiblackness and Kevin Beasley's sculptural explorations of Black respiration as a material instance of protest, my project examines moments in which race is informed by or apprehended via shifting internal activities. This is not to suggest that these texts identify deterministic biological bases for racial identity – rather, they trace the shifting meanings and materiality of race on the level of minute but ever-shifting bodily processes. In training my attention on these processes, I concur with Michael Hames-García that biology can be a powerful analytic for understanding racial embodiment, provided that "we understand

[29] Price first coined the term bodymind in *Mad at School: Rhetorics of Mental Disability and Academic Life*. Ann Arbor: University of Michigan Press, 2011.

biology…as significantly less determinate than it is often taken to be."[30] Following Hames-García, I believe that jettisoning biology altogether is not a sufficient rejoinder to discourses that use biology to racialize or essentialize bodies and minds. Rather, I seek to decouple biology from racial essentialism by investigating its capacity to signify and transform.

Anthropologist Arun Saldanha offers one model for detaching biology from racial essentialism in his work on what he provocatively calls "the viscosity of race." Rebuking the relegation of race to the discursive realm, Saldanha uses the concept of viscosity to articulate the ways in which bodies "stick" together and create racial collectives. This reveals race as a "shifting amalgamation of human bodies and their appearance, genetic material, artifacts, landscapes, music, money, language, and states of mind,"[31] thus allowing Saldanha to explore the material facets of race as an entity that emerges among and *inside* bodies. Recognizing the ways in which race shifts in terms of material embodiment and social groups, as Saldanha suggests, makes it possible for me to examine its visceral manifestations: from the long-term effects of discrimination on the body, to the biological mechanisms of adaptation under fraught circumstances.

Paying close attention to biological fluctuations, we will begin to see how bodily matter and processes produce and metabolize the experience of disability, sickness, race, and gender concurrently and on deep-seared levels. Recall, for the moment, Wang's visceral meditation on how displacement, racial trauma, and mental illness play out on the level of her mother's womb. This scene offers us one frame for contemplating the ways in which the biological aspects of

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[30] Michael Hames-García. "How Real Is Race?" In *Material Feminisms.* Ed. Stacy Alaimo and Susan Hekman. Bloomington: Indiana University Press, 2008, 308-339, p. 324.

[31] Arun Saldanha. *Psychedelic White: Goa Trance and the Viscosity of Race*. Minneapolis: University of Minnesota Press, 2007, p. 9.

embodied identities are constantly in motion, and constantly open to interpretation. In other words, biological imaginaries can be used to mediate and theorize identity not as a social skin or a set of fixed, interlocking categories, but as a biologically profuse experience that is constantly in motion.

Politicizing Biology

Reading for biological profusion requires us to recognize the interactive nature of self, viscera, and "external" worlds. Aurora Levins Morales illuminates this point in her exploration of environmental illness, in which she invites readers and activists alike to recognize the entrenched connections between external substances and sluggish organs, ecological injustice and physiological pathways, toxic systems and sensate experience:

> There are ways that my body will not ever shift toward the so-called norm, white patches on my MRI that will not darken back into the rest, liver pathways that will always be sluggish and leave piles of debris deposited in my own tiny superfund sites, trails I will never hike…For this body of mine to have real, full inclusion requires a whole new and ecologically responsible economy, one that listens to my body speak about dieldrin and ddt, benzenes and parathion, and takes heed.[32]

As Morales suggests, a methodology that "listens to the body speak"; that "heeds" the minute interactions of internal and external systems, must not only incorporate biological data but practice sustained engagement with the body. This involves paying detailed attention to biological processes, assiduously tracking how bodies internalize the external world, and marking the somatic nature of our strategies for survival and dissent. In an effort to achieve this, my project adopts a non-diagnostic reading approach that seeks to glean information about the internal body without the aim of "solving" its mysteries.[33]

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[32] Aurora Levins Morales. *Medicine Stories*. Durham: Duke University Press, 2019, p. 51.

[33] As Julia Miele Rodas reminds us, the "repurposing of poetics in the service of pathology has been so powerfully influential that even literary readers have unconsciously taken their cue from diagnosticians." In other words, a powerful feedback loop exists between cultural and medical diagnostics that influences the

As Morales reminds us, contemplating the body closely also has political import. The cellular focus of biological imaginaries, which invites us to sift through singular states of being and corporeal minutiae, does not prevent this archive from having collective import. In addition to launching new accounts of bodily alterity into our collective imagination, biological imaginaries offer us a powerful cultural arena for confronting systemic oppression. From unearthing inequalities in healthcare and probing the side effects of common treatments, to highlighting mental health crises and giving shape to the ways in which racism ravages bodies and minds, the texts I consider in this project use biological imaginaries to reckon with the multiple ways in which bodies interiorize medical scientific and political injustices. Where these injustices have frequently been culturally obscured, clinically overlooked, or scientifically under-examined, biological imaginaries bring them to the surface by enacting a visceral mode of embodied knowledge.

The connection between embodied awareness and political sensibilities has long been a fruitful one for artists and political organizers alike. My opening consideration of body mapping – which originated in 1970's queer and feminist activism but remains in use today – is partly intended to link the contemporary issues I discuss in this project to twentieth century social justice movements that affirmed the creative, political, and therapeutic dimensions of attending to embodied experience from marginalized positions. In the radical feminism of the Women's Health Movement, in the Black Panther Party's emphasis on health justice as a crucial aspect of Black liberation in the 1960's and 70's, and in the AIDS activism that responded to deathly medical and governmental policies from the 1980's on, we witness a variety of historical movements for gender, racial, and sexual liberation that responded to medical and scientific

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ways we read for bodily difference in different contexts. See Rodas. *Autistic Disturbances: Theorizing Autism Poetics from the DSM to Robinson Crusoe*. Ann Arbor: University of Michigan Press, 2018, p. 49.

mistreatment by devising community-based strategies for care, bodily autonomy, and self-knowledge.[34]

While these examples are by no means a comprehensive list, it is striking that these three political movements for Black, female, and LGBT+ health justice can all be linked to cultural movements that rendered defiantly non-normative bodies into instruments for creativity and defiance. For instance, the feminist body art that emerged in the 1960's used the body as a vehicle for denouncing the material realities of living under patriarchy.[35] In the 1960's and 1970's, the Black Arts Movement generated aesthetic emblems of Black Power, creating innovative considerations of Black life that incited consciousness raising and activated the fight against white supremacy.[36] And from the 1980's on, AIDS cultural production created arresting depictions of queer life ravaged by, and persevering through, a pandemic that disproportionately affected the most vulnerable.[37] These briefly noted examples provide important precedents for art and activism that engages bodily precarity, while circulating new arrangements of gendered, racialized, and sexual embodiment in the cultural imaginary to trouble dominant conceptions of "the other."

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[34] For an overview of the Black Panther health movement, see Alondra Nelson's *Body and Soul: The Black Panther Party and the Fight Against Medical Discrimination*. Minneapolis: University of Minnesota Press, 2011. For the women's health movement, see Sandra Morgen's *Into Our Own Hands: The Women's Health Movement in the United States, 1969-1990*. New Brunswick: Rutgers University Press, 2002. And for AIDS activism, see Deborah Gould's *Moving Politics: Emotion and ACT UP's Fight Against AIDS.* Chicago: University of Chicago Press, 2009.

[35] Amelia Jones. *Body Art/Performing The Subject*. Minneapolis: University of Minnesota Press, 1998.

[36] Lisa Gail Collins and Margo Natalie Crawford (eds). *New Thoughts on The Black Arts Movement.* New Brunswick: Rutgers University Press, 2006.

[37] Douglas Crimp. *Melancholia and Moralism: Essays on AIDS and Queer Politics*. Cambridge, MA: MIT Press, 2002.

While biological imaginaries can be related to these historic, identity-based political and aesthetic projects, they also speak to contemporary challenges by subverting new developments in biomedicine and biotechnology to illuminate debilitating conditions that cross identitarian lines. Biological imaginaries index and respond to present circumstances that are impacting our bodies on a massive scale, including mental and physical health crises, racial inequity, and oppressive political, medical, and corporate efforts to regulate the body. In the United States at least, these conditions are being met with political responses that fail to alleviate their debilitating effects. Indeed, as responses to the COVID-19 pandemic, climate change, and the erosion of healthcare and bodily autonomy have suggested, policymakers are more than capable of *worsening* these situations and their effects.

In the absence of systemic solutions, individuals are bombarded with political and corporate messaging that we alone are responsible for our wellbeing. For those who have the resources to do so, internalizing this message is becoming the only path to achieving so-called health and wellness. In recent years, the internal body has become a potent site at which personal responsibilities and health mandates take hold. Over the past decade, new initiatives in biotechnology have elevated the act of peering inside the body as the key to optimizing the self from the inside out. In the absence of universal healthcare or accessible services, for example, digital healthcare corporations like Femtec, Modern Age, and Viome are promising tailored solutions via the solicitation and analysis of bodily data. For instance, Viome promises better gut health after customers purchase its Gut or Health Intelligence kits and submit blood and stool samples to the company labs, while Femtec plans to elicit skin and hair samples from customers

to establish tailored hormonal regimens.[38] Beauty companies are also increasingly targeting the internal body — from patches that release a dose of bespoke vitamins into the bloodstream, to beauty technology that purports to penetrate the skin and DNA testing for better beauty routines.[39]

This elevation of biological regulation as the key to physical optimization crystallizes in the case of Theranos, Elizabeth Holmes' health tech startup. Founded in 2003, the company claimed to be developing at-home blood testing technology that would promise users detailed information about their bodies from a few drops of blood pricked from the finger. In one of the company's most prominent promotional imagers, Holmes was shown pinching a micro-vial of blood between thumb and forefinger; peering at the tiny vessel as if the secrets of human embodiment lay within. She reinforced these optics in language when she spoke of her invention's ability to identify and predict disease and irregularities. Prior to being charged with massive fraud in 2018, she successfully pedaled the promise to "find out what's going on inside your body, take control, and live your best possible life."[40] This pledge undergirds many modern corporate initiatives that combine precision medicine with wellness culture, which elevate the acts of surveilling and diagnosing the body as the key to knowing "what's going on inside."

There are two troubling tendencies in this concerted effort to access and discipline the internal body. The first declares that a closer look at biological stuff – blood, waste, skin cells, DNA – will reveal innate truths about who we are. This reifies essentialism as the central

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[38] Kaiser Health News, "Microbiome Startups Promise to Improve Your Gut Health, But Is the Science Solid? *Health Leaders Media,* August 25, 2021,https://www.healthleadersmedia.com/innovation/microbiome-startups-promise-improve-your-gut-health-science-solid.

[39] https://sequencing.com/skin-genes-dna-analysis-app https://www.viome.com/ https://www.femtechealth.com/ and https://modern-age.com/

[40] For the Theranos campaign archives, see Patrick Thomas O'Neill "Theranos", https://patrickthomasoneill.com/Theranos

analytic and logic for understanding our bodies. The second offers an ostensibly less deterministic approach by promising ways to target and manipulate biology in a practice now known as biohacking. In this formulation, however, biology is only a fluid entity in terms of its potential for optimization. These bio-ventures therefore turn on the ableist assumption that looking inside the body should only serve a standardizing and capacitating function.

It is this impulse to standardize, optimize, or diagnose the internal body that biological imaginaries resist. Against efforts to regulate the internal body in increasingly invasive ways, I am interested in how contemporary cultural forms are reimagining biology from below. They do so by attending to aspects of embodied life that have often been culturally overlooked and clinically underexamined, by highlighting scientific lacunae and medical abuses, and by tracking the wayward, ever-changing meanings of alterity on a microscopic scale. In emphasizing biological profusion over fixity and drawing attention to the minute ways in individual and collective human bodies diverge from the norm and respond to oppressive circumstances, biological imaginaries also rework a damaging assumption: that individual bodily optimization is the key to surviving a debilitating era. While my objects of study often testify to debilitating and difficult realities, they are also emblems of tenacity and expressions of interdependence and joy. They refuse to adjust embodied realities to normalizing mandates, or to individualize what it takes to keep going. My first chapter takes up this relational impulse in more detail, examining interrelated accounts of bodily alterity that question what it means to witness the pain of others.

Chapter Outline

In Chapter 1, I explore two texts that speculate on a host of biological processes and devise radical responses to medical subjectivity. I compare Catherine Lord's *The Summer of her Baldness* (2004), a cancer journal and photography collection, and Patrick Staff's short art film *Weed Killer (*2017), a meditation on sickness and transgender embodiment. Taking extracts of Lord's memoir as its script, *Weed Killer* connects Staff's experience of undergoing hormonal replacement therapy (HRT) to Lord's account of undergoing chemotherapy. By adapting Lord's memoir to articulate their own gender transitivity, Staff negotiates the similar medical demands that are made on disabled, sick, and trans people. Read together, *Baldness* and *Weed Killer* give shape to a paradoxical tension that is at the center of both crip and trans discussions of medical intervention: between accessing the care one desires on the one hand, and a perceived capitulation to the medical industrial complex on the other. I read Staff and Lord as charting a space between uncritical endorsement and outright rejection of medical science. From Lord's narration of chemotherapy on the level of cells and follicles, to Staff's aesthetic use of thermal imaging, both texts deploy biological imaginaries to mediate the unseen side effects of their chosen treatments, subsequently revealing an array of medical oversights that disproportionately affect the sick and disabled, women, and trans people. Drawing on pharmacological data on both HRT and chemotherapy, I read these texts as staging a cripped transfeminine treatment protocol that takes both the hazards and the transformative potential of medical subjectivity into account.

I continue my reevaluation of medical subjectivity in Chapter Two, arguing that biological imaginaries allow us to reimagine the disdained medical subjects of the past. I analyze Aaron Apps' prose poetry collection, *Dear Herculine* (2015), which functions as a meditation on Apps' own illness and intersexuality and as an experimental biography of the intersex person

Herculine Barbin (1838-68). Following her death by suicide, Barbin's body was autopsied and distributed in service to the medicalized pursuit of binary sex. Responding to the dehumanizing language that infuses historical accounts of Barbin, Apps represents Barbin as something other than fodder for medical science. He achieves this by repurposing medical technologies, subverting the medical gaze, and using biological language and imagery to propose a fuller, non-binary reckoning with Barbin's biography. Ultimately Dear Herculine reveals that the very bodily matter that has long been inscribed with gendered meaning – gonads, genitals, tissue, chromosomes – in fact defies categorization as male or female. The text thus imbues the anomalous body with the capacity to defy an essentialist read. Towards the end of this chapter, I depart from Apps to trace affiliations between the contemporary movements for intersex and disability justice, highlighting their shared call for medical and political recognition of the realities of bodily variance.

Chapter Three continues to explore cultural forms that subvert biological essentialism, this time through the lens of Black feminist artistry and activism. I begin by exploring the work of writer, scholar, and activist Alexis Pauline Gumbs, whose multimedia work reimagines Black feminist ancestry by utilizing a biological imaginary. As scholars including Alondra Nelson and Stephen Best have argued, African American ancestral enquiry can risk either reinscribing genetic determinism and white racial essentialism, or reaffirming the discursive essentialism that assumes an easy exchange between enslaved ancestors and contemporary Black subjects. Against these tendencies, I argue that Gumbs deploys a biological imaginary to give shape to a visceral sense of genetic estrangement on the level of minute biological activity. Drawing on numerous organic processes including respiration and blood circulation, Gumbs uses biology to reveal the toll of genetic isolation, also to identify concrete strategies for adaptation and refusal

on a granular level. Her use of biological imaginaries in her writing and community-building activities resonates with an array of contemporary experiments in art and activism that trade in distinctly biological aesthetics. In the final portion of this chapter, I argue that work by visual artists like Kevin Beasley and Wit López, artist-activist Jen White Johnson, and movements like Black Disabled Lives Matter and the Harriet Tubman Collective, strategically deploy biological imaginaries. They do so to represent the impact of antiblack racism on a cellular level, to depict the interlocking nature of different forms of discrimination, and to probe political organizing as a somatic experience.

Chapter Four expands my enquiry into the somatic, examining how biological imaginaries might be used to convey the complex bodily manifestations of anxiety. I focus on anxiety because it occupies a particular place in both medical and cultural spheres, cast simultaneously as a mental disorder and a broad social plight, but rarely discussed as a disability that effects the entire sensorium. My archive includes the comedy of Jenny Slate, whose 2019 special *Stage Fright* performs the multiple ways in which anxiety is somatized. I also attend to the artistic collaboration between writer and artist Hannah Black, textile artist Ebba Fransén Waldhör, and musician Bonaventure, who create immersive performances and art installations which I read as formally representing a symptom of anxiety known as somatosensory amplification. Through these readings, I suggest that crip methods are themselves in need of a sensory awakening in order to grapple with the somatosensory contours of so-called mental illnesses. In the final section of this chapter, I shift from thinking about how cultural forms portray anxiety to how they alleviate it by drawing on the internet subculture of autonomous sensory meridian response or ASMR: a diffuse collection of audiovisual, primarily digital texts that seek to trigger pleasant sensations in their audiences. The reciprocal nature of crip ASMR

communities online – in which creators often respond to requests to design pieces to relieve certain symptoms – offers one way in which biological imaginaries can engender new modes of sociality.

My conclusion briefly reasserts the urgency of biological imaginaries as a cultural movement through the lens of COVID-19. As many reconcile themselves to living with heightened awareness of bodily vulnerability, I ask how biological imaginaries might processes this condition and contend with the misinformation that obstructs individual and systemic responses to the pandemic. While the effect of COVID-19 on cultural production is ongoing, the unforeclosed effects of the pandemic suggest that the need to integrate biological instability and new medical scientific developments into cultural analysis is already troublingly apparent. My dissertation aims to model that integration and analysis by making the internal multitudes of the body newly palpable. In my first chapter I take up the question of how we might decouple medical biology from oppressive frameworks specifically for the purposes of crip and trans worldmaking – not by disavowing medicalization altogether, but by cultivating a creative and critical orientation to medically induced bodily flux.

Beyond the Medical Model:

A Crip, Transgender Treatment Protocol in *Weed Killer* and *The Summer of her Baldness*

When we talk about making work about health, sickness, debility, we're often in these positions—the cleaner, above-board answer as to why this, why now, and the dirtier, messier question of the lived reality of our bodies.

- P. Staff[41]

Staying alive means acknowledging the coexistence of worlds that were separate.

- Catherine Lord[42]

Disabled people have long subverted, or cripped, mainstream discourses to reveal ableism and discrimination.[43] But little attention has been given to the ways in which we subvert the insights and methods of medical biology. In my introduction, I attributed this oversight to the tendency of disability studies and other critical theories of embodiment to omit medical biology for fear of reinscribing essentialism. I suggested that the aesthetic explosion of biological imaginaries – contemporary depictions of bodily alterity that foreground the viscera and subvert medical science – invites us to reconsider that omission.

Challenging both the medical scientific tendency to pathologize or essentialize biology, and the humanistic impulse to demonize or jettison it altogether, this chapter pursues a different

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[41] P. Staff. "Remedy + Poison: Patrick Staff on Agitation in Art + What it Means to Represent the Pain of Others in *Weed Killer*." Interview with Brandon Sward, *AQNB*, 21 September 2017: https://www.aqnb.com/2017/09/21/remedy-poison-patrick-staff-on-agitation-in-art-what-it-means-to-represent-the-pain-of-others-in-weed-killer/

[42] Catherine Lord. *The Summer of her Baldness: A Cancer Improvisation*. Austin: University of Texas Press, 2004, p. 200.

[43] Carrie Sandahl draws the idea of cripping from queering in queer culture, which "describes the practices of putting a spin on mainstream representations to reveal latent queer subtexts; of appropriating a representation for one's own purposes, forcing it to signify differently; or of deconstructing a representation's heterosexism." Similarly, some disabled people practice cripping to spin mainstream discourses. See Carrie Sandahl. "Queering the Crip or Cripping the Queer?: Intersections of Queer and Crip Identities in Solo Autobiographical Performance. *GLQ*, 9(1), p.25-56, 2003.

conversation about medical biology through the question of what it means to be a critical medical subject. I examine two texts that deploy biological imaginaries to wrestle with the felt, material complexities of consensual medicalization: Catherine Lord's *The Summer of Her Baldness: A Cancer Improvisation* (2004), a memoir and photographic account of illness and treatment, and P. Staff's short art film *Weed Killer* (2017), a meditation on debility and transgender medicalization that uses Lord's memoir as its script. Through a comparative close reading, I explore how these texts mediate biology as an active force in the making of medical subjectivity. Staff and Lord's biological imaginaries become legible in their emphasis on visceral processes, their twisting of the medical gaze, their investigation of clinical oversights, and their performance of a speculative relationship to biological data. Lord and Staff use these biologically-informed strategies to perform a critical relationship to the medical industrial complex, and to articulate their own nuanced relationship to treatment.

In each text, the internal body offers a suitable realm for mediating the experience of medicalization, because biology is the site at which the simultaneously transformative and hazardous effects of treatment are revealed. To track these effects, Staff and Lord formally represent their medical regimens on the level of turbulent biological activity including intoxicated cells, overheating organs, and hormonal flux. For Lord (a sick, cisgender woman who desires treatment for breast cancer) and Staff (a trans person who uses they/them pronouns and desires hormonal therapies), these regimens are part of survival and self-determination. But each artist-author also documents the damaging aspects of their therapies. This reveals a host of unwanted side effects and an alarming array of healthcare oversights that disproportionately effect women and transgender people. As deeply ambivalent accounts of medicalization that harness and repurpose biological data, *Weed Killer* and *Weed Killer* and *The Summer of Her*

Baldness reveal both the painful effects of treatment and its restorative properties by way of arresting encounters with the internal body.

I begin by providing an overview of each text and the specific tropes of Lord and Staff's biological imaginaries across different media and genres. I then unpack a paradox that lies at the heart of both crip and trans discussions of medicine: between accessing the services one desires, and acknowledging the capacity of those services to harm. Rather than performing either outright disavowal or wholesale endorsement of treatment, Lord and Staff use biological imaginaries to contemplate the deep-seated interactions of human biology and drug – also known as pharmacology – as a simultaneously destructive and regenerative process. Etymologically derived from the Greek word *pharmakon*, meaning drug, poison, philter, charm, spell, or enchantment, pharmacology reveals the mutual constitution of poison and remedy. [44] As Staff explains, one of *Weed Killer*'s central themes (and that of its source text, *The Summer of Her Baldness*) is a "desire to needle at questions of what we think of as being medicine and what we think of as being poison. There is an incredibly complicated and fine line between…what is nourishing me and what is poisoning me."[45] As a process whose very naming acknowledges this slippery nature of drugs, pharmacology materializes the paradox of medicalization that both *Weed Killer* and *The Summer of Her Baldness* engage. Reading these texts alongside relevant biological data, I am interested in how each subverts pharmacology to revealing its toxic properties even as they appropriate its therapeutic effects.

These texts act as crucial case studies in my mapping of biological imaginaries because they offer biologically-influenced literary and visual accounts of medicalization across different

[44] "Pharmacology." *Online Etymology Dictionary*. https://www.etymonline.com/word/pharmacology.

[45] P. Staff. Interview with Sarah Cluggish, no page number.

(but, I will argue, resonant) experiences of bodily alterity. In adapting Lord's memoir, Staff does not shy away from these differences. Instead, they use it to ponder how we might process visceral experiences that are distinct from our own. Reading *Weed Killer* and *The Summer of Her Baldness* as each other's pertinent intertext, the claim underlying my analysis is that each text models a more sensitive approach to the body in treatment. In so doing, these texts enable an awareness of other people's visceral experiences and facilitate a coalitional critique of the medical industrial complex from within.

From 2000-2001, Lord documented her experiences of breast cancer, chemotherapy, and radiation over an email listserv in which she assumed a polemical alter-ego named Her Baldness. These dispatches are collected in *The Summer of her Baldness* alongside correspondence from friends, stark self-portraits, and photographs of medical scenes. As Lord traces the diagnosis, treatment, and aftermath of cancer, her narrative does not arch towards the tidy moments of resolution or cure that structure traditional illness memoirs.[46] Instead, she represents continuous bodily turmoil at all stages of her illness by way of unruly bodily *stuff*. Biology bursts through the narrative in disruptive, misshapen, and often uncontainable ways. Diarrhea is "dark green and oily", blood "balloons into a bulge the size of a grape" under the skin, ovaries "wither", brains puddle into "kefir," cells "leapfrog…through my bloodstream" or "shrivel into dust."[47] Of her treatment, Lord writes:

> chemo works by killing all the fast-growing cells in your body, of which cancer is only one kind, and, when you stop to think about it, the difference between your fast-growing cells and you is a matter of splitting hairs and you are not in possession of hairs to split.[48]

[46] For more on the common tropes that structure traditional illness narratives, see Arthur Frank's *The Wounded Storyteller: Body, Illness, and Ethics.* Chicago: University of Chicago Press, 2013.

[47] Lord, p. 145; 166; 159, 115, 23, 35.

These descriptions of dead follicles and collapsing cells suggest the sheer biological disarray that is precipitated not only by cancer, but by chemotherapy. In contrast to society's mass investment in cure, Lord frames treatment as a constant negotiation. She describes chemo as the ingestion of "enough poison to make you crazy miserable but not enough to put you out of your misery…chemo is like mainlining weed killer."[49] Throughout the text, weed killer distills both the promises and the perils of medical subjecthood.

Lord's central image of weed killer lends a title to P. Staff's *Weed Killer* (2017), which uses extracts of Lord's memoir as its script. Over seventeen minutes, Staff intersperses documentary-style footage of the actor Debra Soshoux performing portions of Lord's memoir with otherworldly images of corporeal unrest. Using microscopic imagery and thermal imaging technology, Staff litters the film's visual field with bodily activity under infrared light: DNA chains melt and morph, cells tremble and transform, skin crackles and splits, hair follicles quiver in the wind. These images visually reproduce the biological unruliness that Lord verbally conjures in her memoir.

However, *Weed Killer* is not simply an adaptation of Lord's text. Instead, Staff brings Lord's meditation on cancer and treatment to bear on their own consideration of gender transitivity and transgender medicalization. The film invokes trans embodiment in numerous ways: by using Soshoux, a transfeminine actor, to perform as Lord, by incorporating scenes of eerie choreography performed by trans and nonbinary artists as Soshoux's narration of the memoir continues via voiceover, and by using Lord's equivocal account of chemotherapy as a

[48] Ibid, p. 292.

[49] Ibid, p. 48.

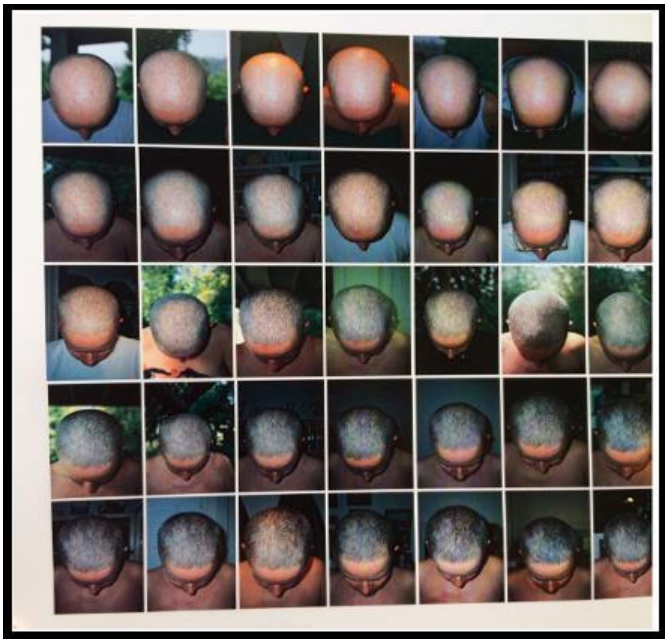
prompt for Staff's own ambivalence about transgender medicalization. Specifically, Staff takes an active interest in the carcinogenic properties of common hormonal therapies, which they connect to Lord's risk assessment of chemotherapy as well as the toxicity of our everyday environments. In overlaying these experiences of illness, gender transitivity, and intoxication, *Weed Killer* queries how disparate bodies might access or process each other's pain by way of an aesthetic encounter with biological instability.

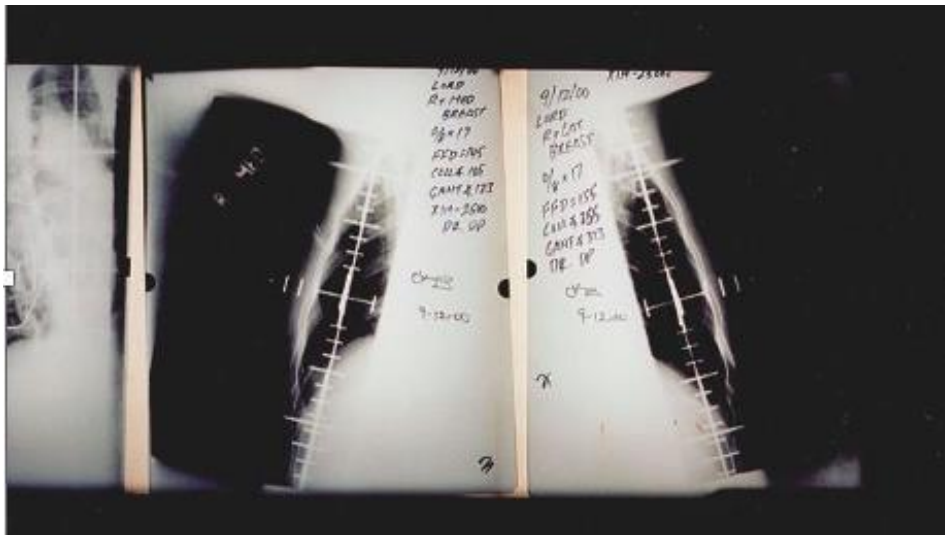
The Summer of Her Baldness and *Weed Killer* index key tropes of the biological imaginary. These include, firstly, the use of visceral aesthetics and formal innovation to convey bodily precarity: from Lord's emphasis on cells, guts, and follicles, to Staff's visualizations of internal unrest. Secondly, each text subverts the medical gaze, as demonstrated in Lord's photographs of medical scenes and detailed descriptions of tumors, or Staff's use of thermal imaging technology to dramatize bodily fluctuations. Thirdly, each repurposes medical scientific data to illuminate the effects of common treatments that often remain hidden from view. Lord charts the pernicious effects of chemo, while Staff ponders the relationship between our everyday surroundings, hormonal therapies, and cancer risk. Lastly, each text uses human biology as an unexpected device for considering disparate embodied states. By adapting Lord's cancer memoir to articulate their own transgender experience, Staff negotiates a relationship between sick and trans subjects that illuminates the similar medical scientific demands that are made upon these groups — without collapsing important distinctions.

Rather than analogizing the experience of sickness and gender transitivity, I am interested in how each text uses viscerality to disrupt the very idea of social categories."[50] For instance, *The*

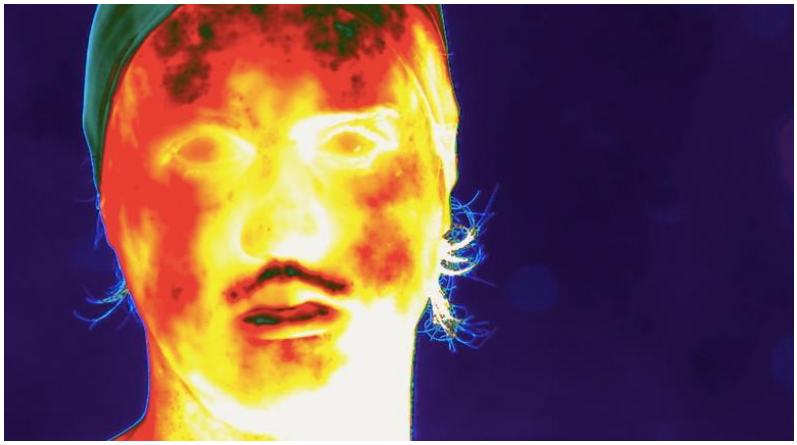
[50] As Ellen Samuels reminds us, analogies can "create and rely on artificial dichotomies that not only produce inequality between the terms of comparison but exclude or elide anomalous experiences that do not fit easily within their terms. Ellen Samuels. "My Body, My Closet: Invisible Disability and the Limits of Coming-out Discourse." *GLQ: A Journal of Lesbian and Gay Studies* 9.1 (2003): 233-255, p. 235.

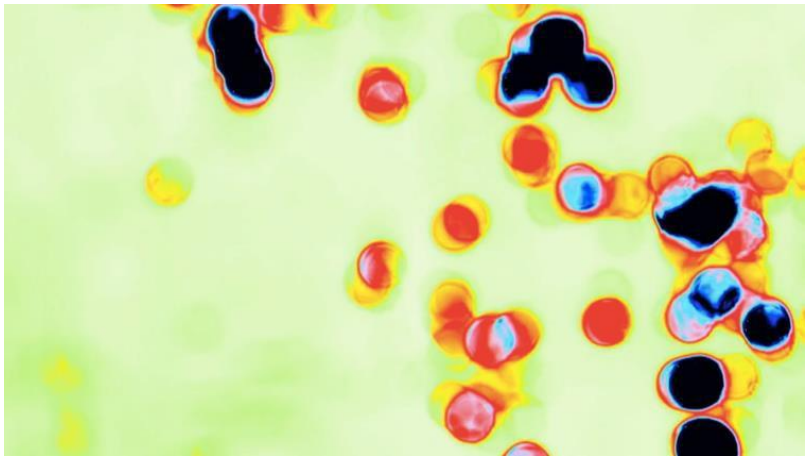
Summer of Her Baldness conceives gender, sexuality, and illness as resonant states of corporeal flux. As a newly bald, sick, queer woman who declines the offer of a wig, Lord performs a precarious relationship to the normative codes of wellness, heterosexuality, and femininity. While her baldness is a social marker of this destabilized subjecthood, Lord also documents how her sense of self is transforming on a deeper level. By filtering her illness through hormonal, alimentary, cellular, and cognitive disturbances, she centers visceral turbulence as an experience that reshapes her sense of health, sexuality, and gender concurrently.

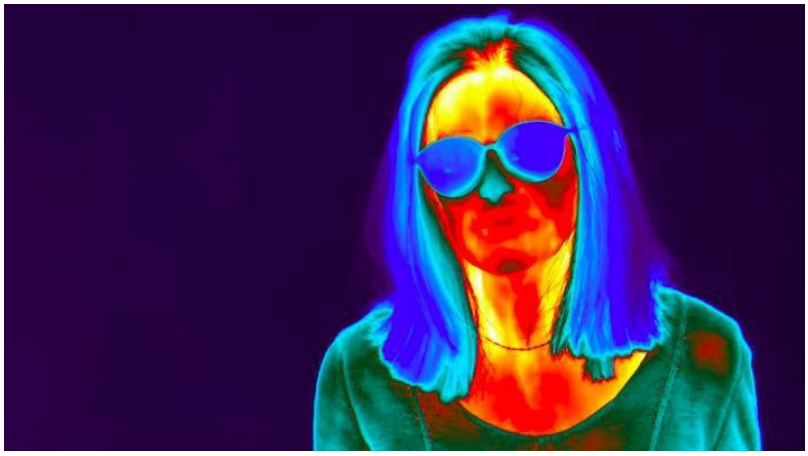




Catherine Lord, *The Summer of Her Baldness*







P. Staff, *Weed Killer*

Staff also uses visceral imagery to envisage the imbrication of debility and gender transitivity. The artist has stated that their intention with *Weed Killer* was not to flatten the differences between themselves and Lord, but to allow the meanings of Lord's memoir to proliferate in relation to a wider field of bodies. Commencing the project, Staff knew that *Weed Killer* "was not going to be an easy exercise in intersectionality…I asked Catherine to adapt a section of her book but explicitly wanted to interject onto it, introducing my own subjectivity…to let the meaning shift."[51] One of the ways in which Staff "shifts" the meaning of *The Summer of Her Baldness* is by using Lord's ambivalence about cancer treatment to stage their own meditation on trans medicalization. Specifically, Staff is interested in the dynamic between hormonal therapies and cancer, and the ways in which hormonal therapy is both a crucial resource for many trans people that can alleviate the agony of gender dysphoria, and a precarious, potentially painful process that remains under examined in medical spaces.[52]

Taking Lord's critiques of treatment as a provocation, *Weed Killer* uses images of bodily matter under pressure not to analogize the experience of undergoing chemo and opting for hormonal therapies, but to conceive both treatment protocols as transformative, risky processes that intensify one's awareness of fleshy vulnerability. This shared sensitivity to biology merges discrete subjects in a form of interrelationality, relocating a consideration of embodied difference away from social surfaces and towards the question of how different aspects of alterity signify on the level of shifting biology. In more concrete terms, Staff and Lord's portrayal of disparate subjects under medical supervision enacts a coalitional critique of the medical industrial complex

[51] P. Staff. "To Survive on One's Own Terms". Interview with Sarah Cluggish. *Walker Reader*, February 19, 2018. https://walkerart.org/magazine/to-survive-on-ones-own-terms-patrick-staff-on-weed-killer.

[52] Ibid.

that brings the paradoxes of treatment for marginalized subjects to the fore. In the following section, I define these paradoxes and explore their ramifications for sick and trans people alike.

The Paradoxes of Medicalization

Staff and Lord's shared medical ambivalence reveals a paradox that lies at the heart of both crip and trans discussions of treatment: between validating the desire for medical intervention on the one hand, and recognizing the oppressive nature of the medical industrial complex on the other. As the disability activist and scholar Mia Mingus elaborates:

> Many of us are dependent on the MIC [medical industrial complex] while we are simultaneously trying to change it and ultimately build alternatives to it. Many of us don't want to have to turn to the MIC yet have few other viable options. And still many of us are fighting for access to current (or better) services within the MIC. There are no easy answers and the contradictions we are living in are often painful and unjust.[53]

These contradictions are also an embodied reality for trans and nonbinary people in medical spaces. While trans and disability studies have commonly been conceived as distinct, scholars working within and across both fields have repeatedly critiqued medical models that seek to "fix" or normalize bodies and minds.[54] In so doing, they have affirmed the value of bodily diversity and underlined people's capacity for self-determination. At the same time, both trans and disability scholars have cautioned that a total rejection of medical models can risk discounting the experience of people who are constrained or debilitated by the material realities

[53] Mia Mingus. "Medical Industrial Complex Visual," *Leaving Evidence*, February 6, 2015: https://leavingevidence.wordpress.com/2015/02/06/medical-industrial-complex-visual/.

[54] See, for instance, Jasbir Puar. *The Right to Maim: Debility, Capacity, Disability*. Durham: Duke University Press, 2017; Abby L. Wilkerson. "Normate Sex and its Discontents" in Robert McRuer and A. Mollow (eds.) *Sex and Disability*, edited by Robert McRuer and Anna Mollow. Durham: Duke University Press, 2012, p. 183–207; Alison Kafer, *Feminist Queer Crip*. Bloomington: Indiana University Press, 2013; Eli Clare, *Brilliant Imperfection: Grappling with Cure*. Durham: Duke University Press, 2017.

of their embodiment, as well as those who undergo or seek medical intervention. In the field of disability studies, Alison Kafer argues, the dismissal of medicalization can function as an overcorrection: "because we are so often confronted with the medical framing of disability as unending burden," she writes, "admitting to struggling with our impairments or wanting a cure for them is seen as accepting the very framings we are fighting against… but by [disavowing medicine] we limit the discourses at our disposal."[55] Here, Kafer identifies a need to account more fully for the painful aspects of impairment and the complexities of pursuing treatment. This would bring us beyond a purely medical or purely social model of disability by acknowledging the capacity of impairment to harm and by grappling with the material experiences of disabled people in treatment.

Similarly, the trans theorist Alexandre Baril argues that neither a medical nor a social model can fully grasp the visceral, sometimes debilitating realities of trans embodiment. In the following extract, he explicitly links this point to disability:

> Just as medical and social models of disability are inadequate to name the subjective experience of my disabilities, medical and social understandings of trans identities/embodiments insufficiently describe the complexity of the experience and suffering related to my transness. This suffering remains despite the surgeries I have undergone (the medical model's solution) and would persist in a world without transphobia/cisnormativity (the social model's solution) … the experience of suffering linked to some of the debilitating aspects of transness should not be overlooked.[56]

By drawing attention to the "debilitating aspects" of trans embodiment, Baril is not reverting to a medical model of gender. Rather, he is querying the ways in which debility – in the form of gender dysphoria, medical transition, anxiety, cisgendered violence, and more – can function as an element of trans embodiment in ways that neither a social nor medical model can

[55] Kafer, 2013, p. 7-8.

[56] Baril, p. 68-69.

fully account for. Other theorists including Hil Malatino, Eli Clare, and Jay Prosser have also considered the simultaneously transformative and painful elements of trans medicalization. Like the painful aspects of disability and the complex realities of medicalization, then, there is a need to further probe the material conditions of transgender suffering and how these conditions are alleviated, transformed, or worsened by way of medicalization.

Eli Clare further illuminates the particular discomfort of medicalization for those who identify as both disabled and trans. Confronting his own desire for gender confirming top surgery, he asks: "how can I reconcile my life-long struggle to love my disabled self with my use of medical technology to reshape my gendered and sexed body-mind?"[57] This question acknowledges the evils of medicine that have traditionally aimed to normalize the subject. At the same time, Clare's desire to "reshape my gendered and sexed body-mind" with the use of medical technologies gestures towards the material possibilities of medical science. Although trans people who desire medical assistance are often forced to navigate "highly regulated, hierarchical and pathologizing" medical spaces in order to access care,[58] Hil Malatino argues that trans medicalization can be powerful in itself it is not used to normalize the body. He urges trans people to take up a "nomad science" of transition that does not subscribe to normalizing protocols or binary thinking. Nomad science "focus[es] on the specific, resistant, and creative ways in which trans and gender nonconforming subjects reinvent and reconstruct themselves in manners irreducible to the medical logic of transition."[59] This concept of nomad science

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[57] Clare, 2017, p. 175.

[58] See Eyssel, Jana, et al. "Needs and Concerns of Transgender Individuals Regarding Interdisciplinary Transgender Healthcare: A Non-Clinical Online Survey." *PLOS One* 12.8, 2017: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0183014.

[59] Hil Malatino. "Nomad Science," *Transgender Studies Quarterly* 1.1-2 (2014): 138-141, p. 140.

dovetails with nontraditional crip and femme sciences that critically engage medical scientific discourses, but do not seek cure or normalization as their end goals.[60]

In the following sections, I assess the biological imaginary as a powerful cultural realm for unpacking these medical paradoxes and for mediating the complex experience of consensual medicalization. Specifically, I am interested in how *The Summer of Her Baldness* and *Weed Killer* creatively engage biology to index the material realities of alterity, to advocate for self-determination in clinical spaces, and to identify the fissures in official medical scientific research that materially impact folks who are already vulnerable in medical spaces. Later in this chapter, the intertextual nature of these texts also gives me cause to contemplate the relational nature of medical subjectivity. Rather than constellating medicalization as an experience that occurs in invisible or isolated realms, I argue that Staff and Lord utilize biological imaginaries to consider how the body in treatment impinges on other bodies in a material sense.

From Treatment to Poison

Chemotherapy originated at the nexus of destruction and rehabilitation, as delineated by the military and medical industrial complex. During the First World War, studies of soldiers exposed to mustard gas discovered that the gas halted the ability of bone marrow to reproduce in a way that also prevented cancerous cells from replicating.[61] Today, the specter of warfare continues to

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[60] For more on crip science, see Piepzna-Samarasinha, *Care Work: Dreaming Disability Justice*. Vancouver: Arsenal Pulp Press, 2018, p. 69-70. Crip science is indebted to Kim Katrin's idea of femme science, or the tacit knowledge that flourishes among marginalized folks who use experiential knowledge to assist each other in a variety of contexts. See Kim Katrin. "Femme Science & Community Based Research," *kimkatrin.com*, August 9, 2013. http://kimkatrin.com/queer-gifted-black/2013/8/9/femme-science-community- based-research.html.

[61] Vincent DeVita and Edward Chu. "A History of Cancer Chemotherapy." *Cancer Research* 68.21, p. 8643-8653, 2008: https://aacrjournals.org/cancerres/article/68/21/8643/541799/A-History-of-Cancer-Chemotherapy. No page number.

haunt cultural narratives of cancer and treatment. The 1971 National Cancer Act designated funds to "the national effort against cancer," health and wellness culture draws our attention to cancer "fighting" nutrition and wellness hacks, and people who have cancer are commonly referred to as warriors and survivors. In her 2019 memoir of breast cancer and treatment, Anne Boyer argues that these narratives are fueled by "money and mystification;" propped up by systems that profit from the idealized figure of the patient who never stops fighting. What these narratives occlude, for Boyer, is the exhaustion entailed in that fight. She writes that having cancer involves draining one's already-depleted energy for the sake of survival, characterizing those with cancer as a community of ever-more debilitated people who "sell the hours of their lives to survive their lives."[62] Here Boyer underscores cancer treatment as an ambivalent site of exchange that worsens certain effects of illness even as it alleviates others.

Commencing her own course of chemotherapy, Lord also contemplates cancer treatment as a fraught exchange. For Lord, chemo summons a toxic sensorium of side effects:

> You do, in fact, feel better in the short run, much better, but you also know that the weed killer is feasting on you…Any one of a list of unpleasant side effects could be in your future: heart attacks, kidney failure, intestinal parasites, collapsed veins, loss of sexual interest, sores in the rectum, skin so thin it splits, weight loss, weight gain, extreme fatigue, ditto vaginal dryness, olfactory hallucinations, severe skin burns, permanent hair loss, and, of course, the stress induced by waiting for the advent of any of the above…the body betrayed, no longer has confidence that what it takes in might nourish.[63]

As a substance that withers particular forms of plant life so that others can thrive, weed killer metaphorizes chemotherapy as both a protective and destructive process. Chemo works by administering cytotoxic agents, or compounds toxic to living cells, which in turn halt the ability of cells to reproduce by damaging the structure of their DNA. While this process effects

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[62] Anne Boyer. *The Undying: Pain, Vulnerability, Mortality, Medicine, Art, Time, Dreams, Data, Exhaustion, Cancer, and Care*. New York: Macmillan, 2019, p. 247-8.

[63] Lord, p.49.

cancerous cells more acutely due to their faster replication rates and more concentrated absorption of the poison, all human cells are damaged during chemo. Lord traces the extent of this damage in the passage above, targeting moments in which treatment tips into poison. With this use of visceral language and imagery, she communicates the experience of chemotherapy as a mutually vampiric process in which the subject intravenously ingests something that "feasts" on her.

This feasting is both immediate and anticipatory: the side effects of chemotherapy overtake short-term relief and, perversely, begin to mimic the destructive behavior of cancer itself on human cellular makeup. Lord represents this destruction in intimate detail via descriptions of textural changes wrought by chemo: stretched skin, sprouting sores, vaginal dryness and caved-in veins all mirror the ways in which conglomerates of cancer cells change the shape and feel of the body. These blurred effects of cancer and chemo further emphasize the ways in which illness, treatment and human biology modify each other on the level of internal bodily matter. By drawing attention to these interactions, Lord refutes the broader cultural assumption that cancer drugs merely act on or "fight" inert bodily matter. In place of the cancer patient at war with their own body, armed with only their personal grit and a cocktail of pharmaceuticals, Lord delineates the relationship between human biology and drug as a coactive and affectively laden interplay.

Weed Killer gives visual form to these laden interactions between human biology and toxic substances. Take, for instance, the point in the film in which Staff adapts Lord's inventory of side effects quoted above. This section combines talking-head footage of Soshoux slowly chanting the impact of chemo with enlarged, abstracted images of her face and body under thermal imaging. Staff interweaves these images with shots of industrial landscapes including a

quarry, a highway, and dancers gyrating next to churning cement — all hazardous industrial landscape that are rife with carcinogenic potential (cement, for instance, contains the carcinogen hexavalent chromium).[64] These flickering images all appear onscreen within the space of a minute, with their restless nature echoing the affective alarm of Lord's writing in visual terms.

We might read this rapid overlay of images as producing a sort of aesthetic metastasis, in which the medical scientific gaze is repurposed to stage a jarring encounter with biological instability. Etymologically, metastasis refers to the flowing and conversion of substances into each other. This process is formalized in *Weed Killer*'s slippage between external and internal sites of contamination. Performed by Soshoux and set to arresting imagery of the interior body, Staff adapts and extends Lord's list of side effects to evoke not only the vulnerability of the body in treatment but the vulnerability of all bodies to their toxic surroundings: from car fumes and industrial waste to the carcinogenic properties of cement. As Soshoux continues to recite Lord's

P. Staff, *Weed Killer.*

[64] Dong-Hee Koh et al. "Cancer Mortality and Incidence in Cement Industry Workers In Korea." *Safety and Health at Work* 2.3 (2011): 243-249: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3430901/

list of side effects, other performers are shown under thermal imaging, gyrating beside a wheel of churning cement; at another point, the camera speeds down a highway before cutting to infrared images of trembling cells and sloppy DNA chains. In these moments, Staff conjoins seemingly disparate materials (churning cement and the human body in motion, speeding cars and cellular transformation) to visualize the body's porous vulnerability to contamination. Staff's use of thermal imaging, which essentially represents a live heat map of the internal body, also allows the viewer to access realms that typically remain unseen. Interspersed with shots of potentially toxic environments, these infrared images not only represent the body in a state of constant change but crystallize the capacity of external objects to infringe upon and interact with biological processes. By imagining an array of potentially hazardous sites and substances alongside images of anatomical tumult, *Weed Killer* provides not so much a stable location for cancer but a sense of its *imminence* in our bodies, our surroundings, and our lives.

The imminence of cancer – in bodies, in substances, and in medical spaces themselves - is a central concern for the artist. But while the poisonous nature of everyday substances and objects is relatively common knowledge, *Weed Killer* also references the imminent toxic effects of common pharmaceutical treatments, particularly as they pertain to trans bodies. Throughout the film, Staff conceptually links the pernicious effects of cancer treatment to the toxicity of hormonal therapies. They do this by mobilizing a biological imaginary to spotlight the involuntary, unpredictable effects of treatment via the agitation of internal bodily matter. Throughout the film, skin burns and flakes, cells multiply and die, and chains of DNA collapse under the pour of a liquid substance. These visceral images mutate Lord's meditation on cancer treatment, bringing her critique to bear on the potentially noxious properties of hormonal therapies. As Staff explains: "If you are trans and decide to take hormones this is often one of the

first disclaimers given. This action hugely increases one's risk of cancer. This is a personal choice that has to be made."[65] Their statement frames hormonal therapy as both a powerful act of autonomy that demands recognition, and a significant risk that can render trans people all the more vulnerable. This dual view of medicalization dovetails with Lord's consideration of treatment as a compromise, one which poisons even as it purports to cure.

Like chemotherapy drugs, synthetic hormones emerged during the Second World War, when progesterone and estrogen molecules were first manufactured using the urine of pregnant mares.[66] While the relationship between hormonal therapies and cancer risk has been documented in some realms of cisgender women's healthcare like contraception and menopausal therapies, significantly less consideration has been given to the risks facing trans and nonbinary people who undergo hormonal replacement therapy (HRT) and the specific requirements of care therein. The scholar S. Lochlann Jain, whom Staff cites as a key influence, offers a useful anchor for exploring these elisions. A queer nonbinary anthropologist, Jain threads their own experience as a "cancer butch" through their cultural history of cancer *Malignant: How Cancer Becomes Us*. The text frequently draws on scientific data, but Jain tends to frame cancer research as a series of imperfect experiments in the ongoing attempt to understand the disease. These imperfections come to the fore in the book's examination of the relationship between cancer and HRT.

Before their cancer diagnosis, Jain opted for hormonal therapy to allow them to donate eggs to their then-partner and have children together. Years on, they deliberate over the question of whether HRT "caused" their cancer. This question proves impossible to answer with the available data: while hormonal therapies are broadly associated with increased breast cancer risk,

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[65] P. Staff, interview with Sarah Cluggish, no page number.

[66] Paul Preciado. *Testo Junkie: Sex, Drugs, and Biopolitics in the Pharmacopornographic Era*. Trans. Bruce Benderson. New York: The Feminist Press, 2013, p. 26-7.

Jain writes that the medical industrial complex elides certain therapies – particularly feminizing ones – from medical scientific studies and literature. For instance, the lack of data on IVF and cancer is commonly reframed by fertility companies to imply no correlation between the two. This "intentional years-long lack of research offers an example of a structural ignorance about cancer, its causes, and its acceptability."[67] For Jain, HRT therefore takes on both a threatening and hopeful proclivity in that it facilitates their family-making but also haunts their experience of cancer and its causality. By drawing attention to these scientific lacunae that surround cancer risk and HRT from a queer perspective, Jain opens up a range of questions about the ambivalent relationship between endocrine disruption, hormonal therapies, gender transitivity, and sickness that *Weed Killer* also engages.

The available data around the impact of HRT on the body heightens this ambivalence. Researchers from the Karolinska Institute in Sweden found that HRT "changed the expression of 50% of genes associated with a greater risk of breast cancer," but that the route of administration (i.e., how and where hormones are administered) will affect genes differently.[68] For instance, natural hormones administered in oral and skin gel forms were found to carry less of a risk of affecting the genes than their synthetic counterparts. However, these studies were conducted on cisgender women. This focus on cis women brings us to another scientific lacuna to which *Weed Killer* attends: the lack of robust research on trans people who choose HRT, which leaves those

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[67] S. Lochlann Jain. *Malignant: How Cancer Becomes Us.* Berkeley: University of California Press, 2013, p. 132.

[68] Per Hall et al. "Hormone-replacement Therapy Influences Gene Expression Profiles and is Associated with Breast-cancer Prognosis: A Cohort Study." *BMC Medicine* 4.1 (2006): 1-13. Electronic copy, no page number. In response to be the increased risk of breast cancer that accompanies certain forms of HRT, the International Menopause Society recommends that the treatment be closely monitored and individualized according to medical and family history. But "at a deeper level, the problem has been; how do we know what HRT actually does to the breast at a genetic level?" See International Menopause Society. "For the First Time, Proof of What Hormone Replacement Therapy Does to Genes Involved in Breast Cancer" *ScienceDaily*. 2 May 2014: www.sciencedaily.com/releases/2014/05/140502172035.htm.

who are already overlooked by the healthcare system even more vulnerable to a world of under-documented pharmacological effects.

The authors of the World Professional Association for Transgender Health Standards of Care concur that HRT can lead to irreversible changes, citing "feminizing agents, particularly estrogens" as one potential trigger for cancer.[69] However, evidence around the *nature* of those effects remains inconclusive. For instance, there are no long-term studies of breast cancer risk in trans women receiving HRT.[70] This lack of robust research around trans healthcare is replicated in clinical settings. For example, the absence of controlled clinical trials on feminizing and masculinizing hormone regimens means that no standard protocol exists for hormone type, usage, and dosage (not to mention managing the range of socioeconomic and psychological factors that come into play).[71] It is important to note that this lack of standardization can be both helpful and harmful: allowing for individualization of care on the one hand but indicating a systemic lack of formal training in the area of transgender care on the other. Furthermore, no standard guidelines exist on how often trans people undergoing HRT should receive a cancer screening, despite the research linking some synthetic hormones to cancer risk. For all patients, frequent testing risks exposure to high amounts of radiation. For trans people, cancer screenings

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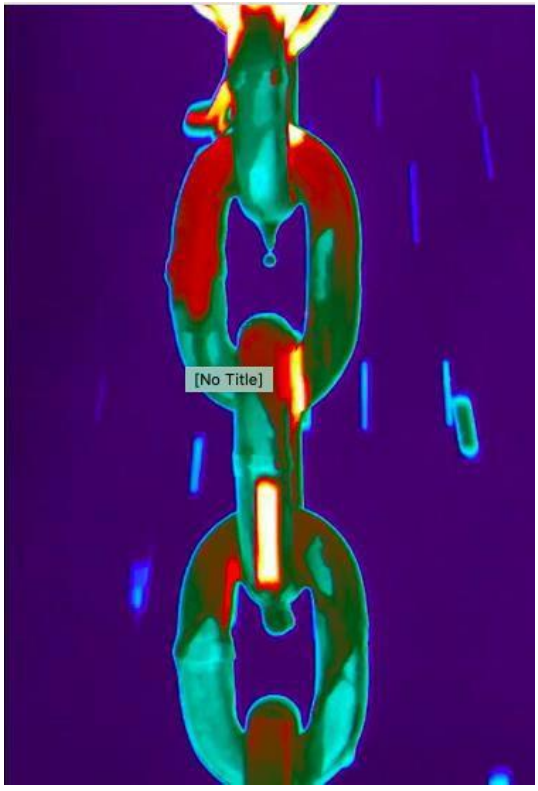
[69] Joshua D. Safer et al. "Barriers to Health Care for Transgender Individuals." *Current Opinion in Endocrinology, Diabetes, and Obesity* 23.2: 2016, p. 67.

[70] Jamie Feldman and Joshua Safer. "Hormone Therapy in Adults: Suggested Revisions to the Sixth Version of the Standards of Care." *International Journal of Transgenderism* 11.3, p. 146-182, 2009.

[71] It is worth noting here that the dangers of trans medicalization, particularly transfeminine medicalization, have been weaponized as a central anti-trans claim by trans-exclusionary radical feminists in recent years. *Weed Killer* does not suggest that the answer to the risks of trans medicalization is to dispose of these practices — rather, the film implicitly critiques this discriminatory stance by demonstrating the urgent need for both robust medical scientific research and more sensitive cultural approaches to gender transitivity as a lived reality and trans healthcare as a right. Furthermore, Staff emphasizes the vulnerability of trans people navigating the medical industrial complex as an inaccessible space that imperils them; not deviant subjects who use medicalization to "invade" cisgender women's spaces.

of organs "associated with sex" can come with specific challenges: "patients may find cancer screening gender affirming (such as mammograms for MtF patients) or…painful (such as pap smears…for FtM patients)."[72] The high variance of emotional and somatic response to HRT, different potencies of administered pharmaceuticals, unclear monitoring protocols, and inconclusive evidence, makes it all the more difficult to perceive and manage the risks of treatment.

Weed Killer intervenes in these understudied effects by giving visual form to the possible impacts of HRT on the body. Take, for example, the film's abstracted depiction of cellular damage that follows Staff's adaptation of Lord's alarming list of side effects. In this sequence, chains of various thicknesses appear under thermal imagery, swaying and flickering from icy blue to prickly orange. The screen then cuts to a single chain, which appears to spark and melt under the pour of a molten substance. In light of the documented impact of both chemotherapy and synthetic hormones on human genes, as well as Staff's thematic interest in toxicity and the chemical vulnerability of the body, we might read these melting chains as DNA. This image of genes disintegrating under heat and pressure contributes to the general sense of bodily disarray that can be triggered by chemical treatments. More



P. Staff, *Weed Killer*

[72] World Professional Association for Transgender Health EMRWG. "Standards of Care for Health of Transsexual, Transgender, and Gender Nonconforming People, 7th Version. 2011, https://www.wpath.org/media/cms/Documents/SOC%20v7/SOC%20V7_English.pdf p. 66.

specifically, the chains reference the latent or possible outcomes of hormonal therapies on human DNA. Read in the context of *Weed Killer* as a visual response to Lord's memoir, the image connects the toll of chemotherapy to the risks of undergoing HRT.

This abstracted suggestion of unspecified external substances mutating the internal body is necessarily speculative, given the uncertain relationship between hormonal therapies, cancer treatments, and cellular damage that *Weed Killer* engages. In the face of scant scientific research on transgender healthcare and hormonal therapies, the film instead uses speculation as a tool of critique. Staff's amalgamation of scientific speculation and memoir resonates with Sami Schalk's claiming of the speculative as a useful cultural arena for complicating the realism that has tended to dominate cultural accounts of bodily difference. Disabled artists and writers, Schalk argues, have traditionally turned to testimony in order to "emphasize notions of the real and the authentic in opposition to a history of negative and skewed portrayals of people with disabilities by nondisabled people."[73] According to Jay Prosser, this impulse to recreate "authentic" realities is also a central trope of transgender autobiography. This involves narrating transition through a structure of "consecutive stages: suffering and confusion; the epiphany of self-discovery; corporeal and social transformation/conversion; and finally, the arrival 'home'— the reassignment." This has become a popular narrative arc for mediating gender transition in realist testimony.[74]

In contrast to these realist, linear narratives in which the non-normative subject arrives at a state of secure bodily occupation, *Weed Killer* represents embodiment as a system of ongoing

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[73] Sami Schalk. *Bodyminds Reimagined: (Dis)ability, Race, and Gender in Black Women's Speculative Fiction*. Durham: Duke University Press, 2013, p. 18.

[74] Jay Prosser. *Second Skins: The Body Narratives of Transsexuality*. New York: Columbia University Press, 1998, p. 101.

rearrangement. We witness this impulse in the film's proliferation of images of bodily matter and processes as they morph and mutate. As Soshoux's monologue progresses, the film's shots of the internal body become more agitated as cells rain down the screen and are seen to multiply themselves. By rapidly switching between more realist documentary-style footage of Soshoux relating an experience of illness, and eerie imagery of the internal body, the film testifies to the deep-seated, visceral activity that underlies descriptions of bodily flux but tends to exceed or challenge straightforward expression. Staff reflects on this difficulty of closing this gap between expression and visceral sensation in the statement that opens this chapter: "when we talk about making work about health, sickness, debility, we're often in these positions — the cleaner, above board answer as to why this, why now, and the dirtier, messier question of the lived reality of our bodies.[75] *Weed Killer* attends to these "dirtier, messier" realities even as it utilizes personal testimony. For those who are deemed unreliable narrators of their bodies in medical spaces – women, trans and gender non-conforming people, the disabled, and the racialized – neat descriptions of the body are often a prerequisite for accessing healthcare. This leaves little space for considering the messy realities of alterity, which may profoundly impact daily experience but can be used to discredit or further pathologize medical subjects. By foregrounding imagery of wayward human biology, *Weed Killer* draws our attention to the visceral activity that rages beneath the surfaces but often goes unsaid and underexamined in clinical spaces.

Staff redeploys medical scientific technology to attend to these visceral realities, even as they challenge conventional forms of expression. Throughout the film, infrared images of melting DNA, splitting cells, trembling follicles, and burning skin are amplified to speculate on bodily behaviors that unfold beneath the surface. Typically used for surveillance or medical

[75] Staff, interview with Brandon Sward, no page number.

ends, thermal imaging captures the invisible energies of light to detect temperature variation in the body.[76] While it is most commonly used as an instrument of discovery, Staff reroutes this clinical technology to contemplate the enigmas of the body without the aim of diagnosis or explanation. As evidenced in the film's presentation of infrared chains transforming under pressure, these images of interiority work to interrogate how the body processes and interacts with potentially harmful substances. While the capacity of external substances to mutate human biology is a disconcerting prospect, the point of these speculations is not to criticize those who choose medical intervention or to discount treatment entirely. Like Lord, Staff spotlights a range of responses to treatment in order to perform an open-ended risk assessment about the toxic tradeoffs of treatment that many marginalized people choose, need, and desire. Their speculations on the damaging properties of HRT illuminate the ways in which marginalized subjects live with degrees of compromise and contamination that materially impact the body.

Lord also deploys a biological imaginary to explore the porosity of the body in visual terms, often speculating on the harms of chemotherapy that radiate beyond the presumed boundaries of her individual body. For instance, her photographs of intravenous drips, biological waste bins, and other medical objects work to create a profound sense of discomfort around the penetrability of the human body and its vulnerability to toxicity. In one photograph, she depicts the stark space above a hospital toilet. Mounted on the wall is a metal pack of toilet seat covers, a medical-grade hand sanitizer, and a sign declaring, "if you are currently receiving chemotherapy, please double flush the toilet."[77]

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[76] Michael Vollmer and Klaus-Peter Möllmann. *Infrared Thermal Imaging: Fundamentals, Research and Applications*. John Wiley & Sons, 2017.

[77] Lord, p. 95.

Catherine Lord, *The Summer of Her Baldness*

The sign suggests that even people who are not receiving chemo remain at risk of exposure to its poisons. This risk works in multiple directions. On the one hand, people with cancer are particularly vulnerable to everyday infection and are advised to avoid crowds of people, children, and certain substances like plastic. On the other hand, the call to double flush the toilet suggests the ways in which people with cancer function, themselves, as toxic assets due to the threat of chemotherapy and its waste products out of context. Here Lord's attention to pharmacology, and its afterlives in the form of human waste, reveals the vulnerability of those that consider themselves healthy and sick alike. In these moments, the pharmacology of chemotherapy is revealed not only as an ordeal for those undergoing treatment, but as an entity that pollutes other

bodies. With this image of chemotherapy as a toxin that moves within and *between* bodies, Lord further upends notions of biological fixity and clear boundaries.

The Summer of her Baldness is deeply concerned with how these biological breaches are registered in social settings. One of Lord's key signifiers of illness is her baldness: knowing that she is likely to lose her hair during treatment, she rejects the option of a wig and opts for baldness as "another approach to the design of prosthetic devices, an honorific…Her Baldness was a strategy designed to flaunt and to conceal."[78] This frames baldness not as a "natural" alternative to a wig but as a calculated performance borne of involuntary change. As she embarks on her performance piece, Lord becomes bleakly fascinated by the responses that female baldness elicits in the world. Losing her hair literally detaches the signifiers of gender, sexuality, wellness, and race from the surface of her body, leaving her subject to constant mis-readings: Lord recalls being mistaken for a man on multiple occasions, or interpreted as making an aesthetic statement with her "butchly LESBIAN haircut."[79] Sickness also signifies differently depending on location. Lord, who grew up in Dominica, reflects on the various meanings of baldness in a country with more limited healthcare resources than the US: "due to the complete lack of facilities for treatment, baldness resulting from [chemotherapy] wouldn't be a legible sign in [Dominica]…baldness would make [me] whiter and sicker too… there's not much sense in Dominica of serious illness as a curable event."[80] In Dominica, baldness could be read a veiled signifier of access to American healthcare, but it is more likely that it will be seen as a certain death sentence. In the US, baldness as memento mori is frequently occluded by the visual

[78] Ibid, p. 265.

[79] Ibid, p. 34.

[80] Ibid, p. 85.

signifiers of white heterosexual femininity like pink ribbons, wigs, prosthetics, and cosmetics that make illness socially and commercially palatable.[81] Lord's baldness flies in the face of this feminized marketing and refuses to pass: "I do not want to pass…baldness becomes me, in a literal sort of way, a hell of a lot better than a pink ribbon."[82] Like Staff, Lord is not interested in sanitizing the messy realities of alterity. Her intentional display of her pate can be interpreted as a refusal to cover up the truths of her body. Put differently, baldness acts as an external signifier of the complex interactions between Lord's body, her illness, and her treatment that are raging below the surface.

By devising visceral aesthetics, formally upsetting autobiographical conventions, investigating scientific lacunae, and twisting the medical gaze, both Staff and Lord construct biological imaginaries to furnish us with an understanding of how human biology and drugs interact on a visceral level, while making the imminent toxicity of these interactions apprehensible. However, neither text can be read as taking an anti-healthcare stance. Instead, Staff and Lord both explore their desire for medical intervention while charting the detrimental aspects of their chosen treatment protocol and the medical scientific oversights that worsen these effects. This approach weaves an ambivalent account of treatment as a poison on the one hand, while leaving space to chart the possibilities for remedy on the other. In what follows, I shift to flashes of relief that unfold within each text. Resisting the need to resolve their medical ambivalence, I argue that Lord and Staff devise aesthetic responses to medicalization that embrace biological instability and the body's capacity for constant change.

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[81] For more on the commercialization of breast cancer, see Léa Pool's 2001 documentary *Pink Ribbons, Inc;* S Sandy M. Fernandez' "History of the Pink Ribbon" reprinted from MAMM June/July 1998, https://thinkbeforeyoupink.org/resources/history-of-the-pink-ribbon/; and Samantha King's *Pink Ribbons, Inc: Breast Cancer and the Politics of Philanthropy*, Minneapolis: University of Minnesota Press 2006.

[82] Lord, p. 44.

From Cure to Remedy

In depicting contamination as inherent to the experience of medicalization from sick and gender nonconforming perspectives, *Weed Killer* and *The Summer of Her Baldness* evoke the enmeshment of marginalized identity, contagion, and heightened bodily vulnerability that has become all the more acute in recent years. In the U.S., pollution is concentrated in areas inhabited by lower income groups and people of color, while everyday chemicals like cleaning products and cosmetics tend to be marketed to women. According to the Center for the Study of Women and Chemical Entanglements at the University of California Los Angeles, these unequal patterns of exposure can "lead to illnesses such as Toxicant-Induced Loss of Tolerance (TILT) and Multiple Chemical Sensitivity (MCS)" that disproportionately affect women, poor people, and people of color.[83] These toxic developments are also being interrogated in cultural production. From visual art that explores marginalized groups' susceptibility to poison (Jenna Bliss' meditations on the toxicity of birth control; Candice Lin's sculptural reflections on environmental destruction and stunted queer growth) to literature that engages the nexus of identity, poison, and the medical establishment (Eula Bliss' explorations of immunity; Oliver Broudy's work on environmental illnesses), recent art forms have attempted to trace these tendrils of toxicity. Combining memoir and criticism, scholars like Paul Preciado, Vanessa Agard-Jones, and Mel Chen have also reflected on the cross-contamination of external environments, gender, race, and disability. Chen, who experiences Multiple Chemical Sensitivity, has argued that nonnormative subjects are not only more vulnerable to toxicity, but are themselves framed as toxic assets by mainstream society. But in their consideration of queer,

[83] "Chemical Entanglements: Home." UCLA Center for the Study of Women. https://csw.ucla.edu/cswresearch/chemical-entanglements/#:~:text=CSW's%20Chemical%20Entanglements%20initiative%20is,scholars%20in%20gender%2Fsexuality%20studies.

sick, racialized intoxication, Chen reconceives impurity as an empowered position: "an uptake, rather than a denial of, toxicity seems to have the power to turn a lens on the anxieties that produce it and allow for a queer knowledge production that gives some means for *structural remedy* while not abandoning a claim to being just a little bit 'off'" (emphasis mine).[84] In other words, a positioning outside the normative order allows powerful outsider perspectives to proliferate.

In light of Chen's framing of toxicity as a critical orientation to toxic worlds, we might read *Weed Killer* and *The Summer of her Baldness* as pursuing structural remedy as they navigate oppressive situations. Crucially, the pursuit of remedy is distinct from the wholesale endorsement of cure, which scholars of disability and other states of bodily difference have long critiqued. Where cure offers a "resolution of symptoms…remedies offer temporary, situational relief."[85] While the preceding section asked how Lorde and Staff approach treatment as a poison that ravages or contaminates the body, this section asks how they use biological imaginaries to shape a vision of remedy**.** Here remedy functions as both a mode of managing alterity, and as a critical stance towards toxic substances and surroundings.[86] They do this by formally representing contamination as an embodied state that propels affiliation between different groups of people, and by disputing curative logics that structure conventional understandings of illness and treatment.

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[84] Mel Chen. *Animacies: Biopolitics, Racial Mattering, and Queer Affect*. Durham: Duke University Press, 2012, p. 220.

[85] Matthew Wolf-Meyer. "Therapy, Remedy, Cure: Disorder and the Spatiotemporality of Medicine and Everyday Life." *Medical Anthropology* 33.2, pp 144-159, 2014.

[86] Eunjung Kim writes that the rhetoric and practices of cure are frequently underwritten by a violent compulsion: "curative violence is what occurs when cure is what actually frames the presence of disability as a problem and ends up destroying the subject in the curative process." Eunjung Kim. *Curative Violence: Rehabilitating Disability, Gender, and Sexuality in Modern Korea*. Durham: Duke University Press, 2017, p. 14.

We have seen how *Weed Killer* and *The Summer of Her Baldness* use biological imaginaries to portray the mutual contamination of external substances and human biology. But contamination is also an important analytic for considering the relational nature of these texts. Lord's memoir is a formally contaminated work in that it reproduces a cacophony of responses to her listserv and devises an alter ego to communicate with her audience. *Weed Killer* echoes this formal contamination in that it overlays Lord and Staff's experiences, creating an alliance between the two despite the evident differences between their embodied states. As Staff explains, "there's a lot of body doubling going on: Catherine [Lord] to Her Baldness, to me, to me asking Debra [Soshoux] to perform as Catherine but also to perform as herself."[87] This slippage between autobiographical selves mobilizes an affective network of mixing and impurity, in which subjects seep into each other and allow the artist to explore the imbrication of different embodied states.

Within and across *The Summer of her Baldness* and *Weed Killer*, the blurring of autobiographical selves evokes a queer relationality that is driven by a shared experience of toxicity. This sense of relationality extends to Lord and Staff's audiences. As Staff reminds us, "pollution can happen *within* a work - an image is dirtied, language polluted, materials are transformed—but it can also become a reciprocal, dirtying process *between* work and viewer" (emphases mine).[88] Where Lord/Her Baldness actively responds to her listserv readers and incorporates these exchanges into the text, Staff devises aesthetic strategies for implicating the

[87] P. Staff, interview with Sarah Cluggish, no page number.

[88] P. Staff. "To Survive on One's Own Terms: Patrick Staff on *Weed Killer*." Interview with Sara Cluggish, *Walker Art*, February 2018. https://walkerart.org/magazine/to-survive-on-ones-own-terms-patrick-staff-on-weed-killer.

viewer in their portrayal of intoxicated embodiment. In these ways, each text invites the audience to reconsider their own relationship to bodily boundaries.

As intertwined accounts of change and vulnerability, *Weed Killer* and *The Summer of Her Baldness* use visceral language and imagery to challenge their audiences' sense of bodily habitation. For instance, skin is a contested surface throughout *The Summer of Her Baldness*: punctured with needles during chemo, penetrated and scorched during radiation, and prodded by medical practitioners as they test, prepare, and inspect Lord. The author also takes an active interest in skin breakage, at one point describing herself as "a sunburn picker and a fingernail biter and a scab picker."[89] This desire to literally scratch at the surface intensifies over the course of Lord's radiation treatment, which causes unbearable itchiness. When she asks her cancer support group about the itch, they tell her to resist the urge: "DO NOT give in…because when your skin burns it itches and if it itches you want to scratch but if you scratch and your skin breaks they won't give you any more [treatment] and you will have to wait longer for it to be over."[90]

By sharing these excruciating experiences, which are themselves the product of yet another biologically disruptive cancer treatment, Lord facilitates a degree of social contagion between author, support group, and audience. Social contagion describes the replication of behaviors that we witness in others such as yawning, coughing, or itching.[91] Because humans demonstrably tend to reproduce these behaviors in social settings, it is reasonable to infer that Lord might trigger an itch in her reader by drawing attention to her scratchy radiation burns and

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[89] Lord, p. 90.

[90] Ibid, p. 141.

[91] See Nicholas A. Christakis and James H. Fowler. "Social Contagion Theory: Examining Dynamic Social Networks and Human Behavior." *Statistics in Medicine* 32.4 (2013): 556-577.

"itchy pink unwashed skin."[92] Her descriptions are replicated in *Weed Killer's* imagery of performers clawing at their skin as it heats and splits, which are equally likely to get under its audience's skin. These performances of social contagion invite the audience to briefly inhabit a moment in which the reception of another person's embodied experience temporarily moves from the realms of witnessing to that of immediate sensation. By using biological imaginaries to elicit immediate bodily responses, Staff and Lord posit that it is possible to render interiority collective through art. This shift from singular visceral experiences to collective response evokes a form of structural remedy, in that it reminds us that we are always proximate to the visceral experiences of others. Alongside Lord and Staff's intertextual intimacy and their mapping of common ground between seemingly disparate subject positions, these aesthetic strategies dispel the illusion that the body in pain exists in isolation.

Weed killer, that substance that flows through and connects these two texts, also invites us to contemplate remedy in unexpected places. Across each work, weed killer takes on multiple meanings: a poison, a threat, yet also a substance that metaphorizes relief. We see this experience unfolding in a later scene in Lord's memoir, where she contemplates the restorative properties of gardening. In the following quote, she polls her cancer support group for tips on how to manage mental illness that accompanies cancer and treatment: "how do you get through the depression…you weed, said Suzie, even if it's only for ten minutes. You just go out to the garden and weed."[93] While the potency of chemotherapy easily "fits right on the pesticide shelf", here the notion of weeding takes on a therapeutic propulsion. *Weed Killer* gives visual form to these multiple meanings. Staff ends the film on the "go out to the garden and weed" line from Lord's

[92] Lord, p. 107.

[93] Ibid, 199.

memoir and closes with Soshoux rising and stepping out of the frame. It feels likely that she is repeating an act that we witnessed her perform earlier: picking through green leaves and branches in the sunlight, hydrating them with a spray bottle. This scene illustrates the intermixing of poison and remedy in everyday contexts: the spray bottle may well be pumping carcinogenic weed killer, but the scene's affective note is one of hope.

Here weeding can be understood as a form of what Ann Cvetkovich calls "transformative daily habit" in her exploration of depression and queer perseverance.[94] In her amalgamation of theory and memoir, *Depression: A Public Feeling,* Cvetkovich identifies techniques for surviving depression in quotidian rituals, from swimming and grocery shopping to queer craft circles. She calls such acts "slow living," a corrective to Lauren Berlant's vision of slow death, or the wearing-away of subjects by way of affective attachments that ultimately harm them.[95] Slow living offers one way in which we can steer ourselves through conditions that test us, without pretending that those oppressive conditions don't exist.

[94] Ann Cvetkovich. *Depression: A Public Feeling*. Durham: Duke University Press, 2012, p. 76.

[95] See Lauren Berlant. *Cruel Optimism*. Durham: Duke University Press, 2011.

P. Staff, *Weed Killer*

These gentle, deliberative activities replicated in Staff and Lord's gardening, which center *coping* over curing. As the perennial queer gardener and British artist Derek Jarman wrote, gardening is a small daily act of hope: "my garden's boundaries are the horizon."[96] After learning that he was HIV positive in 1986, Jarman retreated to Prospect Cottage in Dungeness in the United Kingdom, an exposed coastal landscape overlooked by a nuclear power station. Here he constructed a "stony desert" filled with hardy beach plants, shingle, and flotsam sculptures. Jarman's later writings and films frame gardening as crucial respite during an illness that had limited treatment options at the time.[97] In one of his final films, titled *The Garden* (1990),

[96] We might link this to José Esteban Muñoz's argument that queerness is a horizon, or a way of being that can be invoked from the vantage point of the present but is "not yet here" due to a politically and imaginatively stalled present. See *Cruising Utopia: The Then and There of Queer Futurity.* New York University Press, New York, 2009.

[97] Importantly, this later work does not reflect a quiet acceptance of debility – on the contrary, Jarman created many incandescent artworks that critique the political response to the AIDS crisis. See, for instance, his

Jarman presented a series of elegiac rituals filmed at Prospect Cottage. In the voiceover for the film, Jarman states that *The Garden* "offer[s] you a journey without direction…and with no sweet conclusion…when the light faded, I went in search of myself. There were many paths. And many destinations."[98] This narrative refutes tidy narratives of illness, testifying not to the promise of relief and recovery but to the ongoing power of artistic exploration around the dissolution of the body.

Jarman's later work, which finds liveliness in barren landscapes, anticipates Staff and Lord's queer emphasis on gardening as a material instance of perseverance under duress. In a scene from her 52nd birthday party, Lord once again links gardening to transformation and endurance. The author hands out party favors in the form of plastic bags, filled with seeds and strands of her own hair. "It has been pointed out to me," she writes, "that there is something chilling to this gesture of mixing dead hair with seed and handing it out. Also that there is something affirming. I myself find it perverse. Women are not supposed to spread their seed. Dead hair is nasty."[99] The suggestion that Lord's friends might spread her dead hair and seed is both elegiac and life-affirming, echoing the scattering of ashes as well as the renewal of life. The baggies affirm that growth happens in unexpected places while issuing a reminder that the effects of cancer live, ambiguously, on. This inconclusiveness is clear from the instructions Lord supplies to her guests with the baggies: "take a walk. find a patch of bare ground. Scatter the contents. Revisit." The uncertainty surrounding whether the seeds will flourish or die can be linked to Cvetkovich's assertion that living through debilitating situations involves "not

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"Slogan Paintings", which repurpose tabloid hysteria and government announcements around AIDS to critique the response.

[98] Derek Jarman. *The Garden.* 1990.

[99] Lord, p. 200.

knowing, trusting to process and to a holistic intelligence that encompasses mind, body and senses in order to see what happens."[100] For Lord and her friends, the scattering of human and plant matter becomes a performance piece with no secure resolution.

In concluding her narrative with this refusal to resolve, Lord refutes the curative imaginary and elevates the ongoing "business of living with cancer." Her future, she writes, will involve a host of medical procedures like bone and CT scans, check-ups and mammograms, and emotional effects. This vision of survival that is tempered by illness and its aftereffects suggests that medicalization does not simply stop with the choice to opt for, or out of, treatment. In the long term, a cripped approach to medicalization therefore demands a durational, heightened sensitivity to biological being and increased awareness of biological processes that impact lived experience over time.

Weed Killer echoes Lord's refusal to present a stable vision of cohesive transformation or cure but applies it the continuous negotiation of gender. As Eunjung Kim explains, cure enforces normative ideals not only of health but of gender and sexuality.[101] *Weed Killer* refuses to inhabit these codes, instead drawing attention to gender as an ongoing process of transformation that is influenced by turbulent bodily activity in ways that remain difficult to predict. Ultimately, *Weed Killer* and *The Summer of Her Baldness* guard against the lauding of a normative medical subject who is rehabilitated and cured by way of medicalization. Taking their cue from crip, femme, and nomad modes of scientific knowledge, they instead forge complex configurations of embodiment that mark both the risks and therapeutic properties of treatment, all the while emphasizing the durational and inconclusive nature of this process. These configurations find their aesthetic

[100] Cvetkovich, p. 202.

[101] Kim, p. 14.

incarnation in the biological imaginary, which envisions and enacts responses to medical biology in ways that neither disavow the material agencies of the body, nor aim to restore the body to mythological wholeness.

On Witnessing the Pain of Others

There is a scene, in *Weed Killer*, that stands apart from Soshoux's monologue and Staff's repeated use of infrared imagery. In this interlude, the artist and performer Jamie Crewe is shown lip syncing her heart out to an oblivious crowd. Crewe appears in a glittering outfit and glamourous makeup, passionately lip syncing to La India's *To Be In Love With You* in a grubby gay bar. As her performance builds, Crewe brings another version of heat to the film (the song's chorus runs *to be in love with you is everything/ it's burning me up inside)*, getting hot and bothered as she prances through the bar and contorts herself, clutching her sweating hair and face in a performance that blurs ecstasy and distress. In contrast, the bargoers remain either baffled by or oblivious to her exertion.

P. Staff, *Weed Killer*

By placing a transfeminine performer in front of a group of cis-presenting gay men who neither match nor take an interest in her heightened emotional state, *Weed Killer* interrupts its cross-textual, coalitional consideration of alterity with a moment in which subjects decline to acknowledge or process the experience of others. Staff reflects on this moment in their interview with *AQNB*, which is worth quoting at length for its illumination of the difficulty inherent to any intersectional consideration of disparate embodied states:

> A big part of *Weed Killer* was, 'how do we articulate pain, who gets to articulate pain and to whom?' I wanted the juxtaposition of the bar scene to redirect the energy of the monologue in some way. That first section of the video, Debra [Soshoux] is speaking so intensely about her chemotherapy, her body, to the audience... I wanted to contrast that with a club scene where Jamie projects in a completely different way, equally if not more passionately, to a group of uninterested people. She's singing about how it's possible to feel almost addicted to another person, how it's burning her up inside. And yet there's no reciprocity from the men watching her … [in the Crewe scene] there's transfemininity in relation to groups of cis gay men. There's a proximity between those identities, but also a moment when solidarity easily collapses.[102]

As an adaptation of an illness memoir that splices a queer cisgender woman's experience of cancer together with Staff's meditation on trans vulnerability, *Weed Killer* can certainly be read as an exploration of solidarity between different embodied positions. Yet in the extract above, the artist reinforces the point that their work is not a proclamation of easy coalition. In addition to asking how the painful aspects of gender and debility inform each other, the film reminds us of the continued difficulty of metabolizing embodied experiences that are different from our own.

While the gay bar scene serves as an important reminder that attempts at enabling that awareness can fail, in the preceding analysis I have sought to trace one way that recognition and processing might happen by following *Weed Killer* and *The Summer of Her Baldness* deep inside

[102] Staff, interview with Brandon Sward, no page number.

the body and analyzing their intertextual intimacy. Through a close reading of these texts' visceral language and imagery, their subversion of the medical gaze, and their hijacking of medical scientific data and discourse, I have identified some significant aesthetic and formal features of the biological imaginary and characterized it as an emergent cultural arena for mediating deep-seated aspects of bodily disquiet.

Without re-pathologizing the marginalized body or reverting to essentialism, Lord and Staff's deployment of biological imaginaries has several implications for our conception of embodiment, medicalization, and alterity. In terms of embodiment, *Weed Killer* and *The Summer of Her Baldness* complicate the equation of biology with inert matter by representing it as a reactive, unruly set of processes. This defies the medical scientific assumption that biology can be controlled or "acted upon" by drugs, as well as the humanistic assumption that biology is less active or mutable than our so-called social identities on the other. Depicting biology in this way gives us a palpable sense of embodiment not as a secure habitation, but as a state of tumbling fluctuations in which internal and external worlds contaminate each other. This reminds us that our human bodies, while seemingly distinct, are always proximate to the visceral experiences and chemical interactions that unfold beneath each other's skin.

In terms of medicalization, *Weed Killer* and *The Summer of Her Baldness* negotiate the fine line between exposing the body to untold effects and accessing relief. Rather than framing the choice of treatment as either a capitulation to the medical industrial complex or as an uncritical endorsement of cure, these texts interrogate how biological data might empower marginalized subjects in clinical spaces. By critically orienting themselves to the medical industrial complex, Staff and Lord also reveal the ways in which the medical promise of relief can also incite more pain — both physiologically in the form of side effects, and psychologically in the form of

further alienation. Each text documents the effects of treatment that have gone overlooked, but also questions the surprising opportunities for relief that might emerge while undergoing these processes.

And in terms of alterity, Staff and Lord use biological imaginaries to show how subjects are implicated in the embodied experiences of others, even when we are not consciously aware of these entangled relations on a surface level. If there are social impediments to articulating and processing the pain of others, as the scene in which Crewe lip-syncs to an indifferent crowd suggests, we can choose to explore or ignore the ways in which we remain proximate to each other's embodied experiences. *Weed Killer* and *The Summer of her Baldness* choose to embrace this proximity. In the next chapter, I explore another example of a writer who channels the biological imaginary to mediate the relationship between disparate non-normative subjects — this time across the gulf of space and time, and with the aim of engaging the disempowered medical subjects of the past.

Bio-Histories:

Herculine Barbin, Intersex Embodiment, and the Biological Imaginary in *Dear Herculine*

But if the state and legal system has an interest in maintaining only two sexes, our collective biological bodies do not.

Anne Fausto-Sterling[103]

This letter believes that all bodies are intersexed, yet dwells in the extreme of two bodies until the two burst and spread out into the floor.

Aaron Apps[104]

In one of many visceral renditions of history in *Dear Herculine* (2015), Aaron Apps' poetic response to the biography of the intersex person Herculine Barbin (1838-68), the author imagines his subject's own relation to the past. Addressing Barbin directly, Apps writes: "when you were a child you would devour history texts, you'd take them and retreat into the chestnut grove filled with those little spheres of round nut meat. Little round things like gonads. Little tree fetuses ripe for the crunching."[105] These lines draw on a passage from Barbin's own memoirs, which were rediscovered and published by Michel Foucault as *Herculine Barbin: Being the Recently Discovered Memoirs of a Nineteenth-Century French Hermaphrodite* in 1980. In these writings, Barbin recalls withdrawing into chestnut groves to read as a child. During a melancholy childhood, she describes reading as a refuge. History, in particular, "distract[ed] me from the vague sadness that then dominated me completely. How many times did I excuse myself…to walk alone with a book in hand, on the magnificent paths of our beautiful garden, at the end of

[103] Anne Fausto-Sterling. *Sexing The Body: Gender Politics and the Construction of Sexuality*. New York: Basic Books, 2000, p. 31.

[104] Aaron Apps. *Dear Herculine*. Boise: Ahsahta Press, 2015, p. 8.

[105] Ibid, p. 27.

which there was a little wood planted with dark, dense chestnut trees!"[106] In creatively reworking this scene, Apps (who is intersex and uses he/him pronouns) explicitly links Barbin's personal history to biology, as the pastoral moment of an intersex child reading in the woods sinks into foreboding imagery of ripening reproductive organs ready for consumption. More broadly, these lines suggest the intersection of Barbin's biography with the medical history of gender.

Born in southwestern France in 1838, Barbin was raised, and self-identified, as a woman. While scholars have used a variety of pronouns, including they/them and s/he, I use she/her pronouns when referring to Barbin in this chapter. Here I follow M. Morgan Holmes' call to honor Barbin's narrative and sense of herself: "although [Barbin] saw herself in many ways as an exceptional female, she did not perceive herself as necessarily beyond the boundaries of the female."[107] Barbin experienced chronic abdominal pain throughout her life, which motivated her, at the age of twenty-two, to seek out a doctor and precipitated the "discovery" that she had testes. After further medical, legal, and religious scrutiny, Barbin's gender was legally reassigned to male in 1860. Eight years later – forced to live as a man, cast out of her home and job as a teacher in a girls' school, and estranged from her former life – she died by suicide in her Paris apartment.

Following her death, Barbin's body was autopsied by medical authorities. She subsequently became an important specimen in the medical scientific effort to determine the origin and meaning of "true sex." Her biography dovetails with a period of medical history that historian Alice Dreger terms the 'Age of Gonads.' At this time, doctors and scientists (whom

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[106] Herculine Barbin, trans. Michel Foucault. *Herculine Barbin: Being the Recently Discovered Memoirs of a Nineteenth-Century French Hermaphrodite*. New York: Vintage, 1980, p. 8-9.

[107] Morgan Holmes. "Locating Third Sexes." *Transformation: Online Journal of Region, Culture and Societies* No. 8 (2004), no page number.

Dreger refers to as "medical men") were consolidating new methods for exploring the internal workings of gender, including improved microscopic technology and tissue sampling. This led medical men deeper into the body, to the extent that they came to focus on gonads (ovarian and testicular tissue), rather than external sex characteristics like visible genitals or body hair, as the defining biological marker of sex.[108] Apps references this gonadal logic, as well as Barbin's subjection to the medical gaze, in his description of gonads "ripe for the crunching" in the passage quoted above. By placing an image of exposed internal organs in a scene from Barbin's early life, the author foreshadows Barbin's vulnerability to the gonadal definition of sex, her ultimately fatal encounters with medical science, and the historic ramifications of her gender identity for the conception of binary sex.

While my first chapter considered how artists utilize biological imaginaries to forge alternative accounts of contemporary medical subjectivity from marginalized standpoints, this chapter argues that biological imaginaries can be harnessed to reimagine the medical subjects of the past. I read *Dear Herculine* as an experimental work of biography that deploys a biological imaginary to reimagine Barbin's life and afterlife. The collection also uses a biological imaginary to dispel binary conceptions of sex that were first popularized in nineteenth century medical science — from the notion that genitals neatly correspond with gender identity, to the understanding of gonads and chromosomes as strictly male or female.

Apps challenges these limited understandings by exploring the concrete ways in which biology signifies beyond the logics of binary gender. He does this by accentuating the strange agencies of biology, punctuating his account of Barbin's life with experimental descriptions of biological matter and processes via wayward gonads, overflowing bodily fluids, and reanimated

[108] See Alice Dreger. *Hermaphrodites and the Medical Invention of Sex*. Cambridge: Harvard University Press, 1998, p.139-167.

corpses. These images of visceral profundity deconstruct dominant medical scientific discourses that seek to define and fix the meaning of gender to the intersex body. By interrogating clinical reports on Barbin's body, destabilizing the medical gaze, and repurposing the medical technology that was used to peer inside her body, Apps launches a critique of the medicalized history of gender that detaches biology from the projects of gender classification and essentialism. Attending to these features of the text, I argue that *Dear Herculine* uses images of biological multiplicity to disperse oppressive and deterministic notions of Barbin's gender — and to suggest that biology functions as the seed of formal and aesthetic innovation in the text.

Dear Herculine is a hybrid text that can be located at the intersection of poetry, autobiography, and biofiction, a postmodernist literary genre in which aspects of an historical figure's life are reimagined with fictional or non-realist elements. The text functions as a collection of epistolatory prose poems addressed to Barbin, an autobiographical account of Apps' own intersex experience, a eulogy for a recently departed friend, and a visceral reckoning with Herculine Barbin's place in history. Beginning with "Dear Herculine…", each poem is a missive from author to subject. These tend to connect fragments of Barbin's life to the author's own lived experience, or to rewrite scenes from the memoirs that were found alongside Barbin's body.

Apps also uses Barbin's experience of medicalization to illuminate the medical history of gender, and to contemplate contemporary cultural and medical assumptions about intersex corporeality. To illustrate Barbin's connections with the medical scientific discourse on gender that accelerated during the nineteenth century, Apps reworks different historical sources including her memoirs, medical documentation, genital diagrams, microscopic samples of

intersex bodies, and clinical reports. A full report on Barbin's anatomy, accompanied by edited extracts of her memoirs, was first published by a doctor named E. Goujon. He had obtained permission to perform Barbin's autopsy lest science "lose the opportunity to make a study of it."[109] Responding to the dehumanizing language that infuses such accounts of Barbin's body, Apps represents her as something other than fodder for medical science. He achieves this by repurposing and subverting the medical gaze, and by using biological language and imagery to propose a fuller, non-binary reckoning with Barbin's biography.

Biological imagery is at the heart of *Dear Herculine*: castrated genitals, bloated gonads, flaking skin, putrefying corpses, and pooling bodily fluids are all recurring tropes. The abject quality of these materials formally evokes the dark history of gender under medical scientific scrutiny during the nineteenth century, including the internal exams, autopsies, and sampling to which Barbin herself was subjected. Apps fictionalizes aspects of Barbin's life by foregrounding her somatic experience in medical encounters and other scenes from her memoir, making the horror of her lifelong uncertainty about her body, her numerous health issues and discomfort through adolescence and adulthood, her final exposure to the medical gaze, and her subsequent enfreakment newly palpable to contemporary readers.[110]

While Barbin's story has, understandably, been most commonly viewed through the lens of sex and gender, in this chapter I argue that her lifelong experience with pain, as well as her exposure to medical science, calls for an integrated approach that absorbs the shared history of debility and intersexuality. *Dear Herculine* takes this shared history into account, drawing attention to Barbin's experience of physical pain and mental anguish in addition to her gender

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[109] See E. Goujon. "A Case Study of Incomplete Hermaphroditism as a Man", *Journal de L'Anatomie et de la Physiologie de L'Homme,* 1869, pp. 609-39. Translated by Foucault and republished in Barbin, p. 129

[110] See David Hevey. "The Enfreakment Of Photography." *The Disability Studies Reader* 2 (1997): 367-78.

alterity. For example, Apps imagines the scene in which Barbin first meets a lover as one informed by their shared experience of debility: "her name is L. and you meet her at the infirmary, both your bodies full of sickness. Broken ornaments in need of constant care together breaking into each other."[111] In characterizing these queer bodies, one intersex, both "full of sickness", Apps invokes the enmeshed history of the exploitation of disabled people and gender and sexual outlaws, in which these groups were deemed monstrous, pathological, and in need of medical correction.

As Apps' own lived experience makes clear, recognizing the resonances between disability and intersexuality serves more than an historic purpose. As an intersex person, he writes that he is continually othered and misunderstood in medical contexts, in which abuses continue to this day against intersex bodies. In the absence of standards of medical care and comprehensive education on the spectrum of gender identities, infants who do not display dimorphic sex characteristics remain vulnerable to the subjective beliefs of doctors and fraught decisions by parents. This often results in medical "normalization" surgeries shortly after birth. Those whose intersex traits are misrecognized or not immediately apparent at birth can later be subjected to medical "correction" in the form of surgery or hormonal therapies.[112]

Intersex scholars and activists have consistently argued that intersex babies are considered less than human, only admitted into this category via widespread but unregulated acts of medical intervention into so-called DSD (disorders of sex development). As we see from the

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[111] Ibid, p. 68.

[112] As M. Morgan Holmes writes, "intersexed infants and children face a prevailing perception that they are so seriously damaged it is impossible even to conceive of admitting them to the category of personhood without performing extensive and immediate medical and surgical intervention on them. The birth of an intersexed child has until very recently been described with near unanimity in the medical literature as a crisis, with these alarmist tones calming only very recently in favor of other, more subtle means of promoting immediate surgical intervention. See Holmes. "Locating Third Sexes." *Transformation: Online Journal of Region, Culture and Societies* No. 8 (2004), no page number.

troubling medical practice of normalizing intersex babies through nonconsensual genital surgery, the standards of binary gender continue to hold significant sway in the medical scientific imagination. In reality, these normalizing protocols create health and wellbeing disparities for many intersex people, who have been found to have higher levels of mental and physical health issues and poorer standards of healthcare over the course of their lives.[113] As scholars working on disability, intersexuality, and other forms of non-normative embodiment have suggested, there is a need to engage the alignment between the fight for intersex recognition and care with that of disability access and equity.[114] Doing so involves affirming and protecting the biological variance of bodies, both as a lived experience and as a discursive refusal of the medical, legal, and cultural logics that prescribe and overdetermine the meanings of biology to this day.

Dear Herculine contributes to this refusal by emphasizing the realities of biological multiplicity. For instance, the text is shot through with images of physical aberration and profusion: gonads tumble through space, corpses explode and melt into each other, orifices brim with bubbling blood and bile. These depictions of volatility serve to refute medical practices that seek to "fix" the meanings of gender to discrete bodily materials, and ultimate giving shape to a vision of intersex embodiment that affirms the rich and transgressive power of bodily diversity. In this way, the text trades in biological language and imagery not to echo, but to *refuse* medical logics. Apps shows that the very biological matter that was absorbed into medical narratives

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[113] Amy Rosenwohl-Mack et al. "A National Study on the Physical and Mental Health of Intersex Adults in the US." *PloS one* 15.10 (2020): https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0240088.

[114] See, for instance, M. Morgan Holmes "Mind the gaps: Intersex and (re-productive) spaces in disability studies and bioethics." *Journal of Bioethical Inquiry* 5.2-3 (2008): 169-181; Sumi Colligan, "Why the Intersex Shouldn't be fixed: insights from queer theory and disability studies" in *Gendering disability*. New Brunswick: Rutgers University Press, 2004; and Celeste Orr, "Exploring Intersex and Cripping Compulsory Ableism." A thesis submitted to the Faculty of Graduate and Postdoctoral Studies in partial fulfillment of the requirements for a Doctorate of Philosophy degree in Women's Studies at the University of Ottawa, 2018: https://ruor.uottawa.ca/bitstream/10393/37597/3/Orr_Celeste_E_2018_thesis.pdf.

about gender – gonads, genitals, tissue, chromosomes – in fact defies categorization as male or female. By staging a series of explosive encounters with the internal body, *Dear Herculine* refutes the impulse that mapped maleness onto Barbin's anomalous body and instead imbues the biographical subject with the capacity to defy a gendered read. Through the language and imagery of biological plenitude, Apps gives shape to the multiplicities of unorthodox embodiment and elicits a consideration of Herculine Barbin in all her corporeal complexity – a complexity that was thoroughly disregarded in early accounts of her life.

In the sections that follow, I first trace Barbin's personal narrative as recorded in her autobiographical writings, as well as the circulation of her story in medical scientific and legal records. With the rediscovery and publication of her memoirs by Foucault in 1980, Barbin appeared more frequently in theoretical accounts of gender, sexuality, and power including writings by Judith Butler, Ladelle McWhorter, and Gayatri Chakravorty Spivak — which, I argue, did not necessarily account for the fuller meanings of her material body.[115] I then turn to *Dear Herculine* in more detail, paying close attention to Apps' deployment of a biological imaginary to reframe what we know about Barbin's life and to twist dominant medical narratives. I argue that Apps employs a biological imaginary to project alternative visions of intersex embodiment, focusing on the use of gonadal imagery as a crucial aspect of those new visions. As an alternative history of Barbin and an experimental meditation on intersexuality, *Dear Herculine* conclusively shows us that the meanings of biology are never historically stable. Moreover, Apps suggests an urgent need to account for these alternative inscriptions of the body,

[115] For an intellectual history of Barbin's resonance with an array of critical theorists see Hil Malatino, *Queer Embodiment: Monstrosity, Medical Violence, and Intersex Experience*. Lincoln: University of Nebraska Press, 2019, p. 39-40.

at a time when intersex and other non-normative bodies remain vulnerable to pathologizing practices.

The Life and Death of a Medical Marvel

What we know today about Barbin's early life originates in her memoirs, which were found alongside her body at the time of her death. Born to a poor family in 1838, Barbin grew up in the town of Saint-Jean-d'Angely in southwestern France. She gained a scholarship to the nearby Ursuline convent, where she excelled at her studies. In her memoir, Barbin describes an acute sense of bodily difference from an early age. She writes in melodramatic prose of her sense of alienation in her all-female environments, her poor health, and her pervasive sense of melancholy in relation to these issues. For instance, she describes her pubescent embodiment as strikingly out of time:

> My complexion with its sickly pallor denoted a condition of chronic ill health…my upper lip and a part of my cheeks were covered by a light down…Understandably, this peculiarity often drew to me joking remarks that I tried to avoid by making frequent use of scissors in place of a razor. As was bound to happen, I only succeeded in making it even thicker."[116]

Barbin frequently sought to veil and sequester her body, from avoiding swimming with her school mates to the efforts at modifications described above. At seventeen she moved to another convent school at Oléron, where she began training to become a teacher. As an assistant instructor in an unidentified girl's school from 1857, Barbin fell in love with a colleague, Sara, and the two enjoyed a clandestine affair. While she documents internal unrest and ill health throughout her life, it was around this time that Barbin began to experience "nameless,

[116] Barbin, p. 26-27.

intolerable pains that, I learned afterward, constituted an imminent danger."[117] Having reluctantly agreed to consult a doctor named Chesnet, Barbin reflects on the encounter as a loss of control: "he wanted to examine me. As it is known, a doctor enjoys certain privileges with a sick person that nobody dreams of contesting." But after the examination, "the poor man was in a state of terrible shock!"[118] While he did not inform Barbin at the time, Chesnet had identified the source of her pain as "underdeveloped" testicular tissue and confirmed that she had both male- and female-identified sex organs. Another medical man, referred to only as Doctor H, subjected her to further examination. It was during this instance Barbin apparently became aware of her intersexuality for the first time. That moment is somewhat glossed over in her autobiography:

> I shall excuse myself of entering into the minute details of this examination, after which science conceded that it was convinced. It now remained for [the doctor] to bring about the correction of an error…to do so, it was necessary to instigate a judgement that would rectify my civil status.[119]

This was the moment at which Barbin was informed that she must be identified under the law as a man. In June 1860, her birth register was formally amended, and she was removed from her teaching post.

From there, Barbin's memoir progresses in a feverish tone, moving through further medical exams, her gender reassignment under law and separation from her lover, her move to Paris in the hope of finding new employment, and the years leading up to her death. In Paris, she laments, "can my isolation be more complete? Can my abandonment be more painful?"[120] In February 1868, she asphyxiated herself using the charcoal stove in her apartment and was found

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[117] Ibid, 51.

[118] Ibid, p. 68-69.

[119] Ibid, 78.

[120] Ibid, 103.

dead by authorities. Suspecting death from syphilis, state medical officials examined Barbin's genitals and granted A Doctor Goujon permission to autopsy the body in pursuit of new information about intersex bodies. In 1869, Goujon published his findings in the *Journal De L'Anatomie et de la Physiologie De L/homme.* His report documented Barbin's anatomy in graphic detail, largely disregarding the written testimony that she left behind and instead seeking answers directly from her body.[121] However, the tone of this document is not purely clinical. Instead, Goujon sets the scene of Barbin's death and his ensuing investigation with a number of narrative flourishes:

> A mean bed, a small table, and a chair made up all the furniture…a little earthenware stove, in which only ashes were left, stood in a corner with a rag containing charcoal. The corpse was lying on its back on the bed, partly dressed; the face was cyanosed, and there was a discharge of black and frothy blood coming out of the mouth.[122]

Goujon's dramatic details – the pitiful setting, the smoldering ashes, the gurgling corpse – serve to heighten the drama of the report and frame Barbin as a pitiful and grotesque subject. These details are suggestive of Goujon's own visceral response to her story. Throughout the report, Barbin's physical features are the object of both fascination and revulsion: from her cyanosed face and effusive corpse to her genitals and internal organs. More broadly, Goujon's dramatic embellishments reveal the inextricability of medical and cultural narratives in the collective imagination. In particular, the report confirms the fact that many medical men relied

[121] As Rosemary Garland-Thomson points out, the disabled or deviant body has historically been regarded as the harbinger of biological secrets in medical contexts. During the 19th and 20th centuries, Garland-Thomson writes that doctors voided the agency of an individual's testimony and instead "sought direct communication with the body regarding its condition." See Thomson. *Extraordinary Bodies: Figuring Physical Disability in American Culture and Literature*. New York, Columbia University Press, 2017, p. 50.

[122] Goujon in Barbin, p. 133.

on tropes of the monstrous and the mythical in their accounts of anomalous embodiment.[123] Compounded by the cultural fascination with nonconforming bodies, the indeterminate nature of sex and gender, and the grim circumstances of her death, Goujon's report exceeded the ostensibly clinical domain and established a biographical tradition around Barbin that has long muddied fact and fiction.

In the wake of her death, Barbin's body rapidly assumed the symbolic force of what Jenell Johnson terms a medical marvel. For Johnson, medical marvels are products of the "intense symbolism" that has been applied to extraordinary bodies and unusual medical events since antiquity. A marvel "might be characterized by the density of cultural networks that enfold it in layers of meaning…yet a more crucial aspect of the marvel's circulation is its translation between various discourses and cultural fields, and particularly the bidirectional translation between fact and fiction."[124] In other words, these subjects become saturated with symbolism in ways that straddle the boundaries of fact and fiction as they are disseminated through an array of cultural fields.

Following her autopsy, Barbin was marveled at in the press, debated in medical scientific and legal documents, and refigured in cultural objects like Oskar Panizza's 1893 story "A Scandal at the Convent" (and, much later, Jeffrey Eugenides' 2002 novel *Middlesex*). These texts and more make up an expansive array of biographical discourse on Barbin, testifying to the enmeshment of medical science, human biology, representation, and identity that her complex biography entails. Crucially, this does not mean that the public knew more about her lived

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[123] For more on the ways in which the medical and lay gaze ascribe mythical/monstrous qualities to anomalous bodies, see Benjamin Singer, "From the Medical Gaze to Sublime Mutations: The Ethics of (Re) Viewing Non-normative Body Images." *The Transgender Studies Reader*. Philadelphia: Routledge, 2013. 617-636.

[124] Jenell Johnson. *American Lobotomy: A Rhetorical History*. Ann Arbor: University of Michigan Press, 2014, p.14.

experience due to these texts. Instead, the flurry of medical texts that arrived in the wake of Barbin's death consistently elided her personal testimony about the realities of her body. Rather than accepting Barbin's self-identification as extraordinary woman, postmortem examinations established a pseudo-scientific account of her body and life as a "male pseudo-hermaphrodite" who invaded female spaces. As Dreger writes, intersex people "necessarily challenged what it meant to be female or male…in so doing they forced observers to admit presuppositions and to make decisions about the category of male or female – and *they forced medical and scientific men to tighten up the borders*" (emphasis mine).[125] Through the story of Barbin's nonconsensual gender reassignment, which was reiterated in medical reports that gendered her corpse as male, we witness the ways in which medical science opted to fix identity to the body rather than admit the expansive biological realities of sex and gender that intersex bodies materialize.

While medical scientific accounts of Barbin sought to stabilize the meanings of gender, the queer reparative tradition that begins with the work of Foucault emphasized the inherent instability of these meanings. Foucault uncovered Barbin's memoirs while researching for *The History of Sexuality* at the French Department of Public Hygiene, publishing them in full in 1980 alongside his own biographical-theoretical introduction to Barbin, historic timelines, medical and legal paraphernalia, and Panizza's fictional account of her life. Accompanied by a representative sample of medical scientific and legal literature, Barbin's story appears to offer a microcosm of Foucault's central concerns in that it directly demonstrates the workings of medicine, surveillance, religion, and other disciplinary structures on the individual, which Foucault was at the time in the process of historicizing. In addition, Barbin's life exemplifies the workings of

[125] Dreger, p. 28.

what Foucault called *scientia sexualis*, or the process by which (pseudo) scientific claims are weaponized for exclusionary political aims.[126]

And yet, Foucault's introduction takes little interest in Barbin's relation to power. Instead, he focuses more on her radical potential to slip *outside* power structures. For example, he introduces her as a fugitive from institutional efforts to discipline the body, whose personal narrative "baffles every possibility to make an identification."[127] He then read Barbin's love affairs with women as moments in which "grins hung around without the cat." In other words, these were events in which desire and sex floated freely from the body.[128] And he interprets the institutional, all-female contexts in which Barbin lived – the convent, the school, the dormitory – as "monosexual" all-female environments that fostered "sexual non-identity" and allowed Barbin to inhabit "a happy limbo of non-identity."[129] In these ways, Foucault frames Barbin's early life as a time that was gloriously unregulated by sexual and gender norms:

> It seems that nobody in Alexina's [Barbin's family name] feminine milieu consented to play that difficult game of truth which the doctors later imposed on his indeterminate anatomy…One has the impression at least if one gives credence to Alexina's story, that everything took place in a world of feelings…where the identity of the partners and above all the enigmatic character around whom everything centered [Barbin], had no importance.[130]

This location of Barbin in a utopian space, in which sex and desire have no fixed meaning and her corporeal difference attracted no attention, reframes her story: from a life

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[126] See Michel Foucault, *The History of Sexuality: An Introduction, Volume I.* Trans. Rober Hurley. New York: Vintage, 1990, p.51-75.

[127] Foucault in Barbin, p.xi-xiv.

[128] Ibid, page number

[129] Foucault in Barbin, p.xi-xiv.

[130] Foucault in Barbin, p.xii-xiii.

plagued by social limitations and gender designations to the tale of a gender-bending fugitive who only met with restrictions later in life. In this way, Foucault uses Barbin's memoirs as a site for locating and recovering her agency. Hil Malatino reads this as a "reparative impulse", one that emphasizes how Barbin disidentified from the systems around her.[131] But while Foucault's focus on Barbin's capacity for self-determination and acts of resistance offers an important counterpoint to pathologizing accounts of her life, I think it is important to guard against the romanticizing strand that runs through his account of her life. For instance, Foucault's willingness to perceive Barbin as an embodied example of sex and gender "before" they come under the law indicates a tendency to celebrate her life to the point of discounting some of her formative material experiences. Most notably, the passage above glosses over Barbin's self-presentation as a chronically ill, melancholy, and nervous youth who appears to have been acutely aware of her difference, particularly during her sexual awakenings. While she writes frankly of her sexual encounters with women, she also recognizes their taboo nature. In bringing these fractured moments of the text to the fore, my point here is not to disregard Barbin's capacity for self-determination, nor to discount the defiant nature of her sexuality. Rather it is to sound a note of caution against accepting these relationships as evidence of a "non-identity" in which desire, gender, and sexual identity become untethered from the material body.

Judith Butler also rejects Foucault's "emancipatory ideal" of Barbin in *Gender Trouble*, arguing that his introduction to her memoirs denies her life important context. Yet in their writing on Barbin, Butler focusses less on Barbin's gendered body and more on the legal regulations that surround it:

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[131] Malatino, 42.

> Herculine is not an identity, but the sexual impossibility of an identity. Although male and female anatomical elements are jointly distributed in and on this body, that is not the true source of scandal. The linguistic conventions that produce intelligible gendered selves [i.e., the law] find their limit in Herculine."[132]

The key difference between these two readings of Barbin is one of signification: where Foucault reads Barbin's body as signifying multiplicity prior to its inscription under the law, Butler contends that Barbin signifies an "irresolvable ambivalence" that is produced by the legal enforcement of binary gender. And yet, this ambivalence gathers its meaning from the social and legal context of Barbin's life, not the materiality of the body. By arguing that Barbin's anatomy is not "the true source of scandal," Butler elevates the social construction of gender as a key claim and ultimately reiterates Foucault's elision of Barbin's embodiment in all its fleshy complexity. It is nothing new to point out the elision of the material body in Butler's earlier work. But, when it comes to Barbin, it remains important to note the lack of attendance to materiality in theoretical considerations of her life and afterlife. By extension, this omission implies that materiality – and biology, in particular – is the purview of damaging medical scientific accounts of her body, and that the discursive remains the main avenue for humanistic enquiry into this important figure.

As a fleshy entity that was probed, surveilled, autopsied and circulated in graphic forms to which she did not consent, Barbin's body was pathologized by medical scientific historical records. Resurfacing in formative theories of sexuality and gender decades later, Barbin is not pathologized but anaesthetized, deprived of the sensory and corporeal complexities that her memoirs evoke. More recently, intersex theorists have addressed the elision of materiality from humanistic discussions of Barbin by departing from diagnostic views while keeping the material

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[132] Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge, 1990, p. 31.

body in play. The work of scholars like Malatino, Morgan Holmes, and Gilbert Herdt shows that disavowing intersex medicalization need not come at the expense of exploring the biological body. Instead, intersex bodies in fact materialize the multiple meanings of biology beyond medical frameworks, pointing to the insufficiency of a solely medical or social account of embodiment. This work also illuminates the ways in which the circulation of Barbin through different cultural and medical arenas constitutes, in Cvetkovich's words, an archive of feeling: a repository of emotion that engenders not only discussion but community around the experiences of a cultural figure or object.[133] In close reading Barbin's autobiography, for instance, Malatino seeks "a way of thinking about the resistance of intersex subjects in the context of intense administration regulation [in the present] by examining an early instance of such resistance in a moment shaped by an intense consolidation of medical authority in diagnosing and treating ostensible abnormalities of sex." For Malatino, a crucial aspect of this resistance is embracing the tangible mixity and hybridity of intersexuality that Barbin herself claimed, while holding medical policies and practices to account.[134]

Across a range of mediums and genres, intersex artists and activists have reinforced this vision of gender diversity by looking inside the body — not to echo, but to *refute* the methods and logic of medical science. In the body humor of intersex comics Amazon Jackson and Seven Graham, in the visual art of Dela Grace Volcano and Ins Kromminga, and in the experimental filmmaking of River Gallo, we find depathologized but unapologetically fleshly reckonings with gender that articulate the rich spectrum of experiences beyond the binary. Apps' work emerges alongside these innovations. In what follows, I explore *Dear Herculine* as a text that gives

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[133] See Ann Cvetkovich. *An Archive of Feeling: Trauma, Sexuality, and Lesbian Public Cultures.* Durham: Duke University Press, 2003.

[134] Malatino, p. 64.

formal shape to a key political argument of intersex scholars, artists, and activists: that biology retains multiple meanings beyond the binary, and that equity and care must be pursued with this variability in mind. Apps historicizes, or filters, these claims through the story of Herculine Barbin, positing her as a figure with the capacity to thwart imposed, gendered meanings without discounting her material, often traumatic, experience.[135]

Dear Herculine and the Auto/biographical Body

Dear Herculine troubles the formal conventions of biographical fiction by blending prose poetry, medical scientific fragments, and autobiography, and by refracting subject and author's experiences of intersex embodiment through each other. The relationship between authorial self and biographical subject has been much discussed as an epistemological problem in biographical narratives, with writers variously affirming or negating the possibility of reaching the "truth" of their subject.[136] *Dear Herculine* is fundamentally concerned with the charged dynamic between self and other: not only in terms of the performative encounter that biographical forms entail, but around the fraught relationship between the intersex body and the external world. We see these related concerns unfolding in the opening prose poem, which maps an uneven relationship between public and private, self and other, internal and external worlds. Titled "A Letter Concerning the Layering of Shame Onto Shame," Apps writes of his teenaged efforts to separate his body from the outside world in order mask his gender. He writes, "layers are preferable. I

[135] According to David Getsy, "A capacity is both an "active power or force" and an "ability to receive or maintain; holding power" (*OED*). A capacity manifests its power as potentiality, incipience, and imminence. Only when exercised do capacities become fully apparent, and they may lie in wait to be activated." David Getsy, *Abstract Bodies: Sixties Sculpture in the Expanded Field of Gender*. New Haven: Yale University Press, 2015.

[136] Julia Novak, "Introduction" in Boldrini, Lucia, and Julia Novak, eds. *Experiments in Life-writing: Intersections of Auto/biography and Fiction*. Cham: Palgrave Macmillan, 2017, p.3.

layer the space between others and myself as I proceed through my days, making sure that the façade of my gender is never broken."[137] Swaddled in loose clothing, avoiding the same bathroom twice, and agonized at the thought of anyone getting too close, Apps cultivates clear divides between himself and others:

> The confusion tightens below my skin like a vise, so I keep that confusion hidden below layer upon layer of clothing and shame. Clothing, shame, and all the borders I draw between myself and others using the objects and words that shape rooms. Clay against clay…and the bad blood bubbling its black black between the borders.[138]

These lines introduce two modes of embodiment that coexist, in tension, throughout the collection. Firstly, Apps writes of a body constricted by confusion and shame: internalized sensations made tangible through layers of clothing and the fortification of boundaries. These boundaries assume the bent of architectural containment, as seen in the image of rooms taking "shape" while Apps hides himself away. Secondly, the poem's initial depiction of compression gives way to a more recalcitrant mode of embodiment in its final lines. Between layers of clay upon clay, a frothing biological image emerges: "bad blood bubbling its black black between the borders."

While the bubbling liquid under consideration here is blood, Apps' repeated emphasis on its blackness also readily evokes black bile and the unseen internal activities of our bodies that are often shrouded in darkness. Black bile gushes through the entirety of *Dear Herculine*: staining tongues, charring skin, and oozing out of corpses. In humoral theory, an excess of black bile secreted from the spleen was thought to signal a range of illnesses, most famously melancholy but also physical conditions like cancer. These arcane accounts of the body, in which

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[137] Apps, p.3.

[138] Ibid, p.5.

the humors take on strange agencies, resonates with the bodily substances that assume a force of their own in *Dear Herculine*. In the passage above, for instance, black blood takes on an invasive proclivity as, spurting through cracks and defying Apps' carefully-constructed boundaries. Here biological matter is seen to pressurize, and possibly exceed, the conditions that constrict the author.

Dear Herculine squeezes these two versions of the body together – one compressed and confined, one uncontainable and perverse – to dramatize overlooked moments in Barbin's memoir, and to link these moments to Apps' own experiences. Take, for instance, the sequence of poems titled "A Letter Concerning the Formation of Shame Within Rooms," which leads us through the rooms or disciplinary spaces referenced in Apps' first poem. The Room poems transpose auto/biographical details into dreamlike scenarios, progressing through eerie spaces where the body is classified or surveilled including clinics, social encounters, changing rooms, and schools. Titled simply "First Room," the first poem in the sequence depicts a doctor inspecting Apps' genitals in a place that "smells like broken bodies and Lysol."[139] "Second Room" recreates a scene from Barbin's memoir, in which she expresses her fear of undressing in front of others. "Third Room" brings us back to Apps' school days, squirming under the two-way mirror his coach erected in the changing room. In "Fourth Room" we move again to a scene in Barbin's memoir, in which she recalls her shame at becoming aroused by a nun in her school dormitory. Finally, in "Fifth Room," we witness Apps swimming with a friend, pulsing with fear at the thought of having to take his shirt off. This scene mirrors a moment in Barbin's own memoir, in which she expresses her reluctance to expose her body at the seaside. Flitting between past and present, self and other, the Room poems angle Apps and Barbin towards each

[139] Ibid, p. 9.

other by fictionalizing certain scenes from Barbin's memoir and explicitly connecting them to the author's own life.

Progressing like a corridor lined with doors, each of the Room poems opens onto a scene in which intersex embodiment comes under disciplinary or social scrutiny. Apps' settings of doctor's office, school, and recreational area to recount his own experiences of discomfort echoes the institutional spaces that Barbin inhabited in her own life. Barbin spent most of her time in religious and educational institutions, a fact that leads Marc LaFrance to read her life as "unfolding across a series of cells – that is, of geo-physical boundaries and institutionally-imposed frontiers."[140] The Room poems reproduce these cellular patterns; each poem leading us into an enclosed space with its own disciplinary logic (for Apps, even "the sea is its own room").[141] In this sense, the Room poems could be read as reproducing the conventional historical configuration of Barbin's story. As Malatino writes, accounts of Barbin's life have tended to subscribe to "the logic enacted by the disciplinary agents —doctors, priests, judges— whose diagnoses and pronouncements forcibly shaped and constrained Herculine's life."[142] Here we are reminded of how Barbin's biography was shaped as her body was disseminated: packaged into digestible formats, presented in linear terms, and annotated from above.

On a surface level, the Room poems appear to reproduce this linear approach. Formally, they emulate the ways in which Barbin's life was forged in institutional cells, leading us from school to convent to fraught medical and social encounters. But the content of the poems

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[140] Marc LaFranc. "The struggle for true sex: Herculine Barbin dite Alexina B and the work of Michel Foucault." *Canadian Review of Comparative Literature/Revue Canadienne de Littérature Comparée* 32.2 (2005), p. 167.

[141] Apps, p. 11.

[142] Malatino, p. 41.

subverts this structure by allowing alternative, counter-disciplinary projections of Barbin's body to seep through. Like the bubbling black blood of the opening poem, biology churns within each room: "blood boils red", "muscle fibers twitch", eyes "vibrate" out of skulls, organisms "teem." With this slew of inexplicable biological activity, Apps amplifies the mutability of Barbin's body and ultimately declines to produce a cohesive biographical subject.

We see this refusal of bodily and biographical cohesion unfolding in "Second Room," which plucks and reimagines Barbin's recollection of a school trip. Recalling an excursion to the beach with her classmates, Barbin describes her reluctance to strip off using agitated yet elliptical language:

> The sea was climbing rapidly. The indiscreet waves often reached to a height that one might have wished to save from immersion! What wild hilarity there was then! I was the only one present at this bathing party who was a spectator. What stopped me from taking part in it? I would not have been able to say at the time. A feeling of modesty, which I obeyed almost in spite of myself, compelled me to abstain, as if I were afraid that by joining in this sport I would offend the eyes of those who called me their friend, their sister![143]

Barbin's account implicitly suggests panic, punctuated by exclamation marks and a sense of the physical environment as threat. In rewriting the scene, Apps takes the latent dangers of Barbin's version – including the rising waves that threaten to submerge and stir the genital area, her awareness of her outsider status and difference, and her fear of exposure – and renders these disturbances in a more visceral mode. Reworking this scene in the second person, Apps writes:

> You worry about what their bodies' image will think of your image, screen on screen, so you stand behind the screen high on the beach with the dune grass. At a distance. In your eyes, blood pools…your nervous eyes thick bowls of black borscht egregiously salted with sea broth, teeming with infectious organisms in the massive slurp spit.[144]

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[143] Barbin, p. 39.

[144] Apps, p. 11-12.

Taking his poetic cue from Barbin's memoir, Apps stays faithful to her feelings of otherness but intensifies the original scene. This involves imagining Barbin's fears on the level of turbulent bodily activity and translating her implicit panic into visceral responses like sobbing and shaking. By focusing on Barbin's deep-seated experiences, Apps presents an intimate and electric account of her body that defies previous medico-historical accounts of Barbin as an anaesthetized specimen. And in contrast to Foucault's claim that she initially lived free of constraint, Apps emphasizes the fleshy materiality of her alterity. Throughout *Dear Herculine*, he portrays Barbin as painfully aware of her difference, terrified but also thrilled by her body, and constantly strained by the rules of her surroundings. These depictions fashion Barbin as a figure who encapsulates the impossibility of reconciling one's own unruly body to the conditions that seek to discipline it. For instance, Apps' depiction of Barbin's discomfort at the beach as overwhelming, infectious, and distorted – her eyes thick bowls of salted sludge "teeming with infectious organisms" – suggests that interactions between of intersex individuals and their social surroundings can produce an array of nonnormative effects including a sense of extraordinary embodiment, emotional intensity, and awareness of oneself as a toxic asset.

In these ways, *Dear Herculine* reworks moments from Barbin's memoir to shape and spectacularize the affective contours of his subject's alienation. Eschewing authorial distance from the subject, Apps frequently represents his and Barbin's emotional experience as coterminous: "my body breathes fluid out into your body, Herculine. My body breathes your breath through your memoirs. We who are intersex leak-breathe through our animal pores such articulating slime. We consume and are consumed."[145] Such suggestions of mutual consumption are formally reproduced in the slippage between first, second, and third person throughout *Dear*

[145] Ibid, p.31.

Herculine. While Apps' authorial voice is most frequently conveyed through "I" and Barbin is typically addressed as "you", the poet's occasional use of the third person troubles the fixity of these identifications and testifies to the ever-shifting positions of subject and object in his experimental biographical project.

These images and pronouns also suggest an experience of abjection, or an encounter with external bodies and substances that "expose[s] the border between self and other as constituted and fragile and threaten to dissolve the subject by dissolving the border," to use Iris Young's phrase.[146] Apps evokes this dissolution through his central image of the corpse, a figure that materializes the porous boundaries not only between life and death, but between self and other. In her memoir, Barbin herself is eerily aware of herself as a corpse. In a portent of her own objectification in death, for instance, she writes that "when [death] comes a few doctors will make a little stir around my corpse."[147] *Dear Herculine* also lingers on that border between life and death from the beginning, with the first poem declaring "this book is written from death. *And what if we are already biological? What if we are already compost*?"[148] (emphasis mine).

This language of death and dissolution invokes the life cycle of the physical text itself: paper already mulching into compost, the living already turning towards oblivion. It also illuminates Apps' interest in embodiment as a deteriorating, shifting, organic process that informs *Dear Herculine's* re-animation of an historical figure who died a painful death. In contrast to the anaesthetizing of Barbin's corpse as a medical specimen in the wake of her death,

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[146] Iris Young, *Justice and the Politics of Difference*. Princeton: Princeton University Press, 2011, p.144.

[147] Ibid, p. 103. According to Julia Kristeva, "corpses show me (it) whatever I thrust aside in order to live. These bodily fluids, this defilement, this shit at what life withstands…on the brink of death. There, I am at the border of my condition as a living being." See Kristeva. *Powers of Horror: An Essay On Abjection.* Columbia and Princeton: University Presses of California, 1982, p.3.

[148] Apps, p. 6.

Apps clarifies his interest in the corpse as an active presence that continues to disturb the present: "I don't mean to fetishize your death, I mean to say we are both corpses in a way. I mean to say we always already were animals dying in the soil."[149] The poet reinforces this deathly identification with the subject by continually referring to himself and Barbin as corpses or corpse-like: "we are bloody meat, disgorged tubesteaks," "we are related to all that is dying and dead," [we are] "thick corpse substances drooping forth."[150] In a poem titled "A letter concerning our bodies as corpses," Apps continues:

> These letters are the memory of two bodies coupled until amalgamated by putrefaction. Two hermaphroditic bodies tied to each other's corpses mouth-to-mouth, limb-to-limb, with an obsessive exactitude in terms of how the parts correspond. A dull black-blooded chamber music that runs through all the chambers.[151]

Among these amalgamated and deteriorating bodies, various biological forms are discernible: puckered mouths, interlocking limbs, bubbles of blood. On one level, these corresponding parts exemplify Apps' separation of parts from wholes throughout the collection, reinforcing his poetic tendency to untether biological matter from stable human figures in order to undermine any attempts to "fix" biology. But the poet also admits an "obsessive exactitude" in how these parts might fit together in unorthodox ways. The language and imagery of imperfect coupling recurs throughout the text: broken two-way mirrors, choked channels of communication, and glued-together orifices that sputter but do not necessarily speak all suggest that the encounter between author and biographical subject is an abject, viscerally charged event.

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[149] Ibid, p. 54.

[150] Ibid, p. 85; 65; 74.

[151] Ibid, p. 58.

In another poetic moment that also reads like an authorial manifesto, Apps writes: "this text appropriates and refigures a hermaphrodite so that I might describe, poorly, myself. In the process I learn that the hermaphrodite also appropriates me. Such strange acts of cannibalism in the act of seeking out another body like one's own."[152] Here, he conceives biography as a two-way project: in imaginatively figuring the life of another, the author re-encounters and refigures themselves. Thus, *Dear Herculine* challenges the bodily, temporal, and spatial boundaries that have traditionally structured biographical forms. As we see from the fractious visions of embodiment that range across the collection, Apps places biology at the center of this formally innovative project. In the following sections, I explore one of his biological tropes in more detail: the gonads. This trope clarifies the possibilities of *Dear Herculine*'s biological imaginary for representing intersex embodiment, and for enhancing our understanding of Herculine Barbin and the medicalization of dimorphic sex.

Gonadal Logic and the Reimagining of Gendered Subjects

"When I do think about myself," Apps writes, "I think about a history of bodies. I think about the small histories of my own body, the histories inside each organ, each gonad."[153] Here the poet takes a microscopic view of the past, zooming in on histories nestled within human biological matter itself. This microscopic view references scientific mindsets and methods that were used to inspect Barbin and other intersex bodies: namely the gonadal understanding of sex. In the mid-nineteenth century, improved microscopic technology and more precise methods of

[152] Ibid, p. 36.

[153] Ibid, p. 58.

preparing human tissue for inspection facilitated closer examination of gonadal tissue.[154] This popularized the gonadal definition of sex, which departed from the earlier interest in genitalia and secondary sex characteristics to focus on ovarian and testicular tissue as the definitive markers of sex and gender.

Gonadal logic stemmed from the evolutionary notion that the sexes were defined by their reproductive roles, as well as the gonads' physiological role in the development of characteristics like hormones and body shape. This decisive turn inwards – away from external features, and towards previously invisible internal worlds – went hand in hand with the delegitimization of intersex bodies. Under the gonadal definition of sex, people with ambiguous sex characteristics (those who had facial hair and a vagina, for instance, or breasts and a penis) did not quality as "true hermaphrodites" and could therefore be assigned a "true" sex according to their gonads. According to Fausto-Sterling, the German physician Theodore Albrecht Klebs believed "that under each of these confusing surfaces lurked a body either truly male or truly female. Gonads, he insisted, were the sole defining feature of biological sex." For Klebs, the term "true hermaphrodite" referred only to the few individuals who had both ovarian and testicular gonads.[155] By maintaining that biological tissue was the key to sex, the gonadal definition constructed a system of scientific classification and legal recognition that upheld sexual dimorphism. Herculine Barbin was one victim of this system: an intersex person who was declared a male pseudo-hermaphrodite (in lay terms, she was believed to be "really" a man) due to the presence of testicular tissue in her body.

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[154] Fausto-Sterling, p. 38.

[155] Ibid, 38-39.

To make matters more sinister, gonadal examinations could only by conducted after the death of the individual in question. As Dreger explains, the adjustment of the medical gaze from external to internal characteristics depended on the death and exploitation of the subject-specimen:

> By the end of the nineteenth century, the gonadal definition of true sex meant that "truth" was determined by the nature of the gonads, even if that "truth" were invisible and unsuspected in a living patient. Furthermore, the only true hermaphroditism would exist on a microscope slide after the death or castration of the person from whom the sample came."[156]

Aided by microscopic technology, the gonadal definition of sex significantly affected the visual history of intersex bodies. Intersexuality was no longer pictured in external bodies, but in "abstract photographs of thinly sliced and carefully colored bits of gonadal tissue."[157] Apps dramatizes these overlapping historical contexts – the gonadal definitions of sex, the visual and scientific role of the microscope, the abstraction of intersexuality, and the sampling of dead bodies – in a poem titled "A letter within a letter concerning the chestnut-like gonads." The piece is accompanied by a grainy, abstracted image of the internal body, described as a "PHOTOGRAPH OF HISTOLGIC (MICROSCOPIC) SECTIONS OF A GONAD FROM THE TURN OF THE 20TH CENTURY PROVIDED BY SCIENTISTS AS EVIDENCE OF THEIR ALLEGED CASE OF 'TRUE' HERMAPHRODITISM" (capitalization in original).[158] Visually presenting itself as a label on a diagram, this image-text pairing might at first appear to originate from a medical archive. However, Apps displaces clinical language with a blazing critique in his accompanying poem: "ACCORDING TO THIS METHOD (THIS LOGIC) THE ONLY

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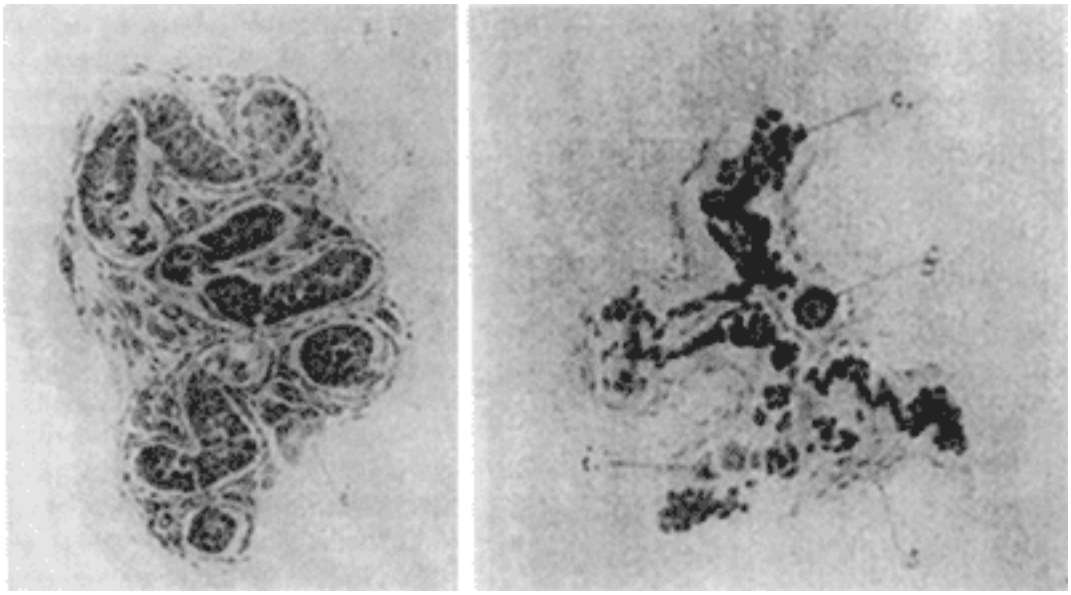
[156] Dreger, p. 150.

[157] Fausto-Sterling, p. 38.

[158] Apps, p. 58.

POSSIBLE ‘TRUE HERMAPHRODITE’ BEING A DEAD OR CASTRATED ONE AFFIXED TO THE SURFACE OF A MICROSCOPIC SLIDE.”[159]



Gonadal sample taken from a deceased intersex person at the turn of the century, reproduced in Aaron Apps, *Dear Herculine.*

This image of human tissue effectively distills the history of dissection and microscopic investigation that informed the medicalization of sex, while Apps’ accompanying all-caps text makes the violence inherent to that pursuit explicit. By drawing our attention to the fact that these investigations of gender were predicated on the death, dissection, and distribution of the intersex body, Apps underscores the ways in which intersex bodies were denied recognition in life and rendered fungible under the medical gaze in death.

While its human and historic origins are unclear, Apps’ image of human tissue nevertheless encapsulates the paradoxical position of writing and reading about Herculine Barbin in the present. “Affixed to the surface of a slide,” the gonadal image is both visceral and abstract:

[159] Ibid, p. 58.

a literal slice of human flesh, but also a non-figurative entity that is detached from any recognizably human source. The tissue fails to display visual traits of the masculine or feminine, and might be more readily likened to the cross section of a chestnut or other nonhuman object (it is steak-like, map-like, bacteria-like). The medical scientific approach to Barbin contributes to this image's paradoxical position as a simultaneously visceral and abstract object. [160] While the medical men who examined Barbin were fundamentally concerned with the entrails of the subject, their reports are also structured by a desire to abstract Barbin into a specimen. *Dear Herculine* presents a funhouse mirror of these attempts with absurd, abstracted corporeal language. Phrases like "flooding corpulence," "cream contortion", "gonad flux", "vomit-flood", and "rotting blood cocoon" do not easily map onto traditional understandings of the human form. Rather, they work to produce new configurations of the body that defy medicalized, binary definitions of sex and their attendant logic of fixity. The next lines of "A letter within a letter concerning the chestnut-like gonads," further elaborates this point:

> Small lovable cells that spread thick, slime butter.
> A nut lard that vibrates, a dark fruit.
> Kill the thing, cut open the dead, get at its essence.
> Cut and biopsy the autopsy, declare the gender.
> *Essence* as if sex could be defined by a few cells in a profuse space.[161]

The comparison of gonads to ripening fruit echoes the scene in which Apps rewrites Barbin's memory of reading among the chestnut trees. While the bruised fruit protecting a dark

[160] This entanglement of visceral and abstract may seem like a contradiction in terms. As Sianne Ngai writes, "the visceral encompasses everything the abstract is not… [abstraction is] associated with the noncorporeal and unparticularized." But Ngai clarifies that abstraction can, in fact, elicit the most visceral responses: it is our capacity to experience visceral responses to confounding materials that makes the abstract available to our understanding. See Ngai, *Theory of the Gimmick: Aesthetic Judgment and Capitalist Form*. Cambridge: Harvard University Press, 2020, p. 173-6.

[161] Apps, p. 59.

kernel implies Barbin's vulnerability to invasive gazes and procedures, its capacity to "spread" and "vibrate" envisions her body as an active and recalcitrant presence. Under the view of the microscope, individual cells are typically examined for essential truth. Yet Apps imagines that they become spreadable like butter on a slide — their form thick, mutable, and emanating slick fatty imprints. With this distended microscopic imagery, Apps deploys a biological imaginary to undermine medical scientific technology and stage a visceral encounter with Barbin's body. Rather than utilizing the microscopic perspective to determine "true sex," the poem suggests that the scientific methods of cutting, biopsy, and autopsy all fail to account for the complexity of gendered identity. Ultimately, attempts to determine the essence of gender, to fix it to a slide, result in the proliferation of slippery biological meanings. With imagery of spreading cells and trembling gonads, Apps suggests not gender rigidity but multiplicity and instability.

Apps' subversion of the medical gaze, from determinism to unruliness, fixity to fluctuation, gives formal shape to the ironic outcomes of scientific inquiries into sex and gender over time. As Ellen Samuels argues, the pursuit of classification that accelerated in the nineteenth century did not result in certainty or concrete terms of identification. Ironically, nineteenth century attempts to fix the biological definition of sex merely resulted in an "expanded field of ambiguous bodies [which] created new categories of confusion and contested meaning."[162] In other words, the more medical science investigated the sexed body, the more biological variations of sex emerged. A consideration of gonadal imagery throughout *Dear Herculine* testifies to these shifting, fugitive meanings of biology under scrutiny. In one poem, gonads are placed in a literally fluid setting: "each gonad a fruit at the bottom of the river that is never the same river twice." The setting of the gonads within an everchanging river brings

[162] Ellen Samuels. *Fantasies of identification: Disability, Gender, Race.* New York: New York University Press, 2014, p. 192.

Heraclitan notions of flux as a constant condition of existence to bear on Apps' understanding of gender. To destabilize the nineteenth-century logic that declared the gonads to be essentially male or female and framed them as the fixed "source" of gender, Apps sets biological matter in motion.

This harnessing of a biological imaginary to signal gender multiplicity has significant ramifications not only for historical understandings of gender, but for contemporary understandings of Herculine Barbin as a figure who has been reduced to medical logics, misgendered, and deprived of her complex identity by those who branded her a "male pseudohermaphrodite." Through poetic meditations on gonads, human tissue, and medical scientific methods, Apps reveals the oppressive history of the Age of Gonads that shaped postmortem investigations into Barbin's body. The poet counter these histories with an insistence on the unstable historical meanings of biology.

Intersex Embodiment in Contemporary Contexts

Apps' imaginative depictions of intersex embodiment also have implications for the ways we view gender and intersexuality today. Specifically, it invites us to contemplate the ways in which gender is still mapped onto the body in both medical and lay contexts. While gonadal definitions of sex have receded, modern medical ideas about gender remain overly reliant on deterministic conceptions of the internal body. For instance, Samuels notes that with the discovery of sex-linked chromosomes in the twentieth century, both medical scientific and popular understandings of gender became more reliant on dimorphism.[163] Despite the cultural solidification of the simplified scientific notion that females have XX chromosomes and males have XY

[163] Ibid, p.192-5.

chromosomes, thousands of human bodies – such as people born with one sex chromosome (sex monosomies) or three or more sex chromosomes (sex polysomies) – reveal the untenability of this claim. Nevertheless, the fantasy of genetically determined dimorphic sex pervades contemporary medical scientific discourses, from athletes' sex testing to the continuing practice of nonconsensual surgery on intersex people. In one of the few inquiries into the effect of the medical "normalization" of intersex infants, the Human Rights Commission of San Francisco classed these interventions as human rights abuses that violated the right to bodily autonomy. As the Commission writes, "normalizing interventions deprive intersex people of the opportunity to express their own identity and to experience their own intact physiology."[164] Organizations such as InterACT Advocates for Intersex Youth and the Intersex Campaign for Equality continue to work against nonconsensual medicalization, as well as social stigma and the erasure of intersexuality from public life.

Based on research by Fausto-Sterling, interACT estimates that 1.7% of people are born intersex, which is far higher than the chance of being born an identical twin (0.3%) or having natural red hair (0.5%).[165] Despite this relative commonality, the lack of research on intersex life is striking. To date, the largest study of intersex adults in the U.S. focused on only 179 people. Within this sample, researchers found that 43% of participants rated their physical health as fair/poor and 53% reported their mental health as fair/poor. The participants were also found to have significantly higher than typical diagnoses of depression, anxiety, arthritis, and hypertension, and over a half reported "serious difficulty" with cognitive tasks.[166] These

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[164] Marcus de María Arana et al., "A Human Rights Investigation into the Medical "Normalization" of Intersex People," April 28, 2015. https://ihra.org.au/wp-content/uploads/2009/03/sfhrc_intersex_report.pdf.

[165] "FAQ: What is Intersex?" https://interactadvocates.org/faq/.

disparities may be attributable to poor healthcare access due to medical stigmatization, as well as a systemic lack of knowledge about intersex bodies and an unwillingness to provide inclusive care.[167] In these ways and more, our cultural and medical focus on dimorphic sex continues to erase the rich spectrum of biology and experience, and to contribute to a system in which intersex wellbeing and self-determination are suppressed.

Like the arcane language of "pseudo-hermaphrodite", the erasure of intersex experience continues to occur within medical language itself. Fausto-Sterling writes that doctors' use of "specific medical terminology – such as 'sex chromosome anomalies,' 'gonadal abnormalities', and 'external organ abnormalities' – indicate that intersex children are just unusual in some aspect of their physiology, *not* that they constitute a category other than male or female."[168] Intersex activism hinges on a rejection of these binary structures by affirming the biological realities of sexual and gendered variance.

With infant surgical intervention still ongoing, and significant health difficulties for intersex adults remaining, the pathologization, stigmatization, and erasure of intersex bodies remains a brutal aspect of contemporary medical practice. Efforts to defy these normalizing procedures gesture to some productive overlaps between disabled and intersex activism, both of which emphasize the disjunct between dominant normalizing imaginaries and the empowering

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[166] Amy Rosenwohl-Mack et al. "A National Study on the Physical and Mental Health of Intersex Adults in the US." *PloS One* 15.10 (2020): https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0240088.

[167] See, for instance M. Morgan Holmes, "Mind the Gaps: Intersex and (Re-productive) Spaces in Disability Studies and Bioethics." *Journal of Bioethical Inquiry* 5.2-3 (2008): 169-18 and Sumi Colligan, "Why the Intersex Shouldn't Be Fixed: Insights from Queer Theory and Disability Studies" in *Gendering Disability*. New Brunswick: Rutgers University Press, 2004. See, for instance, M. Morgan Holmes "Mind the gaps: Intersex and (re-productive) spaces in disability studies and bioethics"; Celeste Orr, "Exploring Intersex and Cripping Compulsory Ableism." A thesis submitted to the Faculty of Graduate and Postdoctoral Studies in partial fulfillment of the requirements for a Doctor of Philosophy degree in Women's Studies at the University of Ottawa, 2018: https://ruor.uottawa.ca/bitstream/10393/37597/3/Orr_Celeste_E_2018_thesis.pdf

[168] Fausto-Sterling, p. 51.

reality of biological variance. Given disabled and intersex folks' shared history of subjection to the medical industrial complex, as well as these groups' ongoing struggles for legal protection, bodily autonomy, and cultural acceptance, a flexible approach that takes both disability and intersexuality into account can be a powerful tool for imagining and protecting alternative bodily morphologies.

As Apps' work suggests, these integrated approaches find an aesthetic incarnation in the biological imaginary. With its epistolatory form, elegiac tone, visceral language and imagery, and invocation of debility overlaying intersexuality overlaying queerness, *Dear Herculine* reveals multiple tracts of exchange between different states of alterity. Take, for instance, Barbin's introduction of a third figure in addition to poet and biographical subject: his recently deceased friend Laura. Apps characterizes *Dear Herculine* as a text "written from death," referencing not only Barbin's suicide and his own mental illnesses but the recent sudden death of Laura. In his Author's Note, Apps writes that "the initial draft of the manuscript was produced in a period of a month metabolically in conjunction with Herculine's memoir, while grieving the death of a friend."[169] In deeming his work an alimentary as well as textual project, Apps underscores the visceral nature of the collection. Metabolizing draws our attention to the physical-emotional toll of sickness and grief, as well as functioning as a metaphor for the poetic processing of other lives life that *Dear Herculine* performs.[170]

[169] Ibid, Author's Note, no page number.

[170] As scholarly meditations on the gut testify, the metaphoric and the material can rarely be kept fully separate in any discussions of the visceral. Kyla Wazana Tompkins states in the introduction to the second edition of *GLQ's* special issue "On The Visceral" that thinking about the viscera necessarily involves thinking about the terms in which they are expressed and metaphorized. For Tompkins, the metaphoricity of the body is a fruitful site to engage the critical possibilities and limitations of the viscera. See Tompkins, Kyla Wazana. "On the Visceral 2." *GLQ: A Journal of Lesbian and Gay Studies* 21.1 (2015): p. 1-4.

In a "A Letter Concerning Remembrance A Letter Concerning Our Affected Emotions", Apps writes of the moment he learned of Laura's death and dedicates his poem to her:

> As I write about our corpses I learn that my friend died
> Of cancer less than a week after they found the mass…
> I imagine her body floating like a jellyfish, bubbling inside.
> Round Bodied: a lovely chamber music in a vast seaweed swell.[171]

Like his poetic animations of Barbin's corpse, here Apps converts his friend's body into pulsing organic matter, a jellyfish verging on the formless but still emitting pale bubbles. The image of these bubbles exuding "a lovely chamber music in a vast seaweed swell" poetically underlines a key conceit of Apps' biological imaginary: that bodies continue to signify strange and affecting messages even in death that, in turn, impinge on his own sense of self.

While *Dear Herculine's* abstracted imagery of dead bodies melting into each other or emitting messages appears divorced from the actual experience of anomalous bodies communing in difference, its insistence on the strange, porous nature of bodily emissions gives us cause to contemplate the transgression and dissolution of boundaries that intersexuality, disability, and other forms of alterity variously materialize. Throughout the text, the different embodied experiences of Barbin, Apps, Laura, and the unnamed intersex bodies of the past (such as the human source of the gonadal tissue pictured above) appear to overlap and inform each other. Writing in the third person plural, Apps declares that "we are matter that becomes charcoal, organic energy…when burned our energy becomes a haunting – that special instance when the visible and the invisible, the dead and the living, the past and the present merge."[172] In merging different experiences of embodiment across the boundaries of time, identity categories, and experience, Apps formally reproduces the transgression that nonconforming bodies emanate in

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[171] Ibid, p. 85.

[172] Ibid, p. 53.

everyday contexts. More concretely, Apps engages the alignment between intersex, debilitated, and queer bodies by affirming the power and value of variance. His vision of heterogeneity undermines the presumed stability of so-called normality by referencing the teeming biological realities of gender, sexual, corporeal, and cognitive variance alike.

In this chapter, I have argued that *Dear Herculine* challenges the formal conventions of biography and contributes to our understanding of gender diversity via its poetic use of a biological imaginary. Through the use of scrambled temporal and bodily boundaries, polyvocality, blended generic conventions and varied registers of address, Apps demonstrates the impossibility of locating stable biographical truths — particularly when it comes to Barbin as an evasive historical subject whose body was distorted by powerful fantasies of biological fixity. Rather than bypassing a consideration of biology to frame Barbin as a gender fugitive or to emphasize the socially constructed nature of her embodiment, Apps illustrates the capacity of biology to exceed deterministic frameworks. From effusive corpses to spreading gonads, *Dear Herculine* uses radical bodily formations to aesthetically evoke the transgressions that intersex bodies materialize.

The association of intersex bodies with boundary crossing is integral to the arguments and practices of many intersex artists and activists. As the artist and self-described gender abolitionist Dela Grace Volcano proclaims, "I…amplify rather than erase the hermaphroditic traces of my body…I believe in crossing the [gender] line as many times as it takes."[173] Such aesthetic practices give shape to arguments that intersex scholars and activists have identified as fundamental to the fight for intersex justice: the recognition of the biological fact that there are multiple genders, the defiance of scientifically-imposed definitions of male/female, and the

[173] Quoted in Sarah Creighton, et al. "Intersex Practice, Theory, and Activism: A roundtable Discussion." *GLQ: A Journal of Lesbian and Gay Studies* 15.2 (2009): 249-260, p. 258.

pursuit of equity on the basis of these truths. In his experimental biographical account of Barbin's life, Apps contributes to these arguments by harnessing a biological imaginary, one which deconstructs the scientific logics imposed on Barbin's body while testifying to her visceral experiences and finding kinship in abjection.

Ultimately, *Dear Herculine* offers a frame for contemplating biology beyond its imposed meanings. In this space, biographical forms might not always be thought of as arching towards resolution or full knowledge of the subject. Rather it is in visceral moments of disturbance that the text refuses traditional systems of representing the gendered body. In the following chapter, I will chart how further works of experimental life writing and other art forms use biological imaginaries to scramble our conceptions of bodily alterity — in this case, the ways in which racialized forms of embodiment and lineage have been overdetermined by medical science but in fact actively defy a deterministic read.

Biological Refusal:
Alexis Pauline Gumbs and the Subversion of Essentialism in Black Artistry and Activism

> Each organism as it confronts its environment, must necessarily know and classify the world in terms that are of adaptive advantage to the organism, terms that can orient the behaviors needed for its own survival, realization and reproduction.
>
> - Sylvia Wynter.[174]

In HBO's 2019 science fiction series *Watchmen,* Regina King's character Angela Abar is shown to access her lineage in two distinct ways. Orphaned as a child and raised by strangers, Angela is a masked detective working with the Tulsa police force to quash white supremacist groups in the city. At the beginning of the series, her mission seems clear — until an elderly man professing to be her grandfather, Will Reeves, surfaces claiming to know the truth about the Tulsa police, Angela's mission, and her origins. To make sense of Will's insinuations, Angela secretly samples his DNA from a coffee mug and smuggles it to the Greenwood Cultural Center, a local Black history museum and ancestry lab. Here she is welcomed by a jovial holograph of Henry Louis Gates Jr, who apologizes on behalf of the U.S. government for the abuses inflicted on Angela's ancestors and invites her to explore her family history (a telling nod to Gates' pop-genealogy television show in real life, *Finding Your Roots*). Prompted by Gates, Angela submits Will's stolen DNA to a genetic scanner. In a room known as the Greenhouse, she contemplates a holograph of a vast family tree that sprouts new branches to confirm that Will is, in fact, her grandfather. However, this ancestral confirmation does not clarify the exact nature of Angela's connection to this strange intruder, nor does it instantly change her perspective on her police work or family background. It is only after she steals Will's Nostalgia pills, taking a potentially

[174] Sylvia Wynter, "Towards the Sociogenic Principle: Fanon, Identity, the Puzzle of Conscious Experience, and What It Is Like to Be 'Black'" in *National Identities and Sociopolitical Changes in Latin America*, edited by Antonio Gomez-Moriana and Mercedes Duran-Cogan. New York: Routledge, 2013, p. 48.

lethal dose in order to access his memories, that Angela begins to grapple with the significance of her lineage on a deeper level.

Concocted from the harvested memories of human subjects, Nostalgia was originally designed to treat people with memory loss but has since been banned for its addictive properties in the *Watchmen* universe. Ignoring the warning that taking another person's Nostalgia could lead to permanent brain damage, Angela abuses the drug to enter the past from her grandfather's standpoint. Titled "This Extraordinary Being," the episode detailing her journey into the past depicts Angela's experience with Will's nostalgia as a disorientating series of relived brutalities, painful realizations, and imperfect revelations. Shot primarily in black and white, the episode hurtles through Will's personal history as one of the first Black police cadets in New York City, his experience of racism in the force, his disillusionment with traditional law and order and subsequent transformation into the shrouded vigilante Hooded Justice, and his uncovering of white supremacist conspiracies within the police that continue in the present moment unbeknownst to Angela.

In moving through this sequence of events not as a distant witness, but as one who literally inhabits Will's body and directly absorbs his experiences of violence and discrimination, his searing disappointment, and his profound anger, the past becomes palpably present for Angela as soon as the Nostalgia takes hold of her body. As the camera overlays Will's past selves and Angela possessing his body and life, including a sequence in which he is nearly lynched by white colleagues, the episode articulates the generational aspects of racialized pain and ultimately motivates Angela's decision to continue her grandfather's investigation of white supremacists within the police. In other words, Angela's illicit experimentation with Nostalgia allows her to literally ingest and figuratively metabolize her lineage in more powerful ways than the

Greenwood Cultural Center allowed. Twisting and expanding the ramifications of the state-sanctioned genealogical testing services that occur at Greenwood, Angela's Nostalgia trip incites a more visceral reckoning with what she has inherited from her grandfather beyond the fact of shared DNA: namely, a complex history of trauma and defiance that catalyzes their parallel fights against injustice over the course of the television series. In this figuration, genealogy does not offer Angela a stabilizing anchor. Instead, it disrupts her worldview, casts doubt on her identity as a police officer, and upends her location in the world. Beyond the idea of lineage as a knowable, absolute biological entity (the discovery of which is marketed as an explicitly reparative project at Greenwood) Angela's second collision with her lineage plunges her into a reckoning with the past that cognitively and physically overwhelms her and threatens the very foundation of her selfhood.

Angela's two modes of genealogical enquiry – one rooted in biological notions of inheritance and scientific, state-sanctioned information; the other wayward, disconcerting, and subject to her own personal interpretation – give shape to two approaches to Black lineage in the contemporary United States, as delineated by Alondra Nelson. In her 2016 book *The Social Life of DNA*, Nelson considers the growth of popular genetics among African Americans that has been facilitated by the commercialization of DNA testing services. These services have allowed millions of people to access the "truth" of their personal history and identity via medical science, purportedly gaining information on their origins with the flick of a swab. For the descendants of enslaved people who continue to experience the genealogical isolation induced by the Middle Passage, home DNA kits emerged as "a cutting-edge answer [that] proposed a solution to a

central enigma [lineage] of African America—a remedy that seemed ripped from the pages of a sci-fi novel."[175]

For Nelson, this genetic impulse serves a dual purpose. On the one hand, DNA testing functions as "the most essentialist and socially anemic conception of human identity" in that it that reinforces the notion that identity is encoded deep within our bodies. This idea of encoded truth upholds inherent biological traits and classification as the best organizing principles for understanding embodiment. Of course, this essentializing logic is particularly problematic for racialized groups. The problem with genetics, Angela Saini reminds us, is the impulse "to group in the first place, to separate even when that separation means having to zoom in on the very tiniest bits of the genome that might differ, and even then only on average. This need to separate, to treat people as different, is how race was invented."[176]

Alongside this essentialist impulse, Nelson writes that there is a second mode of Black genealogical inquiry that subverts the absolutism of the lab. Seeking information about one's lineage, she argues, can serve multiple purposes beyond a purely biological view of descent, including stimulating curiosity about history, creating new affiliations that aren't necessarily tied to a bloodline, and unearthing a "serviceable account of the past" that can complement other accounts like family lore, local history projects, or community building activities. Against the essentializing rhetorics and classifying impulse of mainstream genetics, these activities show

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[175] Alondra Nelson. *The Social Life of DNA: Race, Reparations, and Reconciliation After The Genome.* Boston: Beacon Press, 2016, p. xi.

[176] Angela Saini. *Superior: The Return of Race Science*. Boston: Beacon Press, 2019, p. 103.

how African Americans are grappling with the genetic alienation created by the Middle Passage without reverting to determinism.[177]

Genetic alienation is also a central problem for Black cultural studies. Stephen Best argues that scholars have tended to theorize the relationship between past and present by constructing their own brand of strategic essentialism: one that seeks to unearth the "slave past" as the defining lens that structures and informs Black subjectivity today. While the idea of continuity between the slave past and the political present has long animated important theories about Black politics and identity, Best argues that these narratives also serve to essentialize Blackness as an experience that emerges only through communion with the traumatic past. Against this idea of sociality that depends on the cohesion of past and present, he proposes a vision of sociality that is rooted not in consistency but in disarray: "separation, fearful estrangement, is what makes relationships possible; the challenge of calling an object into being without owning or being owned by the call of identity or identification, of recognition or acknowledgment."[178] Though levelled at scholars and critics, this argument also poses an interesting challenge to genetic absolutists who posit Black genetic enquiry as the key to alleviating uncertainty in the present.

Best's vision of Black sociality forged in alienation rather than cohesion finds a cultural counterpart in Angela Abar's Nostalgia-fueled trip in *Watchmen*. The very naming of the drug,

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[177] Nelson, p. 94. It is important to note here that, while modern genetics does not tend to trade in the historic language of racial typologies, the language of population variation, clusters, and isolates continually surfaces in genetic projects ranging from the home DNA testing service 23andMe to the Human Genome Diversity Project. This reliance of genetic discourses on essentialist rhetoric is, of course, particularly problematic for racialized groups. See David B. Resnik, "The Human Genome Diversity Project: Ethical Problems and Solutions." *Politics and the Life Sciences* 18.1 (1999): p. 15-23 and Joseph S Alper and Jon Beckwith, "Racism: A Central Problem for the Human Genome Diversity Project." *Politics and the Life Sciences* 18.2 (1999): p. 93-94.

[178] Stephen Best. *None Like Us: Blackness, Belonging, Aesthetic Life*. Durham: Duke University Press, 2019, p. 11.

as well as the dangers it poses to her physical and mental health, metaphorizes the hazards of delving into or ruminating on traumatic pasts. On a deeper level, Angela's collision with her family history fails to produce a clear sense of resolution or affiliation. Even after consuming Will's memories, she remains deeply ambivalent about how to relate to him on an interpersonal level (to complicate matters, she's investigating him for murder), uncertain about his political affiliations, and unsure about how to verify and rectify the police abuses that are revealed to her. Subsequent episodes chart her attempts to process her grandfather's fight against injustice and adopt it on her own terms. For the remainder of the series, we see granddaughter and grandfather struggle to communicate, call each other to action, and debate the nature of their missions, with fleeting moments of affection and humor sometimes catching them off guard. Ultimately, Angela's arc of genealogical discovery neither subscribes to an essentialized vision of biology as the ultimate key to identity (as demonstrated in her unfeeling response to the Greenwood Center's genetic testing results), nor to an essentialized vision of Black subjectivity that imagines easy affiliation between a traumatic past and an imperiled present (as indicated by her intense confusion following her Nostalgia trip and her interpersonal friction with Will).

Angela's heightened sense of irresolution following her genealogical discovery, coupled with her fraught efforts to reach an understanding with her obstinate grandfather, indicate one way in which an encounter with monstrous histories creates a new form of what Best terms "fearful estrangement." However, Best views this not as an impediment to relationality, but as its catalyst. The Nostalgia episode also emphasizes the ways in which an encounter with lineage – specifically one that is structured by the trauma of racialization and antiblackness – can be a

sensorially intense and cognitively overwhelming experience that is seen to affect Angela on a visceral level.[179]

This chapter examines Black feminist and queer contemporary artforms that grapple with this precarious embodied experience of encountering the past. Contesting both genetic and strategic essentialism, the cultural forms I consider use biological imaginaries to pose alternative models of Black lineage and embodiment. Genetic essentialism can be defined as the tendency "to think of genes as a defining feature, encompassing one's essence, making people who they are."[180] Strategic essentialism is a rhetorical move that mirrors genetic essentialism when it comes to Black embodiment, in which the difficult past is seen as the defining backdrop to subjectivity and sociality in the present. Against these interrelated strains of essentialism which function, in different arenas, to overdetermine the past, the texts under consideration in this chapter works to loosen the hold of the origin story as a source of resolution.

The bulk of what follows takes the multimedia and interdisciplinary work of Alexis Pauline Gumbs as its case study, exploring her construction of Black feminist lineages that subvert essentialism in surprising ways. Reading across Gumbs' prose poetry, nonfiction, and community-building activities, I argue that she uses a biological imaginary to reveal and eviscerate damaging biological fictions and ingrained assumptions that contribute to essentialism in both the scientific and the strategic sense, and to produce accounts of the body that transcend these narratives. While previous chapters have primarily examined the biological imaginary as

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[179] Following her Nostalgia trip, Angela is hospitalized for its effects and is seen to be debilitated by the experience – unable to speak or move for days, she is immobilized by her violent encounter with the past.

[180] Ilan Dar-Nimrod, Ruth Kuntzman, Georgia MacNevin, Kate Lynch, Marlon Woods, James Morandini. "Genetic Essentialism: The Mediating Role Of Essentialist Biases on the Relationship Between Genetic Knowledge and the Interpretations of Genetic Information. *European Journal of Medical Genetics*, Volume 64, Issue 1: https://doi.org/10.1016/j.ejmg.2020.104119. no page number.

an emergent category of cultural production, Gumbs' use of the biological imaginary in her workshops and community organizing opens up the question of how this burgeoning arena of cultural production might function as a tool for political dissent. In the final portion of this chapter, then, I depart from the topic of lineage to the broader question of how contemporary experiments in Black feminist and queer literature, art, and activism use biological imaginaries to politicize interiority. They do this, I argue, to develop an understanding of how antiblackness impacts the body on a cellular level, to habituate embodied practices for healing, to mark the somatic experiences of political organizing, to configure embodiment in ways that account for the intersection of different aspects of discrimination, and to depict relationality in non-essentializing modes. To begin, I turn to Gumbs as an exemplary figure who examines those radical forms of relationality in her work.

A self-described "Queer Black Troublemaker and Black Feminist Love Evangelist," Gumbs is a writer and activist whose work spans fiction, criticism, poetry, visual art, community outreach, and facilitating collective activities like workshops and retreats. [181] Across these different areas of work, Gumbs states that her goal is "to facilitate infinite, unstoppable ancestral love in practice." [182] Her literary experiments perform that ancestral outreach by weaving Black feminist philosophies together with speculative prose poetry to advance new understandings of lineage, kin, and embodiment. In an experimental triptych of texts published between 2016-2020, Gumbs uses three thinkers as a starting point for her explorations of these themes. *Spill: Scenes of Black Feminist Fugitivity* (2017) presses the writings of Hortense Spillers into the footsteps of

[181] "About", *Alexis Pauline*: https://www.alexispauline.com/about. Accessed July 4, 2021.

[182] Ibid.

fugitive femmes. *M Archive: After the End of the World* (2018), draws on M. Jacqui Alexander's scholarly interrogations of space and time to chart scenes of Black postapocalyptic survival. And in her 2020 book *Dub: Finding Ceremony,* Gumbs takes Sylvia Wynter as her key interlocutor and muse. Loosely inspired by Wynter's critiques of liberal humanism, *Dub* is a work of elliptical prose poetry in which Gumbs contemplates ancestors "who have never been considered human" and portrays these figures in scenes of displacement, survival, and self-realization. While some of these scenes are drawn directly from Gumbs' personal memories and family lore, others imagine a lineage that encompasses spiritual entities, land masses, animals, plants, bacteria, and body parts.

As a figure who frequently addresses ancestry and kinship in her work, Gumbs might on the surface appear to be wielding the sort of strategic essentialism that Best critiques for its attempts to recover a collective identity from the remnants of traumatic histories. However, I contend that her work in fact cements a significantly more multiplicitous vision of lineage, one that concocts non-essentializing forms of Black embodiment (including feminist, queer, and crip embodiment) and incorporates nonhuman species and entities to subvert both genetic and strategic essentialism in a speculative literary mode. In the following sections, I first explore how Gumbs uses a biological imaginary to undermine genetic essentialism in *Dub*. She achieves this by replacing classification and separation with images of biological profusion and diversity in her considerations of ancestry. To illustrate this point, I focus on the repeated use of blood imagery throughout the text as well as Gumb's subversive approach to the natural sciences. Secondly, I examine how Gumbs uses a biological imaginary to trouble strategic essentialism. In *Dub*, she does this by formally representing the estrangement that genealogical enquiry produces for the descendants of enslaved people on the level of bodily materials and responses. I illustrate this

point by focusing on a key biological image and process in Gumbs work: respiration. Coupled with Gumbs' community-based work with The Black Feminist Breathing Chorus, a meditation and consciousness-raising collective, *Dub* uses respiratory processes to trace the bodily registers of genealogical estrangement and to process that estrangement on a somatic level. This somatic approach to racialized pain, and the precarity that comes in multiple forms in an antiblack world, resonates with a range of Black artistry and activism that use biological imaginaries to posit new forms of embodiment, political organizing, and relationality. I analyze these cultural and activist forms in more detail in the final section of this chapter.

Ancestral Reckonings and the Subversion of Genetic Essentialism in *Dub*

Dub is an exploration of Gumbs' ancestors "who have never been considered human," including "my enslaved ancestors, my disabled ancestors, my queer and indigenous ancestors, and everyone subject to…police radio codes", as well as nonhuman species and organic matter.[183] Some of these figures are named and familial, such as Gumbs' Irish great-grandmother Augusta who was shipwrecked in Anguilla and married a local man, or Boda, an Ashanti ancestor who experienced the Middle Passage.[184] Others go unnamed and untethered to conventional familial lines: those who perished during and survived enslavement, divine foremothers, and the unborn, as well as islands, coral reefs, whales, microorganisms, and bodily matter.

In envisioning these human and nonhuman entities and naming them as ancestors, one of Gumbs' broad aims is to undermine the principles of white racial essentialism including the

[183] Alexis Pauline Gumbs. *Dub: Finding Ceremony*. Durham, Duke University Press, 2020, p. xii.

[184] See Gumbs, "The Making of a Love Letter," interview by Ashia Ajani in *Sierra,* February 13 2020: https://www.sierraclub.org/sierra/making-love-letter-alexis-pauline-gumbs. Accessed May 20, 2021. See also Gumbs' poem "coral bone", April 3, 2020: https://www.alexispauline.com/now/2020/4/3/coral-bone. Accessed May 30, 2021.

privileging of the white, male, and self-enclosed subject, the division of human and nonhuman lifeforms, and the naturalization of these hierarchies. More specifically, *Dub* disrupts the tenets of genetic essentialism including its overemphasis on biologically-based origin stories and its view of human attributes as "immutable and predetermined…homogeneous and discrete."[185] For Gumbs, these tenets are the "founding mythologies" of modern life that not only structure our relationship to the past but take root deep in our bodies, tinging our experience and perception of daily life. She expands on this point in a sequence that describes the conception of *Dub*, in which she depicts the process of writing the text as a visceral excavation and transformation of her origin stories:

> I conducted an experiment…I made myself a dare. What if I go to my own veins, the origin stories that I think precede me, what if I go there and say that all the blood that ever spilled can now become paint. What then?[186]

With this depiction of origin stories coursing through her veins, Gumbs dramatizes the pernicious ways in which deterministic narratives can invade a person's understanding and lived experience of their body. Blood is a particularly powerful biological substance with which to communicate this idea, given the multiple ways it has been weaponized to shore up genetic essentialism in the U.S. and beyond. From the study of blood as an early indicator of race to the racialization of blood conditions like sickle cell disease and hypertension, blood has long been used to promote the idea of race as a predetermined biological entity.

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[185] See Ilan Dar-Nimrod and Steven J. Heine. "Genetic Essentialism: On the Deceptive Determinism of DNA." *Psychological Bulletin* 137.5 (2011): https://doi.org/10.1037/a0021860, p. 800.

[186] Gumbs, p. xi.

A potent example of this blood-related essentialism can be found in a brief history of sickle trait and disease in the U.S.[187] From the first clinical report of curved or sickle-shaped red blood cells, as observed in 1917 by the white American physician James B. Herrick while inspecting the blood of a West Indian man, sickle cells were correlated with Black embodiment and used to stoke fears about contamination and lineage. Sickling was initially thought to pass through a dominant gene trait, meaning that it could be transported from one parent to their child even if the other parent did not carry the trait.[188] This theory of hereditary sickle cells was subsequently weaponized by white officials in order to defend segregation and restrict miscegenation. According to Keith Wailoo, sickle cell research was therefore spurred more by the need to protect white American lineage than by the search for treatment. In both medical and popular literature, "descriptions of the disease constructed, idealized, and reified black-white identities and racial relations."[189] The fact that sickling can occur in a range of individuals – specifically those who live in or descend from areas that experience high levels of malaria (to which sickle cells provide resistance) like West Africa, Southern Europe, and the Middle East – was ignored

[187] Although early scholars of the disease did not distinguish between individuals whose blood had the capacity to sickle (the trait) and those who had an outsized number of sickle cells and an array of attendant symptoms (the disease), the two are now recognized as distinct. Sickle cell disease occurs when an excess amount of red blood cells sickle, impeding their flow and causing them to deplete more quickly. This depletion causes sickle cell anemia and a variety of other symptoms including stroke, vision problems, and pain in deoxygenated areas. See "Sickle Cell Trait", *The American Society of Hematology*: https://www.hematology.org/education/patients/anemia/sickle-cell-trait. Accessed July 9, 2021. See also, Saini, p. 197.

[188] Keith Wailoo, *Drawing Blood: Technology and Disease Identity in Twentieth-Century America.* Baltimore: Johns Hopkins University Press, 1999, p. 141.

[189] Ibid, p. 146.

in favor of a medical-moral panic about the nature of "Negro blood."[190] By the 1930's, sickling had become a racial "trait" with an immutable etiology.[191]

In the late 1940's, the view of sickle cells as hereditary changed with the publication of Linus Pauling's research on the molecular structure of hemoglobin.[192] Pauling argued that the sickle cell trait was not dominant but recessive, or dependent on the inheritance of the trait from both parents. This confirmed that marrying "outward" would not, in fact, spread the disease but reduce its likelihood.[193] Most significant for medical men, however, was Pauling's inauguration of a molecular approach to disease. By tracing the origin of sickling "to an alteration in the molecular structure of a protein", Pauling showed that "genes precisely determine[d] the structure of proteins."[194] This molecular method trained the medical scientific gaze on hemoglobin and its genetic structure rather than blood, leading medical science deeper inside the

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[190] See "Sickle Cell Trait", *The American Society of Hematology*: https://www.hematology.org/education/patients/anemia/sickle-cell-trait. Accessed July 9, 2021. See also, Saini, p. 197. According to the Center for Disease Control and Prevention, in 2010 the incidence for sickle cell *trait* was 73.1 cases per 1,000 Black newborns, 3.0 cases per 1,000 white newborns, and 2.2 cases per 1,000 Asian or Pacific Islander newborns.[2] It is estimated that the *disease* effects one out of every 365 African American births and one out of every Hispanic 16,300 births. The CDC does not provide statistics for any other ethnicity. See "Incidence of Sickle Cell Trait in the US" at the Center for Disease Control and Prevention: https://www.cdc.gov/ncbddd/sicklecell/features/keyfinding-trait.html; "Data & Statistics on Sickle Cell Disease" at the Center for Disease Control and Prevention: https://www.cdc.gov/ncbddd/sicklecell/data.html. Accessed June 21, 2021.

[191] For white patients who did display sickling, doctors tended to presume the presence of "Negro blood" or simply manipulate their understanding of race. As Carolyn Rouse explains, "physicians literally could not diagnose sickle cell disease in white patients. Instead, the physician would reclassify the patient as black before making the diagnosis." See Rouse, *Uncertain Suffering: Racial Health Care Disparities and Sickle Cell Disease.* Berkeley: University of California Press, 2009, p. 11.

[192] Linus Pauling, "Sickle Cell Anemia: A Molecular Disease." *Science* 110.2865 (1949): p. 543-548.

[193] Wailoo, p. 135.

[194] Bruno J. Strasser, "Sickle Cell Anemia: A Molecular Disease." *Science* 19 Nov 1999: Vol. 286, Issue 5444, p. 1488-1490. See also Betty S. Pace's introduction to *Renaissance of Sickle Cell Disease Research in the Genome Era*. Singapore: World Scientific, 2007, p. xxxiii-xxxv.

body and ostensibly towards a less racialized perspective on blood and disease.[195] Excitement over molecular medicine did not, however, prevent the continuation of a racializing strain in sickle cell discourse. As Wailoo explains, molecular medicine merely popularized a belief in "technical solutions" to disease. This fueled discussions about the elimination of illness that often strayed into eugenic approaches to sickle cell due its higher prevalence among Americans of African descent.[196] Framing sickle cell disease as a molecular entity did not, ultimately, eliminate the association of the condition with Black embodiment. Rather, it indirectly supplied a method of locating racial identity deeper within the body.[197]

This brief sketch of how sickle cells have been understood in the U.S. reveals how historic forms of racial essentialism – in this case, the use of blood to construct racial typologies – contributed to modern genetic discourses that remain implicitly essentializing. It also provides a useful frame for understanding Gumbs' depiction of false or unreliable origin stories that reside deep in "my own veins." Her location of origin stories at this site recalls the uses of blood as an historic tool of classification and positions the body as a repository of these ongoing biological

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[195] Wailoo points to Kenneth Walker's *The Story of Blood* (1958) as an example of work that "abandoned the linkage of 'blood' and 'race'" for a "more global and biomolecular view." See Wailoo, p. 157.

[196] See Wailoo, 157-159.

[197] The myth of sickle cell trait as a condition that only Black people experience endures today and is accompanied by destructive effects. We a stark example of this in the use of sickle cell trait as a coverup for police killings of Black people. A 2020 *New York Times* investigation found that "sickle cell crisis" was identified as the cause of death in at least 47 cases where Black people died in police custody over the past 25 years. When law enforcement cited the trait as the cause or major factor in these deaths, the cases often avoided further scrutiny. And yet, "in none of the deaths examined by *The Times* did the person have actual sickle cell disease, though there were instances when imprecise language by medical examiners left the false impression the trait and the disease were the same." [197] Like the equation of an originally advantageous genetic trait that effects people of all skin tones to a threatening disease located only within certain bodies, this lack of precision further advances the long-held myth of Black embodiment as volatile and polluted, and upholds antiblackness in medical, legal, and sociopolitical contexts. See Michael LaForgia and Jennifer Valentino-DeVries. "How a Genetic Trait in Black People Can Give the Police Cover." *The New York Times*, 15 May 2021: https://www.nytimes.com/2021/05/15/us/african-americans-sickle-cell-police.html?smid=tw-nytimes&smtyp=cur. The title of the piece is notable for its identification of sickle cell trait as "a genetic trait in Black people" – but while Black Americans carry the trait in higher levels, it is not limited to this group.

fictions. Blood has a specific rhetorical history that parallels medical scientific understandings, in that it is deployed to categorize bodies and the ties between them from class and purity ("blue" or royal blood) to pollution (bad blood), temperament (sanguinity) and emotion (boiling blood).[198] Against this rhetoric of classification, Gumbs offers an image of blood as an errant biological substance: "What if I go to my own veins, the origin stories that I think precede me, what if I go there and say that all the blood that ever spilled can now become paint?"

Set against scientific practices and common idioms that prioritize fixed identity, Gumbs' equation of blood with paint is a striking divergence. By endowing blood with creative proclivities to spatter, smudge, and smear, she disentangles an overdetermined biological substance from its associations with containment and purity. This creative characterization of blood denaturalizes essentialist notions about the internal body: throughout *Dub*, Gumbs disidentifies with the traditional uses of blood as a means for classifying bodies and accessing their "truths." In the ten-page section entitled "blood chorus," for instance, blood takes on a variety of meanings as Gumbs continues to uncover and scramble the pernicious aspects of the origin story. In places, blood marks brutal histories: "the routine redness of our hands pounding on stone…pounding on days…the blood of breaking through…the blood of our own loss that lingers."[199] Elsewhere, it is evoked in more ambiguous terms:

> we make love out of our own pain. the pain that comes. again. again. we made you from our regular pain. our red and fleeting joy.
>
> we grow blood out of our low accessible hearts. our stretched legs. our belly parts. we take love from the part of the brain that don't breathe.
>
> we paint the world with the blood we keep. or leave.[200]

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[198] Shaun McCann. *A History of Hematology: From Herodotus to HIV*. Oxford: Oxford University Press, 2016, p. 17.

[199] Gumbs, p. 207.

These lines offer scenes of bodily ensnarement, with the first stanza invoking entwined bodies who weave pain and pleasure together. This simultaneity is echoed in the second stanza, as deprived bodies – worn-out limbs, weakened hearts, brains deprived of oxygen – are instilled with the capacity to "grow" new blood. That growth, however, is not only reproductive, as suggested in the return to the trope of blood-as-paint in the final lines: "we paint the world with the blood we keep." Once again, Gumbs imbues blood with creative abilities and repurposes it not as a metaphor for certain familial ties but for uncertain, impure kinship that grows in surprising contexts and directions.

Throughout *Dub*, kinship takes on multiple meanings in order to facilitate non-essentializing understandings of diaspora, lineage, and embodiment. As a polyvocal text that illuminates those who have been excluded from the category of the human, *Dub* is a celebration of alterity that rejects the Western privileging of autonomous liberal subjects.[201] Additionally, the text reworks the organization of diasporic life in accordance with these standards. As Amanda Ong has pointed out, "diaspora's attachment to genealogy and biology also means that it can uphold the normative structuring logics of compulsory ablebodiedness and able-mindedness."[202] From women who transform into whales and institutionalized prophets, to walking islands and dancing turtles, *Dub* concocts a cacophony of lifeforms that do not behave as expected and identifies these entities as kin.

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[200] Ibid, p. 208.

[201] As Amber Jamilla Musser reminds us, "the liberal subject is racialized as white because liberal subjectivity is founded on the premise of ascendancy into whiteness."[201] See *Sensational Flesh: Race, Power, and Masochism*. New York: New York University Press, 2014, p. 96.

[202] Amanda Ong. "Finding Tender Roots: Affiliation, Disability, and Racial Melancholia in Monique Truong's Bitter in the Mouth." *Journal of Feminist Scholarship* 17.17 (2020): 64-80, p. 68.

Although many of *Dub*'s ancestral lifeforms are nonrealist, the text models a mode of ancestral inquiry that embraces non-normativity and has real implications for more inclusive notions of diaspora. As Gumbs explains in an interview with *Guernica*:

> [Writing *Dub* was] an intense embrace of what looks like crazy. There are women ancestors in my lineage who I know for a fact were institutionalized in mental hospitals; my great grandmother died in a mental hospital…these women in my lineage were punished for listening to themselves. When it comes to my great grandmother, in particular, she was honestly trying to fight ableism. That's my lineage.[203]

While the author affirms the power of matrilineal bonds, she also she references the practice of "fight[ing] ableism" as a lineage in its own right that extends beyond solely biological, genetic lines. As Nelson reminds us, it is possible to use traditional genealogical inquiry as a starting point for developing non-essentializing reckonings with history. In other words, genetic inquiry can unspool different forms of knowledge and political organizing. Specifically, Gumbs' statement suggests the ways in which her grandmother's resistance to institutionalization has allowed her to approach lineage not as a static entity but as a transferrable legacy of refusal that she practices in her own work. Whether she is writing about enslaved and neurodivergent foremothers or singing choruses of marine life and microorganisms, Gumbs' logic of lineage equates it with resistance and transformation rather than stasis.

This bold, interspecies approach is echoed in Gumbs' study of marine biology *Undrowned: Black Feminist Lessons from Marine Mammals* (2020). Fusing memoir, science writing, and philosophy, *Undrowned* connects human political refusal to the adaptive activities of underwater life. From the echolocation of dolphins to the fat retention of bowheads and evolution of whale

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[203] Gumbs. "Everything that Made Us Still Belongs to Us." Interview by Lisa Factora-Borchers in *Guernica*, September 17, 2020: https://www.guernicamag.com/alexis-pauline-gumbs-everything-that-made-us-still-belongs-to-us/. Accessed May 21, 2021, no page number.

spines, Gumbs argues that marine biology offers powerful metaphors and concepts for analyzing the stifling conditions of white heteropatriarchy and adapting accordingly. At the same time, she critiques the essentializing perspective of marine biology that limit our understanding of organic life:

> what I found [in marine biology literature] was that…the languages of deviance and denigration (for example, the term "vagrant juveniles," used to describe hooded seals), awkwardly binary assignments of biological sex, and a strange criminalization of mammals that escaped the gaze of biologists showed up in what would call itself the 'neutral' scientific language of marine guidebooks…I found myself confronted with the colonial, racist, sexist, heteropatriachalizing capitalist constructs that are trying to kill me—the net I am already caught in.[204]

Using an intersectional lens, *Undrowned* critiques scientific methods while centering marine biology as an unexpected analytic for understanding bodies in resistance. While parts of *Dub* and *Undrowned* mostly explore adaptation as a literal biological strategy among marine life, it is worth noting here that adaptation has long been a cornerstone of Black feminist thinkers' political visions. Speaking in the 1980's, Audre Lorde stated that "one of the most basic Black survival skills is the ability to change, to metabolize experience, good or ill, into something that is useful, lasting, effective."[205] More recently, the writer and activist adrienne maree brown has coined the term "emergent strategy" to encompass a range of tactics "for building complex patterns and systems of change through relatively small interactions" and cultivating "adaptive, relational way of being."[206] As a political strategy, adaptation entails a fundamental rejection of essentialism because it seeks ways of being that are not dependent on a set world order. This is

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[204] Gumbs. *Undrowned: Black Feminist Lessons from Marine Mammals*. Chico: AK Press, 2020, p. *Undrowned.* Ebook version, no page number.

[205] Audre Lorde, "Learning from the 60s", *Blackpast*, August 12, 2012: https://www.blackpast.org/african-american-history/1982-audre-lorde-learning-60s/. Accessed June 19, 2021.

[206] adrienne maree brown, *Emergent Strategy: Shaping Change, Changing Worlds.* Chico: AK Press, 2017. p. 2-3.

not to say that biological adaptation and sociocultural adaptation are identical, but that there are strategies to be found in the exchange of knowledge across both disciplinary and species boundaries that inherently pose a challenge to scientific and discursive essentialism by emphasizing the power of change over fixity.

Gumbs' readings of marine biology in *Undrowned* resonate with a range of contemporary artists and scholars who use interdisciplinary methods to expose racialized logics and defy racism in medical science, including evolutionary biology (Shay-Akil McLean), genetics (Nelson) physics (Michelle M. Wright; Chanda Prescod-Weinstein), geology (Kathryn Yusoff), oceanography (M. NourbeSe Philip; Christina Sharpe), and technology (Ruha Benjamin; Simone Brown). These scholars have roundly challenged the notion "that scientific thought [is] the exclusive purview of Euro-Americans and those of us who have been trained in their knowledge systems."[207] Working against histories in which "the racial underpinnings of scientific knowledge and the application of this knowledge to black bodies have foreclosed interdisciplinary conversations," these cultural figures are inaugurating a strain of science studies that intertwines scientific research with Black feminist and queer lineages.[208] Black feminist science loosens the hold of white racial essentialism by drawing attention to the porous boundaries between human and nonhuman worlds, by defying the organization of knowledge along disciplinary lines, and by decoupling organic life from determinism. In addition, these texts offer new ways of thinking about science in the context of transformative political movements.

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[207] Chanda Prescod-Weinstein. *The Disordered Cosmos: A Journey Into Dark Matter, Spacetime, and Dreams Deferred.* Paris: Hachette, 2021. Electronic copy, no page number.

[208] See Katherine McKittrick. *Dear Science and Other Stories*. Durham: Duke University Press, 2020, p. 149.

In this section, I have examined one of the ways in which Gumbs operates within this emergent tradition of Black feminist science by paying close attention to her use of a biological imaginary to subvert genetic essentialism. She does this, firstly, by imbuing anatomical substances and matter that were originally used to "fix" racial meaning to the body with creative proclivities, as seen in the blood imagery that runs waywardly throughout *Dub.* Secondly, she devises a speculative, interspecies vision of kin that troubles and expands the notion of traditional familial lines. Gumbs uses this interspecies lens to dramatize the human body's capacity for adaptation and transformation. Finally, her interdisciplinary approach to the natural sciences defamiliarizes the medical scientific gaze and the genetic essentialism that proclaims itself the ultimate, accurate approach to human and nonhuman embodiment.

In the following section, I continue to locate Gumbs in the intellectual and artistic traditions of Black feminist science. Departing from her poetic disruption of genetic essentialism, I turn my attention to her contesting of strategic essentialism by analyzing scenes of discontinuity and multiplicity that emerge in her work.

Respiratory Imaginaries and the Subversion of Strategic Essentialism

In the preceding portion of this chapter, I discussed genetic essentialism as a racializing scientific discourse in which genes are seen as the key to embodied identity. But genetic essentialism can also hold powerful cultural sway. One striking example of this appeal arrives in an explanation for Black Americans' high blood pressure that circulated in the early aughts. This theory hypothesized that Americans of African descent retain higher level of salt due to a rapid genetic adaptation that occurred on slave ships, whereby those who could hold onto salt were able to survive extreme dehydration. As Saini writes, this proved an evocative origin story for scientific and lay communities alike, including the descendants of enslaved people:

> Sensitivity to salt, which had helped some through the brutal journey across the Atlantic, landed their unfortunate descendants in the twentieth century with the fatal scourge of hypertension. Western diets had damned them, and there was nothing they could do. The media loved it. Fans of the theory included Oprah Winfrey and the resident health expert on her talk show, Doctor Oz.[209]

The salt retention theory is now widely disproved, due to its inaccurate suggestion that genetic mutation can occur in the period of time enslaved people would have spent in transit and its overlooking of socioeconomic factors and health disparities that contribute to the prevalence of high blood pressure in Black Americans today. Yet the popularity of the theory indicates the continuing pull of essentialist mythologies that ostensibly provide a conduit to the past and excavate ancestral histories for explanations about the present. The point here is not to imply that inherited or epigenetic trauma – which I will discuss in further detail shortly – is not a felt, material experience. Rather, it is to caution against overly simplistic narratives that look to the ancestral past to explain complex modern phenomena.

Stephen Best writes that this imperative to recover the past, coupled with the belief in the reparative nature of this recovering, has also come to infuse Black cultural discussions and critique. In this scholarly tendency to overdetermine traumatic histories, Best notes that it "is not too difficult to see the search for lost or absent black culture as substituting for the recovery of a "we" at the point of our violent origin."[210] While the preceding section asked how genetic essentialism might be reworked, here I turn my attention to the subversion of strategic essentialism. Inspired by Best's work, I use the term strategic essentialism as a shorthand for the critical and intellectual tendency to overburden the ancestral past as the blueprint for understanding present circumstances, as seen in the salt theory. Gumbs' work offers us one

[209] Saini, p. 185.

[210] Best, p.13.

model of how strategic essentialism might be challenged without jettisoning the weight of history on the one hand, or overdetermining contemporary Black subjectivity in relation to history on the other. Rather than performing a reparative return to the traumatic past in her work, I argue that Gumbs uses a biological imaginary to track the uneasy echoes of history that resound in the present. This gives shape to what Best calls "the joy and the pain in genealogical isolation" on the level of the fleshy body. [211]

It is possible to read *Dub*'s particular mode of ancestral outreach as strategically essentialist, in that it reaches into ancestral histories of enslavement and institutionalization. Moreover, Gumbs tends to favor the third person plural to denote ancestral lifeforms speaking in chorus, or to suggest an unspecified "we" who are receiving their messages in the present. As Dwight A. McBride argues, the third person plural has historically enacted "a rhetorical strategy [which] African American intellectuals often use to reclaim a racial essentialism."[212] This strategy can be a useful one for "legitimizing" marginalized experiences and allowing people to speak authoritatively "in a language that is not intended to do that work." But it can also, McBride argues, be a homogenizing rhetorical move.[213] This is an important point to mention in the context of Black intellectuals using the third person plural — and it makes *Dub's* radical tendencies all the more clear. We can read Gumbs' use of the third person plural as a subversive move because it declines to configure an essentially raced, gendered, or human referent. Instead, *Dub* consistently evokes *disharmony* between the author, reader, and the text's multitude of lifeforms. In scenes where ancestors recite cryptic instructions ("knowing is not a given, it is

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[211] Ibid, p. 11.

[212] Dwight A. McBride. "Speaking The Unspeakable: on Toni Morrison, African American Intellectuals and The Uses of Essentialist Rhetorics." *Modern Fiction Studies* 39.3/4 (1993): 755-776, p. 757.

[213] Ibid, p. 774.

made"), where interpersonal communications strain ("we cannot look in each other's eyes"), and where ancestors slip from our grasp ("if you gathered them you/could not hold them"), the emphasis is squarely on disorientation over unification.[214]

Formally, the deeply experimental nature of *Dub* reproduces that disorientation and heightens the sense of irresolution that genealogical inquiry can produce. This sense of ancestral disarray is not, however, purely a source of despair. Like Angela in *Watchmen*, Gumbs' relationship to her ancestors remains askew yet carries a visceral charge that proves simultaneously mournful, creatively galvanizing, and even joyful. Gumbs uses a biological imaginary to chart these varying emotional frequencies, offering multiple scenes in which bodily matter and processes are used to mark both the joy and the pain of genealogical estrangement. To illustrate this point, I focus on a key process that she uses across her work to represent and process genealogical inquiry: respiration.

Breath rises and fall throughout *Dub*: in passages that detail the struggle of enslaved people for breath, in reflections on the somatic experience of racialization, in poetic meditations on the breathing patterns of nonhuman animals, and in calls for the author and reader to breathe more deliberatively. Gumbs deems the text an "artifact and tool for breath retraining," which offers somatic instructions such as ""make the sound you need by breathing", "let the rage held in any of the muscles in your shoulders, re-lease", and "put your hands on your belly and breathe."[215] By analyzing the importance of respiration in *Dub*, as well as the centrality of breathwork to Gumbs' community-building activities, I suggest that her work concocts a respiratory imaginary in order to process both the pain and the potential of Black ancestral inquiry.

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[214] Gumbs, p. 68; p. 235; p. 8.

[215] Ibid, p. 67-73.

Against the tendency to use racialized pain to establish a sense of continuity across generational boundaries, *Dub* uses a biological imaginary to evoke the incoherence of generational pain in the wake of the Middle Passage and its deeply isolating effects. While inherited pain is very much present in the text, it is chronicled in images of bodily disarrangement, in visceral shocks and starts, and in aches without a name or identifiable origin. For instance, Gumbs describes antiblackness as an unwieldy force that exerts pressure from multiple directions: "it pushes on your shoulders. it pulls your muscles down. It slowly teases them apart from tendon…. it gets bolder atop you, it learns how most easily to stop you from the you of your momentum. It strains you at the septum and you push against your own teeth."[216] Here suffering is not the locus of a unified subjectivity, but a weighted presence that pries people and bodies apart and reshapes the body itself over time: wrenching muscle from tendon, nose from face, past from future.

As research on historical and epigenetic trauma suggests, this is not only a metaphoric wrenching. The Indigenous American scholar Maria Yellow Horse Brave Heart first developed the theory of historical trauma to explain how oppression disrupts the body over time, creating "cumulative emotional and psychological wounding over the lifespan and across generations, emanating from massive group trauma."[217] Research in epigenetics, or the study of how molecular changes in DNA can shape human experience over time, also invites us to consider historical trauma as burden to the entire sensorium: damaging neurocognitive

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[216] Ibid, p. 252.

[217] Maria Yellow Horse Brave Heart, Josephine Chase, Jennifer Elkins, and Deborah B. Altschul, "Historical Trauma Among Indigenous Peoples of the Americas: Concepts, Research, and Clinical Considerations." *Journal of Psychoactive Drugs* 43.4 (2011): p. 282-290. See also Brave Heart, "The Return to the Sacred Path: Reflections on the Development of Historical Trauma Healing" at the Indian Health Service: https://www.ihs.gov/sites/telebehavioral/themes/responsive2017/display_objects/documents/slides/historicaltrauma/htreturnsacredpath0513.pdf

development, impairing people's capacity to cope with daily life, and increasing vulnerability to debility in the long term including heart disease, diabetes, anxiety, and depression.[218] However, historical trauma does not offer a purely medical framework. In contrast to post-traumatic stress disorder, which typically focusses on a singular instance of racism or other isolated incident as an inciting traumatic event, historical trauma recognizes the iterative biological, psychic, and social effects of trauma over time. Throughout *Dub*, Gumbs employs visceral aesthetics to mark this iterative, deeply embedded nature of generational pain that does not remain static but mutates over time.

One of the key sites at which Gumbs examines such pain are the lungs. Imagining her enslaved foremother Boda in the wake of her abduction from home, for example, Gumbs focusses on the lungs as the locus of Boda's shock:

> it was all she could do to let blood flow into her brain. it was all she could do to let her lungs volunteer to take more air. it was a numbness that taught her to remember that before, when she thought she knew what pain was, she had been wrong.[219]

Here impeded blood flow and constricted lungs index the physiological experience of dislocation. Boda's violent reduction to bodily process acts as a reminder that, in Ashon Crawley's words "racial categorization and distinction is, in many and fundamental ways, about the disruption and interruption of the capacity to breathe in the flesh."[220] Scholars and activists

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[218] See KN Williams-Washington, "Historical Trauma" in *Handbook of African American Health*, edited by Robert. L. Hampton, Thomas. P. Gullotta, & Raymond. L. Crowel. New York: Guilford Press, 2010; Andie Kealohi Sato Conching and Zaneta Thayer, "Biological Pathways for Historical Trauma to Affect Health: A Conceptual Model Focusing on Epigenetic Modifications." *Social Science & Medicine* 230 (2019): 74-82; and Karina L. Walters et al. "BODIES DON'T JUST TELL STORIES, THEY TELL HISTORIES: Embodiment of Historical Trauma among American Indians and Alaska Natives." *Du Bois Review: Social Science Research on Race* 8.1 (2011): p. 179-189.

[219] Gumbs, p. 42.

[220] Crawley, p. 4.

have long characterized breath as a key process for exploring the experience and enunciation of Black life and death in the United States and beyond. Echoing the final words of Eric Garner, an asthmatic Black man who was murdered by police chokehold in 2014, "I can't breathe" has become a resounding articulation of the ways in which Black life is systematically denied in the U.S. and beyond. Political organizers' echoing of the phrase memorialize those who have died at the hands of police, utilizing the final words of Garner and others as a public declaration of solidarity and dissent.[221] The emphatic repetition of the phrase "I can't breathe" by activists evocatively encompasses the variety of constrictions that are placed upon Black Americans, marking what Jean-Thomas Tremblay calls the "asphyxiating atmosphere in which activists declare that Black Lives Matter."[222]

While respiration materially and metaphorically marks the obstruction of Black life, it can also be used as a material process and tactic for dissent. Christina Sharpe terms these alternative uses of breath "aspiration", which she defines as the deliberative process of working "to keep breath in the Black body."[223] In *Dub*, we witness Boda using aspiration as her own form of interspecies ancestral outreach. In the following passage, she works to channel the Akan whale god Totorobonsu from the belly of a slave ship:

> totorobonsu made the world by breathing. totorobonsu made the world with sound reaching out, bouncing back. totorobonsu moved through depths unseeable. darkness with no beginning and no end. though i am nothing, totorobonsu is now. here.

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[221] According to a 2020 New York Times Report, the phrase has been used by at least 70 people who died in police custody. Mike Baker, Jennifer Valentino-DeVries, Manny Fernandez and Michael LaForgia, "Three Words. 70 Cases. The Tragic History of 'I Can't Breathe.'" *The New York Times*, 28 June 2020.
[2] Jean-Thomas Tremblay, "Being Black and Breathing: On 'Blackpentecostal Breath'", *Los Angeles Review of Books*, October 19, 2016. https://lareviewofbooks.org/article/being-black-and-breathing-on-blackpentecostal-breath.

[222] Tremblay, Jean-Thomas. "Being Black and Breathing: On 'Blackpentecostal Breath'", *Los Angeles Review of Books*, October 19, 2016. https://lareviewofbooks.org/article/being- black-and-breathing-on-blackpentecostal-breath.

[223] Christina Sharpe, *In The Wake: On Blackness and Being*. Durham: Duke University Press, 2016, p. 78.

> boda remembered the whale god. boda remembered the whale was god. boda remembered the world was made by breathing. boda remembered what the whales already knew. and breathed.
>
> by the time she reached the other side she had been reborn. birthed through the belly of the whale. blue from the blood of breathing.

This passage begins with a chant tempered by desperation, a frantic effort to locate the creator and whale God in ungodly circumstances. Totorobonsu's all-encompassing breaths, initially too immense to grasp, see, or quantify, have settled uneasily into Boda's own breath by the end of the passage. This settling, which is formally produced through the repetition of "boda remembered," explicitly links breath to retainment. Here retainment refers to Boda's desperate efforts to maintain her ties to home even as gaps in the historical record are being created in real time, as well as her strenuous efforts to "keep breath" in the body. After the ship, the arrival on "the other side" reads like violent exhalation, an expulsion into hostile worlds. This depiction of Boda's own struggle to retain ancestral knowledge centers breath as a visceral marker of genealogical disarray. In Gumbs' depictions of Boda's life in enslavement, Totorobonsu surfaces as an elusive memory for Boda when she yearns for home. But they are not a figure that can close the gap between past and present. By imagining her ancestor struggling to recall her spiritual ancestor in the wake of her violent removal from home, Gumbs offers us a vision of ancestral relation that is forged not in harmony but in the breach between past and present.

Dub's interspecies ancestral assemblage embraces genealogical disarray not only by positing nonhuman lifeforms like Totorobonsu as shadowy kin, but by looking to these lifeforms for models of survival. Take the following passage, in which Gumbs once again takes inspiration from marine life. Writing from the perspective of coral, she connects their organic activity to human adaptation:

> breathe. breathe. breathe. sing. let that water move within you. let it be you. let your every cilia dance you into healing. let the warm salt water brighten you. your tears. sleep. and when you dream of working, sleep again. sleep until you dream of floating. dream until your edges soft. dream until you birth yourself in water singing with the bones of all your lost.[224]

Coral offers a striking example of adaptation in the natural world, which Gumbs uses to illuminate embodied strategies for human resilience in strange and isolating circumstances. A sessile (rooted) organism attached to the ocean floor; coral consists of vast structures assembled from tiny interdependent polyps. Encased in limestone outer skeletons, the polyps attach themselves to rock or the bones of other polyps in order to live and lay the foundation for new polyps in turn. In this way, coral is a self-generating system that can expand itself over millions of years.[225] At the same time, it is strikingly vulnerable to external stressors. Today bleaching is the most recognizable sign of coral distress, in which the animal loses the algae (zooxanthellae) that lives within its tissue and functions as its food and color source. This loss can be a response to changes in water temperature, salinity shock, light adjustments, and pollutants, which all leave the coral and algae unable to their symbiotic relationship.[226]

While bleaching is commonly discussed as a traumatic event, scientists have recently argued that we can also understand it as an adaptive response. Because coral polyps can host different types of algae and algae can, in turn, move from one coral host to another, biologists Robert W. Buddemeier and Daphne G. Fautin have hypothesized that bleaching causes the coral and algae to seek the most advantageous relationship that will sustain each other in the long term. In this

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[224] Gumbs, p. 13.

[225] "Are Corals Animals or Plants?" *National Ocean Services*, https://oceanservice.noaa.gov/facts/coral.html. Accessed July 18, 2021.

[226] P. W Glynn. "Coral Reef Bleaching: Ecological Perspectives." *Coral Reefs* 12.1 (1993): 1-17, p. 1. Accessed through https://link-springer-com.ezproxy.library.wisc.edu/content/pdf/10.1007/BF00303779.pdf.

formulation, bleaching "provides an opportunity for the host to be repopulated with a different partner; [because] frequent stress tends to favor a stress-resistant combination."[227] This theory is not intended to dismiss the ways in which coral reefs are under threat due to climate change and other human activities, but to tilt our view of coral from an endangered, passive system to a symbiotic creature imbued with some ability to respond to these threats.

This inventive partnership between algae and coral buttresses Gumbs' creative view of organic life, which she uses to illuminate the human potential for adjustment on a biological level. The coral passage uses an interspecies biological imaginary to connect the adaptive strategies of coral to human biological processes that are automatic and often unconscious, but nevertheless remain deeply inventive. Specifically, the coral chorus' call to "let every cilia dance you into healing" brings us deep inside the human respiratory system. Cilia are hair-like strands found within human cells, which function within the lungs to keep the airways clear with a rhythmic, pulsating motion (not unlike the tentacles of coral that filter water, food, and oxygen). While these strands cannot be consciously manipulated, the image of motile cilia "dancing" within the lungs offers a playful reminder that our bodies have adaptive proclivities that sustain us in ways that remain internal and unseen. This focus on internal, involuntary processes dispels a central myth of liberal humanism: that the liberal subject is one that is imbued with total knowledge and control over the self. By emphasizing adaptation over continuity, Gumbs also challenges essentialist notions of organic life which view human and nonhuman biology alike as fixed, separate entities. Her human-coral chorus offers one way in which genealogical disarray does not produce pain alone – rather, Gumbs embraces estrangement by generating alternative models for kinship and survival that dramatize change over cohesion.

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[227] Robert W Buddemeier and Daphne G. Fautin. "Coral Bleaching as an Adaptive Mechanism." *Bioscience* 43.5 (1993): 320-326, p. 321.

The creative, transformative capacities of respiration that Gumbs attends to in her poetry also play a key role in collective modes of Black expression and dissent. As Crawley writes, Black cultural forms aestheticize breath by transforming the automatic movement of air in and out of the lungs into deliberative performances: from the all-clear whistling of formerly enslaved fugitives to the singing and whooping of church congregations. Crawley coins the term "black pneuma" to describe "the performative production of breath" in the Black Pentecostal tradition, in which the collective displacement of air is also a proclamation of life that flourishes under duress.[228] This concept of Black pneuma underlines an automatic biological process as the grounds for cultural and political expression. Challenging the claim that bodily matter is inert, this connection of breath to healing, rebirth and transformation, crystallizes the involuntarily creative capacities of biology. By amplifying the internal mechanics of human respiration from the perspective of a coral colony and associating the adaptive behavior of marine biology with that of human kin, Gumbs concocts a biological imaginary that reveals the nondeterministic behaviors of both human and nonhuman lifeforms.

In other arenas, Gumbs' explores the more concrete question of how healing and adaptation might become enfleshed – or habituated on an embodied level – in her breathing, meditation and consciousness-raising groupwork. The Black Feminist Breathing Chorus, a collaboration between Gumbs and the activist and preacher Olorisa Sangodare Akinwale, offers a series of guided meditations that emphasize embodied and spiritual transformation. Rooted in their own meditative practice of chanting the words of revolutionary thinkers, Gumbs and Sangodare launched the first Breathing Chorus in 2014. Participants receive a recorded meditation and mantra drawn from a mother of Black feminism (for instance, the Toni Cade

[228] Ashon Crawley. *Blackpentecostal Breath: The Aesthetics of Possibility*. New York: Fordham University Press, 2016, p. 38.

Bambara week offers the mantra, "the most effective way to do it is to do it"), set to music composed by Sangodare and a collage celebrating the "ancestor of the day" created by Gumbs. The project has since expanded to include in-person retreats, livestreamed Sunday services, and specific meditation courses focused on select figures or groups like Octavia Butler or the Combahee River Collective.[229]

The Breathing Chorus disseminates the politics of queer Black feminism on a somatic level, inviting participants to reflect on the life and work of figures like Pauli Murray, Audre Lorde, Toni Morrison, Harriet Tubman, and Fannie Lou Hamer. In this work, learning about feminist foremothers is dependent not only on intellectual learning, however, but on somatics. Participants are invited to harness their breath, train their attention, and "over-write the oppressive messages that [they] have internalized with the words and energy of those who have dedicated their lives to our freedom."[230] By converting the language of Black feminist thinkers into mantras that are disseminated, recited, and reprocessed alongside deliberative bodily practices, the Breathing Chorus centers the visceral nature of ancestral enquiry and its role as a catalyst for political engagement beyond seeking conventional family ties.

Sangodare and Gumbs' emphasis on the breath, specifically, reroutes an automatic biological process into a deliberative ritual to transform the bodymind. This transformation is both figurative and material. Figuratively, the Breathing Chorus advocates the therapeutic effect of meditation and deep thought inspired by the tenets of Black feminist philosophy. In this way the project might be viewed as a contemporary iteration of feminist consciousness-raising, in that it

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[229] Information about the Black Feminist Breathing Chorus can be found on Gumbs' website: https://www.alexispauline.com/meditation and at Sangodare's site: https://sangodare.podia.com/breathingchorus.

[230] Alexis Pauline Gumbs, "Testimonials" at the Black Feminist Breathing Chorus: https://sangodare.podia.com/bfb2021

centers embodied knowledge as key to developing an understanding of one's own position in the world.[231] By embodied knowledge, I mean knowledge that accumulates from daily experiences, sensations, and perceptions of one's surroundings; a knowledge which is heightened by the protracted periods of deep breath and sensory awareness that the Breathing Chorus mantras elicit.

As the activist and neurobiologist Sará King explains**,** the physical habituation of these coping and practices is a crucial component of surviving and thriving in antiblack worlds. King argues that the numerous forms of racial trauma that Black Americans experience demand a holistic response to wellbeing that brings together neurological research, mindful meditation, and social justice. Working with high schoolers, she found that mindfulness alone did not provide sufficient support for Black students. Although their experiences were "constantly being shaped by these external forces of systemic oppression which are then causing them trauma in their bodies", these students were "not being given any language or practices around that."[232] Through a framework she names The Science of Social Justice, King works to raise awareness of how racial oppression permeates the body and mind and devises practices to deal with these barriers to wellbeing. Her work encompasses somatic therapy and trauma processing circles, as well as collaborations with visual and aural artists to create immersive spaces for reflection.[233] Such integrations of art, scientific data, and mindful meditation take cultural and social experiences

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[231] For an overview of feminist consciousness raising, see Kathie Sarachild. "A program for feminist consciousness-raising." *Radical Feminism: A Documentary Reader,* edited by Barbara A. Crow. New York: New York University Press, 2000, p. 273-276.

[232] Ava Whitney-Coulter, "Where Science, Mindfulness, and Social Justice Intersect," *Mindful.org,* February 26, 2021: https://www.mindful.org/where-science-mindfulness-and-social-justice-intersect/. Accessed 15 May, 2021.

[233] See, for instance, King's 2020 collaboration with the New York Museum of Modern Art titled "The Art and Science of Social Justice": https://www.moma.org/calendar/events/6745.

into account when addressing historical trauma, but also keeps the bodymind in play as the site where those experiences can be processed.

This processing invokes a biological imaginary in that it trains participants' attention on bodily processes and sensations, working to temper internal worlds for the sake of wellbeing. The biological benefits of meditation and breathwork can be both immediate and long term, from the regulation of blood pressure and mood to the functioning of the nervous system.[234] Bearing these benefits in mind, the Black Feminist Breathing Chorus recognizes the specific stresses that impact Black Americans and addresses them on a material register, forging a non-biological mode of relationality that nevertheless unfolds on a somatic level. While we commonly think of biological activity as occurring internally, and in isolation, Gumbs argues that breathing "is also so profoundly collective…how absurd is it for breathing to be a project at all? Shouldn't it be a given? It's not. It's an embattled project."[235]

These words identify breath not only as a relational process, but as an instrument for collective action. Prompted by Gumbs' depiction of internal bodily activity as collective processes that can transform the way we, in turn, process our relationships and surroundings, the final section of this chapter lingers with a few examples of Black artistry and activism that concoct non-essentializing forms of embodiment and relationality via the politicization of interiority.

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[234] For an overview of meditation's benefits and how they particularly pertain to African Americans, see Sala Horowitz. "Health Benefits of Meditation: What The Newest Research Shows." *Alternative and Complementary Therapies* 16.4 (2010): 223-228.

[235] Gumbs, interview with Mattilda Bernstein Sycamore in *BOMB*, March 22, 2018: https://bombmagazine.org/articles/alexis-pauline-gumbs/.

Biological Imaginaries in Black Artistry and Activism

If Gumbs' experimentations with aspiration and adaptation offer a powerful testament to the transcendent power of breathwork, Kevin Beasley's 2016 installation and performance piece *Your Face Is/Is Not Enough* offers another. Beasley is a multimedia sculptor who uses clothing and found objects to create dense compositions and installations that reflect on memory, identity, and legacy. His work mediates between the visual and the aural, with Beasley often embedding microphones into his sculptures or creating soundscapes for the display of his art objects. *Your Face Is/Is Not Enough* presents mounted police-issue gas masks fitted with microphones and augmented with sculpted feathers, electrical wires, fabric, and found objects. The sculptures variously evoke African tribal headdresses, Rasta caps, horned and long-eared animals, and American pop culture icons like Mickey Mouse. For the live element of the installation,

Kevin Beasley, *Your Face Is/Is Not Enough*

performers animated the art by walking among the audience wearing the masks before coming to rest. Holding augmented gas canisters and facing the audience, the performers breathed heavily through the microphones embedded in the wearable sculptures. Accompanied by droning and differently pitched cries, their breathing became an eerie cacophony until they silently placed their masks back on the exhibition stands.[236]

Activated by movement and breath, Beasley's sculptures operate on a somatic level. Breathing demands physical exertion in a claustrophobic setting on the part of the performers, which in turn implicates the spectators' breath as they reflect on how this biological process can be exerted, controlled and denied.[237] By activating riot gear that materializes the unfair advantages of the state, Beasley creates conditions to reflect on the uneven distribution of breath in the performance space and, in turn, the asphyxiating conditions of police violence, environmental destruction, and chemical warfare that the performers' ragged breathing invokes. In these ways, *Your Face Is/Is Not Enough* offers a respiratory imaginary to confront the embattled conditions under which marginalized people struggle for breath. While the staged encounter between performers and spectators on one level recreates the battleground of a protest, the sculptural masks invoke protest as more than brutal encounter. Beasley transforms standardized riot gear into lavish and highly detailed sculptures, absorbing these objects into a carnivalesque ritual that speaks to the imagination and ingenuity that are inherent to radical political work. The performance's addition of labored breathing underlines the exertion that this

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[236] Kevin Beasley, *Your Face Is/Is Not Enough*. Exhibited at "*Between the Ticks of the Watch*", The Renaissance Society, Chicago, 2016. For a recording of the opening performance of *Your Face Is/Is Not Enough*, see https://renaissancesociety.org/publishing/703/performance-kevin-beasley-your-face-is-is-not-enough/.

[237] For a firsthand account of this experience by the performers, see Huma Kabakci, "Your Face Is/Is Just Not Enough: An Unsettling yet Monumental Performance-based Installation by Kevin Beasley", *Fad Magazine*, 5 September 2018: https://fadmagazine.com/2018/09/05/your-face-isis-just-not-enough-an-unsettling-yet-monumental-performance-based-installation-by-kevin-beasley/. Accessed August 2, 2021.

work entails while creating space for protest as a bodily and spiritual ceremony. In these ways, Beasley emphasizes breathwork as both a necessary response to violence and a performative element of protest in which biological processes are mobilized to forge new heterogeneous collectives — a heterogeneity that is dramatized in his combination of animal, geographic and cultural references.

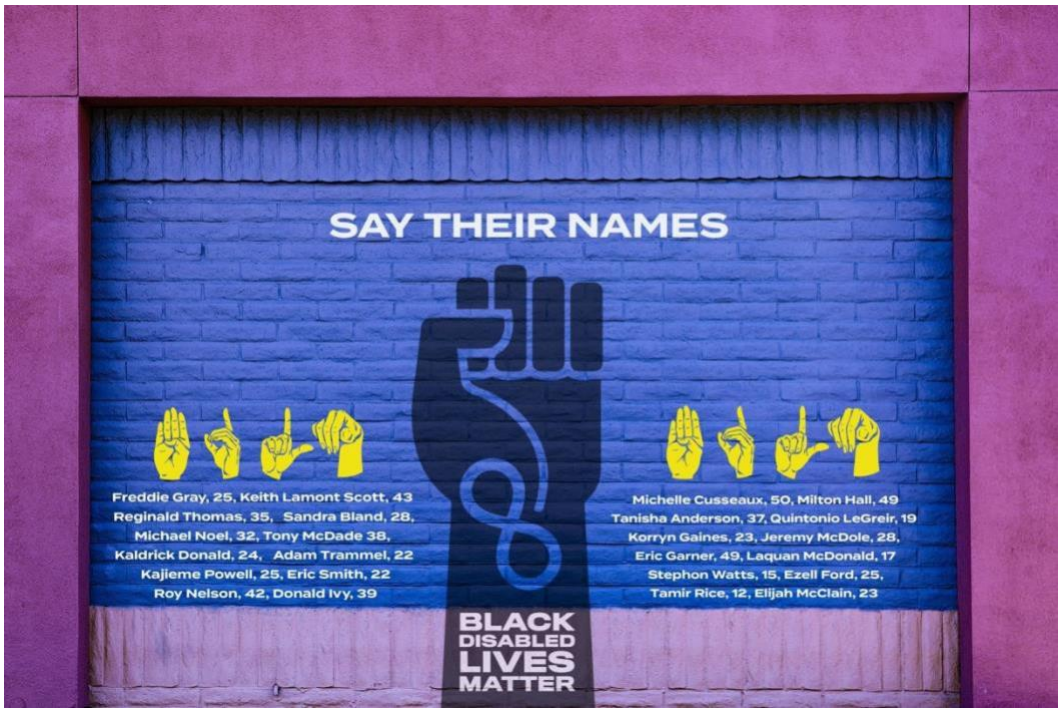
Beasley's use of riot gear readily evokes a space of physical encounter and the clashing of bodies at street protests, but also invites viewers to expand their understanding of what constitutes protest by centering color, sound, movement, and sustained attention as important sensory elements of political organizing. Black and disabled artist-activists have been at the forefront of creating and discussing these alternative forms of protest, which affirm the capacity of different bodyminds to participate in political dreaming while intervening in intersecting forms of oppression. In her art and activism, for instance, the Afro-Latinx disabled artist Jen White Johnson creates accessible forms of protest, drawing attention to the embodied elements of political organizing for the interrelated causes of racial equity and disability justice.[238] In 2020, Johnson created the Black Disabled Lives Matter symbol by amalgamating the Black Power symbol and the infinity sign, which celebrates neurodiversity. The image draws attention to the nexus of antiblackness and ableism, specifically the epidemic of police brutality against Black disabled people.[239] Johnson and others have disseminated the symbol in a range of

[238] See, for instance, the Harriet Tubman Collective's critique of Black Lives Matter organization for the elision of disability as a category of analysis, "Disability Solidarity: Completing The 'Vision For Black Lives'" September 7 2016: https://www.dustinpgibson.com/offerings/disabilitysolidarityctvfbl. Accessed July 5, 2021.

[239] Jennifer White-Johnson, "How the Black Disabled Lives Matter Symbol Took on A Life of Its Own," *American Institute of Graphic Arts Eye on Design*, November 11, 2020: https://eyeondesign.aiga.org/how-the-black-disabled-lives-matter-symbol-took-on-a-life-of-its-own/. Accessed on April 29, 2021.

accessible formats, creating space for people of different abilities to participate in an intersectional movement.

For instance, the Black Disabled Lives Matter Mural Project offers a public mural format that includes the symbols and names of Black disabled people killed by police, as well as "BDLM" in both American Sign Language and Braille. Johnson's public guide to constructing the mural places accommodation at the center of creating and disseminating activist art, from the need for nearby water supplies, bathrooms, and sun shade for those painting the mural to the importance of identifying a location for the mural that is publicly accessible and "visible from multiple vantage points and perspectives."[240] Alongside other activist guides that take access needs into account – such as community care tools and guides to organizing for people experiencing limited mobility or the effects of trauma – the BDLM initiative holds space for a



Jen White Johnson, *Black Disabled Lives Matter*

[240] Jennifer White-Johnson, "Black Disabled Lives Matter Mural Project": https://jenwhitejohnson.com/Black-Disabled-Lives-Matter-Mural-Project. Accessed June 12, 2021.

variety of embodied experiences that often go unrecognized or underdiscussed.[241] By providing a visual language for the intersection of antiblackness and ableism and calling for enhanced accessibility in political organizing, including the creation of activist art, the BLDM Mural Project allows for more capacious accounts of disabled, debilitated, neurodivergent, and racialized bodyminds as powerful agents of refusal and articulates the interconnected nature of antiracist and anti-ableist work.

While the BLDM symbol does not center visceral language or imagery that directly references biology, its incorporation of the infinity symbol does draw attention to the nonvisible, internal aspects of alterity that may go underacknowledged in the traditional format of a street protest, in popular discussions of antiblackness, and in ableist conceptions of diaspora. In addition, Johnson's guide to participating in and envisioning the mural accommodates a variety of embodied experiences when it comes to political organizing and consciousness raising. This insistence on accommodation expands our understanding of both racialization and disability in all their interior complexity.

This complexity is also being explored by Black disabled artists in more traditional exhibition spaces. In their multimedia work, Wit López holds space to consider overlapping forms of oppression including racism, transphobia, and ableism, utilizing fabric to create soft sculptures and interactive performances that enact what they call "tactile disruptions."[242] Tactile disruptions create a multisensory experience in the exhibition or performance space: for instance,

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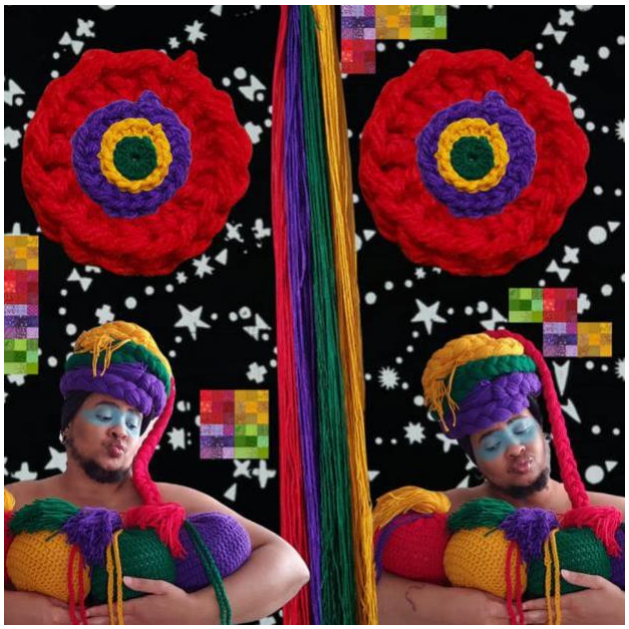
[241] For examples of community tools, see The Audre Lorde Project's "Breaking Isolation" self-care community kit, https://alp.org/breaking-isolation-self-care-and-community-care-tools-our-people and tools for political action for people experiencing PTSD, https://www.cardinalinnovations.org/Resources/Blog/Historical-Trauma-PTSD-and-Racism-in-America.

[242] Wit López, "Radical Softness and Tactile Disruptions" at Carleton University Art Academy, April 1, 2021. For a recording, see https://www.youtube.com/watch?v=tAb5SPbR7FA.



Wit López, Untitled Self Portrait

López frequently distributes knitted spheres or "pillow balls" that correspond to the fabric art on display, or hands out clothing and fabric braids that corresponds to their outfit. By creating art that can be interacted with on a variety of sensory levels, López aims to undercut the ableism of the traditional gallery space in which art is primarily visual and displayed at a distance. This undercutting is aural as well as physical: in addition to encouraging audiences to hug and throw their pillow balls, or swing them on strings, López welcomes an atmosphere of loudness, play, and discussion to invite disabled and chronically ill folk to "explore the depths of their disabilities…without feeling shame about it," and to make the interaction work for each individual in bespoke ways. Crucially, access as a dimension of art and performance is mutually maintained: as a dancer who experiences chronic pain, López creates pockets of rest for themselves during their performances by inviting audience members to trade places or try on their clothes. In these ways, they highlight the importance of mutual awareness of bodily difference as a means to access, inclusion, and transformative experience, even when that

difference is not easily apprehensible on the surface. This places an awareness of internal bodily processes as central, rather than ancillary, to producing, disseminating, and collectively engaging with art as a political statement. In this way, their work fashions a biological imaginary by rendering interiority collective and political, even (and especially) when our interior states are different from one another.

For the artists, writers, and organizers I have briefly considered in the coda to this chapter, interiority can be made political when it is separated from the assumption that biology is predetermined, immutable, and inscrutable. In the preceding examples, the representation and manipulation of the body's internal processes and patterns – from breathwork and deliberative movement to mindful meditation – attend to the physiological manifestations of racial oppression but also work to habituate coping and healing responses. These responses emphasize the mutability of the body in the present and its capacity to forge relationality in strife or disharmony. Such coping and healing responses are potentially transformative, as suggested in forms that cultivate deep embodied knowledge and sensory awareness as key elements of consciousness raising and collective action.

Rejecting the humanistic tendencies to sideline the interior body, the forms under scrutiny in this chapter use biology aesthetically to detail the experience of inhabiting a racialized and multiply marginalized body without reifying diaspora, race, or other identity categories as fixed. As Gumbs acknowledges, decoupling biology from essentialism is a significant task that involves remaking our foundational assumptions about embodiment and identity. She writes, "what if who we think we are, what we believe at a gut level about our kinship loyalty and our perceived survival needs are responses to a story we made up and told

ourselves was written by our genes?"[243] Here she confronts the deep-seated nature of our shared narratives about identity, kin, and survival, which are so ingrained that we may mistake them as naturally occurring. Ultimately, Gumbs and the other artists I have considered all offer the possibility that these essentialist narratives can be denaturalized by giving shape to a sensate, relational body imbued with the capacity to create and habituate alternative ways of living. In my final chapter, I will continue this enquiry into the somatic, examining forms that deploy biological imaginaries to convey the complex bodily expressions of so-called mental illness and to devise new strategies for dealing with alterity that reconfigure deterministic conceptions of embodiment such as the separation of mentality and corporeality.

[243] Gumbs, p. xi.

Enacting Anxiety:
Biological Imaginaries and the Sensory Registers of Mental States

In a recent untitled project, the multimedia artist Erin Kapor explores the sensational nature of anxiety through a series of abstract sculptures and scents. Mounted on wooden beams, her sculptures appear as sponge-like molds and foaming bacteria propagating on the bare structure of a house. These objects are coupled with bottled scents that mimic the chemical byproducts of domesticity, including detergent and other cleaning agents, fragrance, and building materials like flame retardants and plasticizers. By creating scenes of spectacular wastage, isolating synthetic components of the home, and presenting them for the audience's visual and olfactory consideration, Kapor invokes a domestic space that is laced with toxicity and outsized threat. She presents this work as an exploration of loss, anxiety, and "the byproducts of these feelings," thus connecting a contaminated physical interior to the fraught interior of the mind. As the artist states, the bottled scents that accompany the mold sculptures "are my attempt at containing, framing, remembering, fantasizing, and controlling, the lack of which is the crux of anxiety."[244]

Erin Kapor, Untitled Project

[244] Erin Kapor. Interview with Colin Nagy, *Why Is This Interesting*, May 17 2021, no page number. https://whyisthisinteresting.substack.com/p/the-monday-media-diet-with-erin-kapor

At once an attempt to distill hazardous substances and difficult mental states, and a testament to the anxiety-inducing realization that their toxic properties cannot be fully captured or contained, Kapor's work attends to anxiety not as an isolated feeling but as an inundating experience that shapes perception, proprioception, and sensory experience — often in ways that render everyday spaces and objects viscerally off-putting. Specifically, her use of scent to create unease illuminates the physiological connection between olfactory awareness and the biology of anxiety. According to Elizabeth Krusemark and Wen Li, anxiety can entail heightened sensitivity to smell as well as an intensified perception of everyday scents as threatening.[245] This connection between smell perception and the physiology of anxiety illuminates anxiety as an experience that effects the entire sensorium.[246] Bearing these mind-body connections in mind, Kapor's work can be read as a biologically informed account of anxiety in which the cognitive, the visceral, and the olfactory overlap to produce discomfiting bodily responses. Put differently, Kapor presents anxiety as an experience that involves heightened forms of *somatosensory awareness.*

In this chapter, I use the term "somatosensory awareness" to refer to the intensified somatic experiences and sensations that anxiety entails. Firstly, the term emphasizes anxiety as a profoundly somatic process. Despite medical and popular discourses that classify anxiety first and foremost as a mental pathology, the affective components of anxiety including nervousness, apprehension, and fear are also accompanied by tangible states of arousal like sweating, rapid

[245] Elizabeth Krusemark and Wen Li. "Enhanced Olfactory Sensory Perception of Threat in Anxiety: An Event-related fMRI Study." *Chemosensory Perception* 5.1 (2012): 37-45.

[246] I use sensorium to emphasize the body as the locus of sensation, but also to acknowledge that sensorium can function as an umbrella term for intellectual and cognitive processes. "The sensorium is the supposed seat of sensation, the place to which impressions from the outside world are transmitted and perceived. The sensorium also means the whole sensory apparatus of the body. In medicine, "sensorium" is sometimes used as an umbrella term to refer to intellectual and cognitive functions.. See "Altered Sensorium", Medicover Hospitals: https://www.medicoverhospitals.in/symptoms/altered-sensorium#altered-sensorium.

heat beat, and shallow breath, as well as more amorphous somatic complaints like insomnia, restlessness, and pain.[247] Over time, anxiety also carries long-term corporeal effects such as hormonal changes, cardiovascular issues, and respiratory illnesses, all of which can unfold throughout the body even if the subject is not consciously anxious in the moment.[248] These variable effects of anxiety impact an estimated 40 million adults in the United States according to the Anxiety and Depression Association of America,[249] leading psychologist Cheryl Winning Ghinassi to argue that "anxiety disorders constitute the single largest health problem" in the contemporary U.S.[250]

Secondly, I use "somatosensory awareness" to draw attention to the ways in which anxiety changes and reroutes human sensation, or registered bodily responses to stimuli. For those experiencing the psychological and somatic effects of anxiety, sensation can intensify, diminish, or otherwise transform in a short period of time. We witness these altered states of sensation unfolding in experiences like sensory overload (feeling overwhelmed by stimuli) or somatosensory amplification (perceiving regular somatic and visceral processes, like heartbeat or

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[247] For a detailed account of the somatic markers of anxiety, see Alan Gelenberg. "Psychiatric and Somatic Markers of Anxiety: Identification and Pharmacologic Treatment." *Primary Care Companion to the Journal of Clinical Psychiatry* 2.2: 49–54, 2000: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC181205/#:~:text=The%20emotional%20distress%20of%20anxiety,insomnia%2C%20restlessness%2C%20and%20muscle%20aches.

[248] See William Coryell et al, "Effects of Anxiety on the Long-term Course of Depressive Disorders." *The British Journal of Psychiatry* 200.3: 210-215, 2012: https://www-ncbi-nlm-nih-gov.ezproxy.library.wisc.edu/pmc/articles/PMC3290796/; Megan Wenner, "Sympathetic Activation in Chronic Anxiety: Not Just at the "Height" of Stress. Editorial Focus on "Relative Burst Amplitude of Muscle Sympathetic Nerve Activity is an Indicator of Altered Sympathetic Outflow in Chronic Anxiety." *Journal of Neurophysiology* 120.1: 7-8, 2018; Seth Holwerda et al. "Relative Burst Amplitude of Muscle Sympathetic Nerve Activity is an Indicator of Altered Sympathetic Outflow in Chronic Anxiety." *Journal of Neurophysiology* 120.1: 11-22, 2018.

[249] "Facts and Statistics" at the Anxiety and Depression Association of America: https://adaa.org/understanding-anxiety/facts-statistics

[250] Cheryl Winning Ghinassi, *Anxiety*. Westport: Greenwood Publishing Group, 2010, p. 7.

breathing, as aberrant and threatening).[251] Like the somatic complaints noted above, these sensory experiences can function as both a symptom and a cause of anxiety.

Muscle aches, rapid heartbeat, oscillating responses to stimuli, pain: these embodied states materialize anxiety across the somatosensory system. This is the biological entity that receives and responds to stimuli, regulates temperature and the senses, and determines our perception of and movement though space. As the mechanism that structures our interactions with the world but also dictates our awareness of nonvisible processes, the somatosensory system is a potent site within my dissertation's goal of exploring how visceral experiences are rendered culturally discernible. My final chapter traces how anxiety is enacted throughout the body, focusing on contemporary cultural explorations of this condition that perform and elicit somatosensory awareness in order to stage a more corporeal reckoning with mental illness. I am interested in how the physiological ruptures of anxiety come to be collectively understood — from the belly laughs incited by an anxious standup comic to the discomfort induced by performance art or the forms of anxiety relief that are being curated by emergent digital communities. While anxiety unfolds on a deep-seated, individual level, it is also becoming a chronic condition in a world where imminent threats have settled into seemingly ever-present realities including pandemics, climate change, racial violence, and economic inequity. I acknowledge these conditions not to jettison the subjective experience of anxiety, but to emphasize the ways in which individual states of bodily and mental precarity are reflected in the state of the body politic.

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[251] For more on sensory overload, see Jane Lindenmuth et al, "Sensory overload." *AJN: The American Journal of Nursing* 80.08: p. 1456-1458, 1980. For amplification, see Malcolm Lader. "The Nature of Anxiety," *British Journal of Psychiatry*, 121(564), 481-491, 1972. For an overview of somatosensory amplification and its diagnosis, see Morgiane Bridou and Colette Aguerre. "Validity of the French Form of the Somatosensory Amplification Scale in a Non-clinical Sample." *Health Psychology Research* 1.1, 2013.

In tracing the somatosensory aspects of anxiety, I push against both medical and social models of this embodied experience. The medical model of anxiety claims anxiety as a mental illness that is characterized by persistent and debilitating worry. Here the emphasis is squarely on the mind. Apart from "muscle tension", the Diagnostic and Statistical Manual of Mental Disorders offers only emotional and cognitive states as symptoms of anxiety, thus reifying the Cartesian split between body and mind that continues to infuse medical models of illness and disability.[252] As mainstream cultural accounts of anxiety have depathologized the condition, they have also shaped it into a monolith for analyzing aspects of Western life under late capitalism, particularly those experienced by tech-saturated, typically white, college-educated and city-dwelling millennials.[253] In response to the latest DSM definition, for instance, one *New York Times* columnist noted that "clusters of these symptoms probably describe the entire city of New York."[254] This tendency to use anxiety as a shorthand for a particular type of modern malaise elides the confounding bodily realities of the condition. In this way, cultural discussions of anxiety echo the social model of disability in its most orthodox form, in that they reinscribe the notion that disability is produced solely by our surroundings and sidestep material nuance. Challenging both medical and social accounts of anxiety, then, I seek to understand the social, relational, and cultural elements of anxiety in tandem with its biological operations.

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[252] See Table 3.15, "DSM-IV to DSM-5 Generalized Anxiety Disorder Comparison." Substance Abuse and Mental Health Services Administration, June 2016.

[253] In her exploration of burnout, another diffuse term to characterize the mindset of a generation, Anne Helen Petersen writes that "the way the word millennial has typically been deployed—to talk about our high expectations, laziness, and tendency to "destroy" entire industries, like napkins or wedding rings—has been to describe the stereotypical behaviors of a particular subset of the millennial population: one that is almost always middle class, and often white." See Petersen, *Can't Even: How Millennials Became the Burnout Generation*, Boston: Houghton Mifflin Harcourt, 2020, p. xxvi.

[254] Nathan Heller, "The Big Uneasy", *The New York Times*, January 23 2014: https://www.nytimes.com/2014/01/26/books/review/my-age-of-anxiety-by-scott-stossel.html

I begin by proposing a theory of anxiety as a disability that is attuned to biological data and processes, before turning to three case studies that use biological imaginaries to explore distinct somatosensory experiences precipitated by or associated with anxiety. First, I read Jenny Slate's 2019 comedy special *Stage Fright* as an extended articulation of what it feels like to live in a body wracked with anxiety. By examining how Slate – a popular writer, actor and comedian who has enjoyed significant commercial success – cultivates and elicits somatosensory awareness in her work, I offer an example of how biological imaginaries are surfacing in popular culture. I argue that *Stage Fright* illustrates the multiple ways in which anxiety is somatized, thus defying the splitting of mind and body that has limited our understanding not only of anxiety as a condition but of comedy as a popular genre.

Second, I move to a more genre-bending, multimedia consideration of anxiety by exploring an artistic collaboration between writer and artist Hannah Black, textile artist Ebba Fransén Waldhör, and musician Bonaventure. Between 2017-2019, the trio produced a series of art installations and performances that meditated on a fictional superhero named Anxietina, which I refer to as the *Anxietina* series. Paying close attention to the sensory and material aspects of the collaboration – including Black's description of Anxietina's superpower as a form of "superconnection" to other anxious minds, and Waldhör's imposing sets and props – I argue that the *Anxietina* series gives an account of anxiety as both a felt, material experience that is singular in nature, and a relational condition that can transform our relationship with other people and our surroundings. Here I seek to build on political-relational models of disability, while highlighting the utility of somatosensory awareness for crip methods.

Finally, I shift from thinking about how cultural forms portray anxiety to how they alleviate it by analyzing the emergent multimedia genre and subculture of Autonomous Sensory

Meridian Response (ASMR). ASMR refers to a diffuse collection of texts that work to trigger pleasant sensations in their audiences, from YouTube videos to interactive performances and motion graphics. In this section I focus on the experimental theatre troupe Whisperlodge, who use the formal techniques of ASMR to activate sensory responses (including anxiety relief) in their audiences. As my final case study, ASMR offers an intriguing example of how biological imaginaries are being created and disseminated in intimate digital and in-person settings, where creators actively aim to augment their audiences' bodily processes by inducing specific sensations. Taken together, my case studies forge connections between body and mind by giving shape to the somatosensory indications of anxiety, critiquing normative standards of embodiment, and engendering forms of sociality based on the recognition of an anxious historical moment.

Towards A Biological Model of Anxiety

Anxiety is the debilitating anticipation, heightened perception, or intense awareness of threat. The word anxiety comes from the Latin, *anxius*, meaning "solicitous, uneasy, troubled in mind," while the word anxious can be traced to the Proto-Indo-European root *angh-* meaning "tight, painfully constricted, painful."[255] The linguistic associations between hindered mind and constrained body are realized in the lived experience of anxiety, and have been explored in the West since ancient times. Cicero analogized the corruption of the blood to the confusion of the mind,[256] while Galen's treatise on the condition he called lypē linked mental distress to humoral

[255] See *angh, Online Etymology Dictionary: https://www.etymonline.com/word/*angh-#etymonline_v_52789.

[256] Marcus Tullius Cicero, *Cicero's Tusculan Disputations*. Trans. C.D Yonge. New York: Harper & Brothers Publishers, 1877. https://www.gutenberg.org/files/14988/14988-h/14988-h.htm.

imbalances.[257] Over time, discussions of anxiety as a conjoined mental and bodily experience were sidelined in favor of medical, psychological, and psychiatric discourses that located anxiety predominately in the mind. Continuing in the tradition of humoral theory, Robert Burton's *Anatomy of Melancholy* (1621) examined the titular affliction as both a somatic and psychic experience. However, Burton classified anxiety as a symptom of the melancholic *mind* alongside fear, sadness, suspicion, and discontent.[258]

Through the seventeenth and eighteenth centuries, anxiety was mostly used as an umbrella term for fearful states of mind. In the nineteenth century, it cropped up as a dimension of several newly-named afflictions like Boissier de Sauvage's panophobia (panic, terror), Henri Dagonet's lypemanie (depression, psychosis),[259] and George Beard's neurasthenia (emotional disturbance, depletion of the nervous system).[260] It was Sigmund Freud who plucked anxiety neurosis from the more general complaint of neurasthenia, identifying it initially as a byproduct of sexual tension and later as a debilitating anticipation of fear.[261] First published in 1952, the DSM used many of Freud's terms for anxiety. Its third edition (1980) outlined the diagnostic criteria for a range of anxiety disorders including generalized anxiety disorder, panic disorder,

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[257] Susan Mattern. "Galen's Anxious Patients: Lypē as Anxiety Disorder" in *Homo Patiens: Approaches to the Patient in the Ancient World*. Leiden: Brill, 2016, p. 201-223.

[258] Robert Burton, *The Anatomy of Melancholy*. Accessed through Project Gutenberg: https://www.gutenberg.org/cache/epub/10800/pg10800-images.html.

[259] For a history of anxiety disorders in the West, see Marc-Antoine Crocq. "A History of Anxiety: From Hippocrates to DSM." *Dialogues in Clinical Neuroscience* 17.3, 2015 and "The history of generalized anxiety disorder as a diagnostic category." *Dialogues in Clinical Neuroscience* 19.2, 2017.

[260] See George Beard, "Neurasthenia, or Nervous Exhaustion." *The Boston Medical and Surgical Journal* 80.13, p. 217-221, 1869 and "A Practical Treatise on Nervous Exhaustion,(Neurasthenia): Its Symptoms, Nature, Sequences, Treatment." *American Journal of Psychiatry* 36.4, 1880.

[261] For a brief overview of Freud's theories of anxiety, see "What Did Freud Say About Anxiety?" at the Freud Museum, London: https://www.freud.org.uk/education/resources/what-did-freud-say-about-anxiety/.

and phobias. These remain in the text's current edition, the DSM V, which exemplifies the medical model of anxiety as it currently circulates.

The DSM characterizes anxiety as a mental pathology, diagnosing it through cognitive and emotional symptoms including restlessness, difficulty concentrating, fatigue, sleeplessness, worry, uncontrolled thoughts, irritability, and distress.[262] While noting that "the anxiety, worry, or physical symptoms cause clinically significant distress or impairment," muscle tension is the only "physical" feature of anxiety listed in the DSM and the nature of the "impairment" is unclear. This failure to recognize anxiety in all its psychobiological complexity can, in turn, limit clinical understandings of the disease and negatively impact care. Alan Gelenberg writes that the somatic symptoms of anxiety – from the disturbing immediate sensations of tachycardia and hyperventilation to long term conditions like cardiovascular issues and hormonal changes – can often be missed or misunderstood by doctors when they are approached as purely physical ailments: "clinicians may falsely attribute the somatic complaints [of anxiety] to an underlying [physical] medical condition or, when diagnostic tests reveal no organic cause for the symptoms, may fail to look for a psychiatric cause."[263] A small study of people with anxiety who sought medical management found that anxiety can be easily overlooked in clinal settings because "co-existing depression and [physical] health issues can mask anxiety symptoms", as well as the medical subjects' belief that "clinician's prioritize physical over mental health."[264] These

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[262] See Table 3.15, "DSM-IV to DSM-5 Generalized Anxiety Disorder Comparison." Substance Abuse and Mental Health Services Administration, June 2016: https://www-ncbi-nlm-nih-gov.ezproxy.library.wisc.edu/books/NBK519704/table/ch3.t15/

[263] Gelenberg, no page number.

[264] M.C. Barnes et al, "Prioritizing Physical and Psychological Symptoms: What Are The Barriers and Facilitators to the Discussion of Anxiety in the Primary Care Consultation? *BMC Family Practice* 2019: https://doi.org/10.1186/s12875-019-0996-6, no page number. For more on the perception that doctors are more concerned with physical than mental health, see A Machin et al, "Improving Recognition of Anxiety and

oversights of anxiety's diffuse presentations reveal the tendency to reinforce mind-body dualisms in clinical contexts, indicating a pressing need to account more fully for the condition's somatosensory registers.[265]

In referencing these medical scientific reappraisals of anxiety and its treatment, I seek not to privilege this discipline but to decouple biological data and insight from medicalizing discourses that construct anxiety as mental affliction, reify the mind-body binary, and pathologize medical subjects. Information about how anxiety works biologically, and about how clinicians respond (or fail to respond) to this data, are not to be jettisoned but can in fact help us to pin down the ways in which dominant medical discourses of mental illness tend to jettison the body. For instance, it is notable that the DSM lists somatoform disorder, or the experience of diffuse somatic symptoms with no apparent origin, as its own category of illness. Yet the high comorbidities of anxiety and somatization (which also frequently occur with depression) suggest that the clinical lines between psychological and physiological debilities are arbitrary. As one psychiatric study notes, "there is little evidence that depression, anxiety and somatization are separated by natural boundaries." However, it is easier to study the relation of mental illnesses to each other than to incorporate complex somatic data: "theoretical models…were developed to describe the overlap of anxiety and depression, whereas the relationship between somatization

Depression in Rheumatoid Arthritis: A Qualitative Study in a Community Clinic. *British Journal of Medical Practice*. 2017. https://doi.org/10.3399/bjgp17X691877.

[265] For more on somatization disorder, see Zbigniew Jerzy Lipowski, "Somatization: The Concept and its Clinical Application." *American Journal of Psychiatry* 145.11, 1988: https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.469.4798&rep=rep1&type=pdf and Bernd Löwe et al. "Depression, Anxiety and Somatization in Primary Care: Syndrome Overlap and Functional Impairment." *General Hospital Psychiatry* 30.3, 2008.

and [mental illness] is less well studied."[266] While my focus here is on the somatic aspects of anxiety, rather than the relationship among so-called somatoform disorders and mental disorders, the porous boundaries between these experiences reveals the corporeal dimensions of anxiety from a new angle.

Attending to biological data can also lead to more vivid and visceral accounts of anxiety that not only challenge medical models but enliven social models of mental illness. The social model reads anxiety as a product of our surroundings, a symptom and signifier of the stressful conditions of modern life. A 2017 *New York Times* article distills this viewpoint, acknowledging anxiety as a medical condition before attributing its acceleration to technology-fueled, information-overloaded modernity:

> Anxiety is starting to seem like a sociological condition…a shared cultural experience that feeds on alarmist CNN graphics and metastasizes through social media. As depression was to the 1990s — summoned forth by Kurt Cobain, "Listening to Prozac," Seattle fog and Temple of the Dog dirges on MTV, viewed from under a flannel blanket — so it seems we have entered a new Age of Anxiety. Monitoring our heart rates. Swiping ceaselessly at our iPhones. Filling meditation studios in an effort to calm our racing thoughts.[267]

Here anxiety is approached as a modern-day epidemic, framed in universalizing and therefore limited terms. Against an archive of 1990's depression, the author presents anxiety not through the lens of specific cultural objects and figures but through much more amorphous texts: mass media, new technologies, and the stress relief industry. While these major cultural arenas might offer alternative avenues for considering anxiety outside pathologizing narratives, their sprawling nature characterizes the condition not as a specific material and emotional experience

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[266] Löwe, Bernd, et al. "Depression, Anxiety and Somatization in Primary Care: Syndrome Overlap and Functional Impairment." *General Hospital Psychiatry*, 30.3, 2008, p. 192. https://doi.org/10.1016/j.genhosppsych.2008.01.001

[267] Alex Williams, "Prozac Nation is Now the United States of Xanax." *The New York Times*, June 10, 2017: https://www.nytimes.com/2017/06/10/style/anxiety-is-the-new-depression-xanax.html

but as a diffuse vibe that effects a particular subsection of professionals with a disposable income. Recent memoirs of anxiety have acknowledged, though not necessarily interrogated, this broad attribution of anxiety to a class of city-dwelling, "high-functioning" professionals who are often white and college-educated. Although less pervasive than the depression memoirs that followed Peter Kramer's 1993 exploration of depression and treatment *Listening to Prozac*, books like Daniel Smith's *Monkey Mind* (2012), Scott Stossel's *My Age of Anxiety* (2014), Kat Kinsman's *Hi, Anxiety* (2016) and Andrea Peterson's *On Edge* (2017) all address anxiety through a combination of personal experience and cultural commentary. These memoirs tend to recount the author's experience of anxiety, historicize the condition, consult a range of "experts" (usually doctors), and document overcoming or management strategies.

While personal narratives can be useful for crystallizing the lived realities of anxiety, these texts also tend to reproduce a diagnostic framework by searching for an origin point for their plight or fetishizing cure. Smith, for instance, launches an investigation into "how my mother laid the foundation for this intractable problem of mine," echoing a Freudian model of neurosis.[268] Others consider anxiety as an asset to creativity (Stossel), or professional efficiency (Peterson), reinforcing a neoliberal model of anxiety as a lifehack that has surfaced throughout wellness and productivity media.[269]

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[268] Scott Stossel, *My Age of Anxiety: Fear, Hope, Dread, and the Search for Peace of Mind.* New York: Random House, 2014, p. 23.

[269] See, for example Sam Makoul's "The Lifehack That Turns Anxiety Into A Powerful 6th Sense", *A Higher Branch Podcast*, October 2020: https://podcasts.apple.com/is/podcast/the-lifehack-that-turns-anxiety-into-a-powerful/id1463052912?i=1000539139024; Ellen Vora's interview with GOOP, "What Our Anxiety Is Telling Us," August 13, 2019: https://goop.com/the-goop-podcast/what-our-anxiety-is-telling-us/; Healthline's strangely-titled article "5 Hacks to Help Your Anxiety Go from Debilitating to High-Functioning," https://www.healthline.com/health/anxiety-hacks-to-try.

Against these homogenous sociocultural accounts of anxiety, as well as medical models of mental pathology, I understand anxiety as a disability that retains complex social and psychobiological elements. While I acknowledge anxiety's collective, sprawling nature – one that is only intensifying in our present moment of overlapping crises – I seek more specific and vivid representations around what anxiety feels like and how it behaves in and impacts the body. These representations are grounded in visceral responses, which are experienced individually but can be understood collectively.

In pursuit of a biologically informed model of anxiety, I contemplate art forms that stage a visceral reckoning with adverse mental states. I consider texts that craft non-diagnostic reckonings with anxiety by experimenting with aesthetic and narrative form to illuminate the multiple ways in which anxiety is enacted throughout the body. From their evocation of somatosensory processes to their reckoning with the mind-body connection, these texts offer accounts of the anxious bodymind in motion that defies a purely medical or purely social framework. In addition, I consider how these forms seek to activate embodied responses in their audience. By depicting and eliciting somatosensory awareness, my case studies invent biological imaginaries to overturn ableist fantasies of bodily autonomy and to challenge limited theories of embodiment and so-called mental illness.

Although not all the artists in this chapter explicitly identify as disabled, their work draws attention to the ways in which anxiety and its attendant effects can alter our perceptions of normality including every-day life, relationships, and embodied experience in ways that perform and incite a heightened awareness of bodily and mental difference. In this way they echo Alison Kafer's understanding of disability as an open category that fundamentally challenges traditional

categories and conceptions of the normal.[270] Challenging disability studies to expand the parameters of who "counts" as disabled, Kafer argues that forging new disabled communities involves "accounting for those who do 'have' illnesses or impairments, and who might be recognized by others as part of this 'disabled we,' but who do not recognize themselves as such…those folks with hearing impairments, or low vision, or 'bum knees', or diabetes…"[271] I fold anxiety, which has not yet received sustained attention in critical disability studies, into Kafer's expansion of the field's objects.

Given disability studies' investment in dispelling mind-body dualisms, subverting the norms of health, and identifying the intersection of different debilities; it is somewhat surprising that anxiety remains on its fringes. In her influential work on the bodymind, Margaret Price writes of the need to theorize the physiological and sensory elements of mental illnesses together. These include " 'physical' illnesses accompanied by mental effects (for example, the 'brain fog' that attends many autoimmune diseases, chronic pain, and chronic fatigue). And…we should keep in mind its potential congruence with sensory and other kinds of disabilities."[272] Taking my cue from Price and other scholars who are incorporating the physical body into discussions of mental illness, I define anxiety as a disability.[273] In so doing I seek to bring critical understandings of the

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[270] According to Alison Kafer, the idea of collective affinity makes disability an open and expandable category, capable of encompassing seemingly disparate states including "everyone from people with learning disabilities to those with chronic illness, from people with mobility impairments to those with HIV/AIDS, from people with sensory impairments to those with mental illness." Alison Kafer, *Feminist, Queer, Crip.* Bloomington: Indiana University Press, 2013, p. 13.

[271] Ibid, p. 14-15

[272] Margaret Price, *Mad at School: Rhetorics of Mental Disability and Academic Life.* Ann Arbor: University of Michigan Press, 2011, p. 19.

[273] See, for instance, Alison Patsavas, "Recovering a Cripistemology of Pain: Leaky Bodies, Connective Tissue, and Feeling Discourse." *Journal of Literary & Cultural Disability Studies, 8*(2), p.203-218, 2014 and Susan Wendell, "Unhealthy disabled: Treating Chronic Illnesses as Disabilities," *Hypatia* 16, No. 4 (2001): 17-33.

bodymind to bear on a condition that encompasses emotion, sensation, cognition, and physiology. The sheer variability of anxiety's symptoms further reveals potential lines of affinity between peoples experiencing its different manifestations: from panic attacks to heart diseases, agoraphobia to brain fog. I draw on biological data about these different manifestations of anxiety not to place anxiety in a solely medicalized context, but to trace its impact on the bodymind in all its psychobiological complexity. In what follows, I read Jenny Slate's comedy special *Stage Fright* as a representation of that complexity, and a powerful affirmation of mind-body connections rendered through exuberant comedic performance.

Stage Fright and the Somatization of Anxiety

Released as a Netflix special in 2019, Jenny Slate's *Stage Fright* blends standup comedy with family interviews and home movies style footage. The documentary portions of the special delve into Slate's psychic and personal history as she explores her childhood home, mines her grandmother's closet for memories, and chats with her family. These segments provide explication for some of her standup, which revolves around nominally everyday concerns like family, work, dating, body image, and getting high. She mediates these themes though an array of vocal disruptions including screams, chirps, moans, and gasps, as well as through her distinctive physical comedy involving shaking, wriggling, vomiting, and upending herself. For instance, one segment describing her haunted family home is accompanied by a series of contorted impressions of ghosts and marked by distinctively pitched yelps and screams; another bit about being stoned at the Guggenheim sees her wildly hula-hooping her body to evoke both the museum's spiraling architecture and the discombobulating experience of being stoned in

public. As these vignettes suggest, Slate often defamiliarizes daily life by drawing attention to the internal bodily activities and sensations that jostle and rage below the surface. Barre class becomes a process of "sculpt[ing] your clit into an ancient arrowhead"; the performance space itself becomes a room "filled with skeletons covered in slippery muscles and blood, enrobed in skin." In these moments, the strangeness of embodied experience is at the heart of Slate's performance.

Stage Fright also poses the question of how to communicate, and cope with, intense or unusual somatic experiences. In a comparatively somber conversation with her father in the documentary portion of the special, Slate explains her desire to reconcile her "external" self to fluctuating internal worlds through comedy:

> I would like to do some material about just like, what it looks like to try to act normally when you're just not normal, like when you're just screaming inside yourself all the time…when you're just trying to pick out a shirt or look at a menu…and inside you're like I EAT SHIT! I eat shit and live in garbage!

In the wake of a period of self-described "crazy anxiety" and emotional upheaval, Slate's comedy ultimately declines to "act normally." Instead, she reworks bodily and emotional norms with comic exaggeration to convey her experiences of fear and anxiety. As a performer, she is adept at conveying these disconcerting experiences in non-verbal forms. From the moment she appears onstage, she Slate charged with offbeat energy: bouncing and twisting on her toes, gyrating to music, wiggling her limbs, gulping with laughter, and gasping for breath. Her early jokes characterize this energy as lovably nervous: "it's so frightening to be so out of breath…what if right now was when I got asthma…I feel like a turtle that got roller skates and just realized things can be fast, I'm just like bwaaaaaaa!" Over the course of the performance, Slate continues to exhibit that nervous energy: jumping, shimmying, miming puking and jerking

off, and continually tripping herself up as she recounts scenarios in which she feels out of place, fearful, or startled. Her monologue is punctured by similarly excitable vocal patterns including guttural breathing, screeching, retching, and chirping. These nonverbal aspects of the performance verge from the sensual to the silly, but are typically used to accompany descriptions of discomfort. We witness this in Slate's recreation of meeting new people through a physical pantomime of stumbling and vomiting all over the floor; or her performance of waking her parents up at night as an anxious child through a sequence of screams, grunts, and evocations of bodies flying across the room. In these ways, she uses her physicality to suggest an array of outsize responses to so-called everyday scenarios.

Unlike recent comedic performances that deal explicitly with illness and disability - such as Gary Gulman's meditation on depression *The Great Depresh,* Hannah Gadsby's reflection on autism *Douglass*, or Sara Benincasa's work on agoraphobia and panic disorders - anxiety is not explicitly at the heart of *Stage Fright*'s narrative. Rather it looms over, and is imminent in, the scenarios Slate ruminates on. In a short interview segment filmed on the day of the show, she describes the titular affliction in the moment: "I get such bad stage fright. And it's not fake humility, I've tried to get hypnotized for it, it ruins my day, it fucks my body up, I get like crazy diarrhea…. I don't feel good right now." Her statement provides a frame for reading *Stage Fright* as an exploration of fear and anxiety – one which asserts the "fucking up" of the physical body as well as the mind in moments of emotional unrest. Beyond this moment, Slate's vocal enactments and physical performances of living in a body riddled with anxiety cement the special as a distinct meditation on that condition in all its somatic multiplicity. I read these formal aspects of *Stage Fright* as aspects of its biological imaginary, in which Slate mostly uses physical and vocal comedy to evoke the biological ruptures of anxiety. In other words, *Stage*

Fright demonstrates the multiple ways in which anxiety is somatized, or physically produced throughout the body as biological processes and sensations.

Through her comic narration of quotidian events as inherently threatening and her extravagant physical and guttural responses to these events, Slate places intense bodily activity at the center of her comedic narrative. In light of her identification with anxiety, these aspects of her performance can be read as evincing states of autonomic arousal that illuminate the complex somatic expressions of anxiety. Popularly known as the fight or flight response, autonomic arousal occurs when the sympathetic nervous system (SNS) responds to threat. These responses can involve elevated heart rate, shallow breathing, sweating, and increased adrenaline production. While fight or flight is a routine function of the body, people with chronic anxiety are more likely to experience elevated sympathetic nerve activity in response to stress or the anticipation of stress.[274] This temporary elevation can lead to continuing dysregulation of the autonomic nervous system: from yet more stress to digestive disturbances, irregular heart rate, and altered blood pressure. [275] Such states of autonomic arousal index the intricate bodily executions of anxiety as they unfold over time, but also draw attention to the hazy lines between cause and effect for those who experience anxiety (for instance, thumping heart and upset stomach are symptoms of anxiety that can also cause further anxiety and circulate anxiety throughout the body, leading to physiological changes over time like heart disease and irritable bowel syndrome).[276]

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[274] See Wenner, no page number and Holwerda, no page number.

[275] Melanie Klarer et al. "Gut Vagal Afferents Differentially Modulate Innate Anxiety and Learned Dear." *Journal of Neuroscience* 34.21 (2014): 7067-7076. See also J. P. Ginsberg, "Dysregulation of Autonomic Cardiac Control by Traumatic Stress and Anxiety." *Frontiers in Psychology* 7 (2016): 945.

[276] See James A Blumenthal and Patrick J. Smith. "Risk Factors: Anxiety and Risk of Cardiac Events." *Cardiology* 7.11 (2010): 606 and Juanda Leo Hartono et al. "Anxiety and Depression in Various

This biological intricacy highlights the futility of attempting to distinguish between physicality and mentality, cause and effect, when it comes to anxiety. Autonomic arousal reveals the profoundly reactive nature of the anxious bodymind, where anxiety is actualized through a network of mental states and physiological reactions that cannot be reduced to a pathology of the mind or a product of our surroundings alone. Slate's comedy artfully weaves around these established understandings of anxiety, translating the reactivity that often goes unseen into embodied performance. By dramatizing herself as a goofy misfit whose extreme embodied responses to life prevent her from "acting normally", Slate provides comic explication of a densely reactive bodymind in which the boundaries between cause and effect, symptom and condition, are jettisoned in favor of a riotous account of physiological-psychic life.

It is important to note, at this point, that disability scholars have critiqued heightened somatic performances of mental illness as endorsing damaging visual histories. Writing at the intersection of crip and performance theory, Carrie Sandahl and Philip Auslander note that disabled and sick performers have long cultivated "an alternative aesthetics based on somatic experience."[277] But, as Petra Kuppers argues, "our everyday, popular knowledge about mental health is largely dominated by visual representations of twitching bodies, holding on to the traces of hysteria's catalog of symptoms……[in these depictions] this loss of control is made evident and iconic on the body's surface: the body becomes the readable symptom."[278] With her respiratory and alimentary charades, her outsize recounting of fear responses, and her bodily

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Functional Gastrointestinal Disorders: Do Differences Exist?." *Journal of Digestive Diseases* 13.5 (2012): 252-257.

[277] Carrie Sandahl, and Philip Auslander. Introduction to *Bodies in Commotion: Disability and Performance.* Ann Arbor: University of Michigan Press, 2009, p.8.

[278] Petra Kuppers. "Bodies, Hysteria, Pain: Staging the Invisible" in Sandahl and Auslander, p. 152.

contortions that dramatize the thought patterns of social anxiety, stage fright, and night terrors, Slate may appear to reproduce a traditional view of the mentally ill subject in which the unruly body becomes an expression of disorderly states of mind. However, I maintain that reading her performance in tandem with biological data on autonomic arousal and reactivity can reframe our understanding of the relationship between embodiment and mental illness without pathologizing the physicality of the performer. Autonomic arousal, for instance, shows that our physical bodies are not merely vehicles for performing minded states but are intertwined with them. In other words, physiological and cognitive networks are inextricably linked when it comes to the production and experience of anxiety. By performatively drawing together the mental and the anatomical, Slate concocts a playful biological imaginary that implicitly subverts the medical gaze. The body, in *Stage Fright,* is not a passive entity that inadvertently surrenders to the demons of the mind. Instead Slate enlivens the role of the material body in a playful account of anxiety.

Slate's depiction of anxiety as simultaneously cognitive and corporeal can also be understood in relation to feminist disability scholars' theory of the bodymind, which acknowledge the mutual constitution of body and mind and seek to rectify the elision of mental illness from early works in disability studies. Mariam Corker writes that the initial privileging of physical disability in the field not only omits materiality from the discipline, but rhetorically prioritizes distanced or "cerebral" forms of criticism over embodied knowledges like visceral instinct or sensation.[279] This critical division of the rational mind from the irrational body finds a

[279] Corker argues that disability theory has tended to elide the disabled people's sensibility, defined as encompassing our subjective and collective response to the world including emotions, values, aesthetic, and politics. For Corker, sensation is the material aspect of sensibility, indicating the ways in which our responses to the world register on an embodied level. See Mariam Corker, "Sensing Disability." *Hypatia* 16.4 (2001): 34-52.

striking parallel in comedy studies. For instance, feminist comedy scholars Cynthia Willet and Julia Willet's characterize humor studies as taking a "cerebral approach" that is rooted in Enlightenment models of laughter. At this time, laughter was thought to temporarily release illogical urges and emotions from the body, thus framing visceral response as temporary deviations from the rational norm. Willet and Willet argue that this cerebral approach continues in contemporary theories of humor, which tend to identify "laughter's source in the perception of incongruities – that is, in jack-in-the-box violation of mental patterns."[280] In other word, the cathartic properties of laughter are thought to stem from the temporary ceding of the mind to our irrational or base bodily urges. Against this model of laughter, Willet and Willet theorize laughter as a moment in which mind and body work conterminously to process both gut feelings and minded states.[281]

In its elaborate staging of a reactive bodymind that in turn elicits the embodied reaction of laughter, *Stage Fright* rejects what Dana Luciano has called "the form of rationalism that dismisses emotion and sensation as legitimate sources of knowledge."[282] In one vignette, for instance, Slate gives shape to her own neurological landscape in surreal animalistic terms, setting the scene inside her own brain:

> I know my brain is supposed to be like mmblllurrrrrr [makes rounded, bouncy movements with her hands and torso], like have mass and volume. My brain is more like a crepe that has been rolled by someone who isn't French and isn't committed to the cuisine. And then inside of the crepe is like the one naked wiggling worm that's, like, getting really tired and doesn't know how it ended up in that bad sleeping bag.

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[280] Cynthia Willett and Julie Willett. *Uproarious: How Feminists and Other Subversive Comics Speak Truth*. Minneapolis: University of Minnesota Press, 2019, p. 5.

[281] Ibid, 1-21.

[282] Luciano, Dana. Interview with Cécile Roudeau. *Transatlantica, Revue D'études Aaméricaines/American Studies Journal* 1 (2015), no page number.

This absurd personification of Slate's brain as an exhausted wriggling worm landed in an inhospitable environment combines whimsy and threat to propose an irreverent understanding of internal worlds. The worm recalls a range of critters Slate uses as personas; from a turtle going too fast on its roller skates, to a nervous seashell hang-gliding on a Dorito. Combining the cerebral and the goofy to characterize her own limbic system as a worm wrapped in a flaccid pancake, Slate elicits a giggle from the audience that blends not only her own cognitive and corporeal registers but invites the embodied responses of laughter from the audience.[283] When read on a sensory level – not only through Slate's aberrant physical comedy of respiratory disturbance, alimentary exuberance, nonverbal emotional intensity and outsize reactions, but through the belly laughs and gasps she elicits – *Stage Fright* emerges as a performance in which the cerebral and the carnal actively impinge upon each other. For Slate, this impingement is the source of both pain and humor. In her conversation with her father, for instance, she narrates the intrusion of her internal monologues intrude onto everyday life ("you're just trying to pick out a shirt or look at a menu…and inside you're like I EAT SHIT!") by linking the psychological to the visceral, equating the emotional wasting of anxiety with the unnatural processing of literal bodily waste. Mining these connections for both humor and self-awareness, Slate depicts anxiety at the nexus of the mental, the physiological, and the sensory that comedy as a genre also engages.

By reading *Stage Fright* through the lens of biological data on anxiety and somatics, I have intended to elucidate complex bodily registers that have been sidelined in both medical and social models of anxiety. In my second example I turn to an experimental account of anxiety that has both biological and relational dimensions. I contemplate Hannah Black, Ebba Fransén

[283] Ibid, no page number.

Waldhör, and Bonaventure's multimedia consideration of anxiety, focusing on the material dimensions of both the *Anxietina* series as performance – particularly Waldhör's sets – and anxiety as lived reality. As with *Stage Fright*, this work helps to clarify the utility of biological imaginaries for exploring and depicting mental modes. Where Slate uses a biological imaginary in a popular format to present an autobiographical comedic narrative, this collaborative multimedia project accounts for the effects of anxiety on individual and aggregate bodies without losing sight of corporeal specificities.

Anxietina and the Political-Relational Nature of Anxiety

The lights dim on a spectral set, glinting in pools filled with inky liquid and etched into the carpeted floor. A thin flag ripples behind a DJ booth, its monochromatic letters revealing the word "ANXIETINA." As the DJ, Bonaventura, commences her thumping set, the artist and writer Hannah Black strides onstage and performs a fast-paced and fretful monologue. Her speech is only graspable in fragments of emergency: things are bad, "a dark ocean" is approaching, she is "late to save the world." One reviewer noted that Black's speech is effectively drowned out by the music, resulting in a "concatenation of lost words [that) linger in the air;"[284] another characterized it as "a stream-of-consciousness outpouring."[285] As Black veers from quotidian subjects to apocalyptic maxims, portions of her monologue are laser projected onto the walls and watery floor in reverse while strobe lights ricochet through the space and the music reaches urgent heights.

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[284] Fisun Güner, "Transitional Subjects: Hannah Black & Bonaventure." *The Quietus,* April 21 2018: https://thequietus.com/articles/24436-hannah-black-bonaventure-centre-d-art-contemporain-geneva-review.

[285] Alex Greenberger, "Role Play: At MoMA PS1, Hannah Black Alights as Artist and Heroine," *Art News,* April 14 2017: https://www.artnews.com/art-news/reviews/at-moma-ps1-hannah-black-alights-as-artist-and-heroine-8124/.

Hannah Black, Ebba Fransén Waldhör, and Bonaventura, *Or, Life, Or*

Combined with Bonaventura's agitated soundtrack and designer Ebba Fransén Waldhör's eerie set, Black's performance draws us into an anxious mind: a landscape of opacity, intensity, and looming threat. Titled *Or, Life, Or* and showcased at MoMa PS1 in 2017, it is one in a series of collaborative works devised and showcased by the trio between 2017-2019. Each iteration of the project included an immersive performance combining monologues, music, and staging, which were sometimes accompanied by exhibitions displaying portions of Black's monologue alongside Waldhör's fabric art and desolate sets. While the components of the presentation varied, each iteration of the performance was devised around a fictional superhero known as Anxietina: a character who lives an ordinary life by day but is called to confront her own and other people's deepest anxieties by night. As an artists' statement elaborates:

> By day Anxietina is like anyone – working for money, caring for self and others, difficult circumstances, friends, social media, bank account, housework, groceries…but at night and/or in moments of great danger she is transformed by the power of anxiety into ANXIETINA, a force for simultaneous good and evil…she uses her powers…to fight fascism through private secular prayer and to, in the privacy of her own mind, do battle with the demons of capitalism and their endless tendrils. She is superconnected in her superheroic

> mode to the lost voices of the ancestors who want revenge…and to the lost voices of the future.[286]

In this description, Anxietina's daily activities – work, finances, domestic tasks – are lived through the frame of personal and collective anxieties. As night falls or unspecified dangers encroach, the recesses of her mind become her battleground, a site for confronting inner demons and outer forces that imperil her contemporaries, ancestors, and generations to come. The nebulous but seemingly ubiquitous nature of these dangers may appear, at first, to reproduce a sweeping picture of anxiety as a social phenomenon that is both everywhere and nowhere. With a main character who allegorizes "the pervasive anxiety of the everyday", The *Anxietina* series certainly explores anxiety as a collective concern.[287] But it is also a multimedia experiment that engages anxiety as a felt, material condition that is not universal, but has *relational* elements.

I draw the concept of a relational model of anxiety from Kafer's political-relational model of disability. This acknowledges the ways in which debility is "experienced in and through relationships" while keeping material experiences in play.[288] Relational models of disability contest both the individualized medical model of managing disability, and the assumption that pain or alterity occur in isolation. This offers a useful frame for understanding the *Anxietina* series as a collaborative artistic project which engages anxiety as an experience that effects our relationship to our bodies, our surroundings, and other people. To unpack this relational model of anxiety, I here focus on the sensory and material aspects of the series. I first delve into the artists'

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[286] Hannah Black and Bonaventure, "ANXIETINA: A performance by Hannah Black and Bonaventure." Institute of Contemporary Arts London, 27 July 2016: https://archive.ica.art/whats-on/anxietina-performance-hannah-black-and-bonaventure/.

[287] Hannah Black, Bonaventure and Ebba Fransén Waldhör. "ANXIETINA", Centre d'Art Contemporain Genève, 2018: https://centre.ch/en/exhibitions/hannah-black-bonaventure-ebba-fransen-waldhor-anxietina/.

[288] Kafer, p. 8.

use of nonrealist tropes to dramatize the sensory facets of anxiety, before turning to Waldhör's sets as giving material shape to anxiety as a relational experience.

With its formal slipperiness, its bending of temporal and spatial boundaries, and its creation of haunting apocalyptic environments, the *Anxietina* series uses a range of nonrealist tropes to amplify the profoundly disorientating nature of anxiety in ways that exceed realist narratives — which, as I have argued, often turn on a search for the condition's origin or cure. Most notably, the series repurposes and subverts the archetype of the superhero to spectacularize the lived realities of anxiety. As Black's performative persona, Anxietina is a contradictory superhero who embodies what Ramzi Fawaz calls "radical difference." Rather than defending the status quo, Fawaz writes that the radically different superhero enables marginalized experiences – here encompassing not only mental illness, but Black's position as a queer Black British woman of Jewish and Jamaican descent – "to inhabit the space of superheroic power."[289] Given that her power manifests as hyper-alertness to her own and others' anxieties, Anxietina's space of superheroic power is one of ambiguity that is filled with both potential and menace. As she "singlehandedly runs the call center directly connected to citizens of the city or of nowhere who call her into being in moments of intensity," Anxietina's "superconnection" reads like a special state of attunement with other anxious beings but also like sensory overload and relentless cognitive labor.[290]

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[289] Ramzi Fawaz, *The New Mutants*. New York: New York University Press, 2016, p. 2. For a discussion of how Black articulates her art and identity, see Hannah Black, interview with Chris Randle, *Hazlitt* August 23, 2016: https://hazlitt.net/feature/i-feel-everything-shouldnt-exist-interview-hannah-black.

[290] Hannah Black, Ebba Fransén Waldhör, and Bonaventure, *Or, Life, Or,* April 9, 2017. Presented at MoMA PS1 as part of VW Sunday Sessions 2016-2017. Access to image and recordings provided by MoMA PS1, September 19 2021.

As an ambivalent superpower, superconnection dramatizes the affectively and sensorially overwhelming nature of anxiety, in which the bodymind can become rapidly encumbered with or differently attuned to different stimuli. One of the most well-known examples of this is sensory overload, in which the overstimulation of the senses can lead to distress. While sensory overload generally denotes an altered relation to external stimuli, another experience known as somatosensory amplification occurs when an individual experiences their own bodily sensations with heightened intensity and distress. These experiences can be sensory (hyper-awareness of smell, sensitivity to air quality) and somatic (intense awareness of heartbeat, breathing, and other bodily activities).[291]

Sensory overload and somatosensory amplification reveal anxiety's enactment throughout the body, as well as demonstrating how the condition engenders an altered relationship to both our surroundings and our internal, "routine" bodily processes. I read Anxietina's superconnection (her ability to tap into the deepest recesses of the anxious mind) as a spectacular engagement of these altered relationships. Anxietina alone has the power to access a web of endless possible worries in addition to her own, which appear to electrify her lived experience and allow her to sense where and when emergency is occurring. Put simply, and to quote Waldhör, "anxiety is Anxietina's superpower."[292] But what makes Anxietina's anxiety – and her superconnection to other people's anxieties - super? And how can we read superconnection as a productive form of sociality? To answer this question, I focus on Waldhör's sets for the *Anxietina* series.

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[291] For more on the relationship between somatosensory amplification and anxiety, see Ferenc Köteles and Bettina K. Doering. "The Many Faces of Somatosensory Amplification: The Relative Contribution of Body Awareness, Symptom Labelling, and Anxiety." *Journal of Health Psychology* 21.12 (2016): 2903-2911.

[292] Personal conversation with the artist. November 11, 2022.

Meditating on her creations for the *Anxietina* series, Waldhör states that her intention was "to emphasize the performance as a shared social event."[293] Her sets offer us another way to understand the meaning of Anxietina's superconnection: not solely as a draining, overwhelming experience, but as a vehicle for exploring anxiety as a relational condition. Across each iteration of the series, Waldhör uses visual and material elements to convey the cognitive upheaval of anxiety. For the performance at PS1, for instance, the audience sits in a semicircle on the ground in proximity to Black, gathered around deep pools cut into the carpet and filled with inky liquid. Fragments of Black's monologue are projected in reverse onto the dark water and walls, while a single flag spelling out ANXIETINA ripples behind Bonaventura's decks. On one level, this landscape is foreboding: the pools are shallow enough to spill out and seep into the carpet, the lights veer between strobe and pitch black, the projections spell out seemingly urgent but undecipherable messages. Like Black's cryptic monologue, Waldhör's arresting set, props, and lighting plunge viewers into the overpowering and disorienting nature of anxiety without seeking to narrativize the experience. Waldhör's fabric artworks, for instance, materialize feelings of anxious disorientation by utilizing moiré, a geometrical pattern of curved or straight lines that are superimposed onto each other at an angle to create new images but obscure

Ebba Fransén Waldhör, moiré flags for the *Anxietina* series

[293] Ibid.

the actual message.[294] The monochromatic flags and banners that flutter in the *Anxietina* performances and exhibitions are stamped with the word "ANXIETINA" in undulating lines, a message that is alternately revealed and obscured. With these objects, Waldhör repurposes the traditional role of flags and banners from vehicles of official information and national proclamations into "unreliable carrier[s] of information" that scrambles viewers' efforts to decipher a clear signal. Known as a "patten of interruption", moiré is used to arrest the audience's efforts to interpret the performance. If anxiety is, as Sianne Ngai suggests, a "quest for interpretative agency" in which the subject struggles to delineate the nature of the threat, Waldhör's elusive flags disseminate that cognitive disturbance.[295]

Disturbance appears to set the tone for Waldhör's sets, which present a series of grim landscapes: the dark watery world of *Or, Life, Or*; the blown-out living rooms drenched in red light of *Anxietina (The Situation)* (2017)*;* the bleak military preparation ground of NXIETIN (2018). But these scenes are also intimate spaces. For instance, Waldhör's installation for NXIETIN at the Center of Contemporary Art in Geneva blends the imagery of large-scale apocalypse with scenes of bodily intimacy and vulnerability. On the surface, the space is bleak: constructed from military-grade inflatable walls (typically used for combat training) to evoke a maze. With security cameras and televisions sprinkled throughout the gray, claustrophobic space, gallery visitors are continually surveilled and invited to track each other's movements on screens. Some of the military walls are also arranged as dirty mattresses, suggesting that the inhabitants of this holding space are here for the long term.

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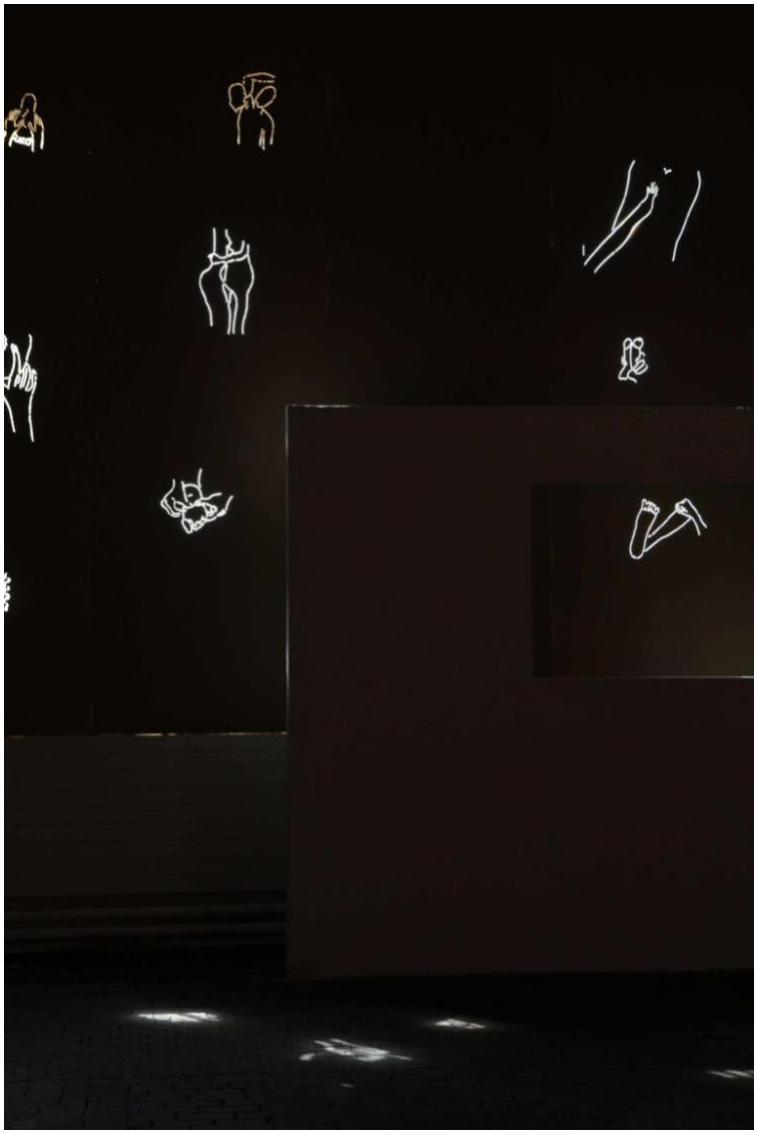
[294] Ebba Fransén Waldhör, "A-------A", 2018: https://ebbafransenwaldhor.net/a-a/ and "Set Design for Anxietina (The Situation):", 2017: https://ebbafransenwaldhor.net/anxietina-the-situation/
[295] Sianne Ngai, *Ugly Feelings*. Boston: Harvard University Press, 2009, p. 215



Ebba Fransén Waldhör, set for NXIETIN

Affectively, this installation evokes the quotidian feelings of anxiety (dark moods, fearfulness, feeling trapped) as well as the entities that fuel collective anxiety: violence, war, surveillance, an unspecified but stifling sense of emergency. At the same time, Waldhör incorporates imagery that places the material body at the center of this crisis. She plasters the walls with carboard, blocking out all natural light except for the glints peeping through small illustrations etched in the carboard. These project small images of bodies and physical intimacy throughout the gallery space. Based on sketches by the *Anxietina* artists and their friends, these images appear as doodles of body parts and couplings: feet and hands press together, hands reach into orifices, naked torsos repose, headless bodies spoon each other.

By using this diverse bodily imagery created by friends as the lenses though which a threatening installation is literally illuminated, Waldhör carves discernible bodily experiences into a landscape of pervasive anxiety and unspecified dangers. With their sensual, humorous infringement into the militaristic space, these images of bodily affiliation (which are, themselves, the product of artistic collaboration) offer a gentler iteration of the superconnection with which Anxietina is charged. In addition to dramatizing the overwhelming physiological and emotional experience of anxiety, superconnection can therefore be read as a refusal to let go of our kin in moments of heightened crisis. The wall carvings of NXIETIN visually elucidate this refusal, suggesting a relational model of anxiety that recognizes the close-knit contours of pervasive crisis.

Overall, the *Anxietina* series offers two distinct ways to think about anxiety. First, it uses the character of Anxietina and her charged superconnection, along with viscerally overpowering and disorienting sonic and material elements, to allegorize the unruly physiological ways that anxiety effects the body and remakes our relationship to the external world. Secondly, it uses

superconnection to dramatizes the ways in which anxiety can be contemplated and recognized in each other, without flattening its felt effects. In the final section of this chapter, I consider the ways in which creators and audiences are attempting to recognize and process anxiety together. Focusing on the highly sensory, participatory art movement of ASMR, I detail how a selection of artists are addressing anxiety on a bodily level and working to reroute or relieve its effects.

ASMR and The Rerouting of Anxiety

If *Stage Fright* and the *Anxietina* series depict anxiety unfolding across the sensorium and invite audiences to experience somatosensory disruptions akin to the bodily registers of anxiety, my third case study shifts our attention from how anxiety is individually experienced and collectively understood to how it is assuaged via external stimuli. Reading across the popular arena of cultural production known as ASMR, I ask how the biological imaginary might be mobilized to reroute or temporarily relieve anxiety by deliberately triggering pleasant sensations.

To take one example, Ilse Blansert has been creating video content to aid with relaxation, stress relief, and mental wellness since 2012. Under her YouTube name The Waterwhispers, some of her most popular works are specifically designed for viewers in the throes of panic and anxiety attacks. In these videos Blansert lies horizontally in bed, staging gentle one-sided dialogs with an imagined companion who is lying on the other side of the bed. As she whispers reassurances, feigns stroking the viewer's hair and face, offers mints from a crinkling packet, sips water and tugs at the papery bed sheets, she uses the techniques of ASMR to directly target the symptoms of anxiety and panic.[296]

[296] "Suffering from Anxiety Attacks? Let me comfort you (ASMR RP Soft Spoken)", YouTube, uploaded by WaterWhispers, December 13, 2013: https://www.youtube.com/watch?v=hidK0FqcgzY&list=PL7qQ1x X4UONAvlcG3vKkej-x5zVy0Sb.

ASMR describes both a bodily response to stimuli, and an emergent arena of cultural production in which creators seek to elicit that response in their audiences. In terms of the body, ASMR is a physiological reaction to audiovisual and haptic stimuli that is marked by feelings of elation and calm as well as pleasurable sensations throughout the head and body, which are often described as "tingles" by those who experience them.[297] The term, which stands for "autonomous sensory meridian response," was coined by a cybersecurity worker named Jennifer Allen in 2010. After reading and posting accounts on health message boards of enjoyable prickling sensations caused by seemingly random events like whispering, light touch, tapping sounds, watching other people doodle, and hearing certain voices, Allen sought "to capture the key components of the sensation without the possibility of being too embarrassing or too removed from the actual experience."[298] Now widely used, her phrase encapsulates the autonomous or singular, subjective nature of the experience, its multisensory and pleasurable dimensions, and its reactionary quality. While some report being able to induce ASMR themselves, ASMR is more commonly discussed as an involuntary response to external stimuli. The artist and theater maker Melinda Lauw compares involuntary ASMR responses to the "impulse shudder" many experience in response to nails on a chalkboard — but rather than being viscerally unpleasant, ASMR is "pleasurable and soothing."[299]

As a cultural movement, ASMR describes a range of texts that attempt to draw out bodily sensations in their audience. Over the past decade, a set of internet subcultures have exploded

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[297] See "WEIRD SENSATION FEELS GOOD", Steady Health, https://www.steadyhealth.com/topics/weird-sensation-feels-good.

[298] Jennifer Allen, interview with Craig Richard, May 17, 2016, ASMR University: https://asmruniversity.com/2016/05/17/jennifer-allen-interview-coined-asmr/#more-5769.

[299] Melinda Lauw. "Tingly Objects: Autonomous Sensory Meridian Response." 2014, p. 1. Accessed through academia.edu: https://www.academia.edu/9527471/Tingly_Objects_Autonomous_Sensory_Meridian_Response.

around the production and pursuit of ASMR "triggers." So far, this content mainly consists of videos in which creators experiment with audiovisual stimuli to elicit tingly feelings in their audiences. Some of the most common formats are hosted videos in which the artist experiments with triggers like whispering, clinking their nails against surfaces, skin brushing, and caressing familiar objects like houseplants, hairbrushes, sponges, and packages. Other videos trade in the curious satisfaction of watching people carve soap into intricate pattens, squeeze slime, slice sand, and engage in other precise, highly tactile activities. These videos work to produce heightened forms of somatosensory awareness: as artists and performers convert everyday objects into repositories of sensory experience, audiences also document their sensory reactions in reply and often leave requests for creators to engage particular triggers or scenarios. The intimacy of this digital rapport is enhanced by the simulation of individualized attention that many ASMR videos create, for instance by looking straight into the camera, whispering conspiratorially, or creating the illusion of a one-on-one interaction with situations like massages or haircuts. The sensory specificity of this content, the intimate exchanges between ASMR artists and followers, and the performance of undivided attention work together to create highly specific forms of sensory art that engages with the sensate body of audience and creator alike.

As both a physiological and cultural phenomenon, ASMR is undoubtedly niche. For those who don't experience tingles, watching ASMR videos can range from awkward to icky. But for those who do, ASMR is a bodily reality, cultural movement, and close community in which creators and consumers can compare their experiences. While the therapeutic potential of ASMR remains an understudied area, countless discussion and comment sections testify to its soothing and restorative quality, particularly when it comes to mental health. Some videos and audiences proclaim ASMR's utility for general wellbeing like deep sleep or "switching off," while others

explicitly connect ASMR to depression and anxiety management.[300] In a rare study of ASMR and mental wellness, a survey of 475 people who experience ASMR, 80% reported positive effects on mood — with the greatest positive effect in comparison to baseline mood occurring in those who also reported depression.[301]

Youtubers like Waterwhispers, BoHime Chella, and Karuna Satori deliberately use the techniques of ASMR including gentle whispering, positive affirmations and sensual, deliberative interactions with inanimate objects in order to relieve the cognitive and physiological effects of anxiety and other mental states. “I just had one of the worst anxiety attacks that I've ever had,” writes one commenter on a Waterwhispers anxiety assistance video, “and I immediately plugged my headphones into my phone and went to this video. Within about 10 minutes I was feeling about 50% better and I was about 85% better at the end.” Another writes, “I was sincerely touched when I saw this video…even though I still get depressed as always, I still find comfort with this video.”[302] These remarks identify ASMR as a source of relief that validates individual experiences of alterity and works to temporarily alleviate distress. Outside the medical logics of cure, ASMR audiences use the genre as a tool for everyday management and care of the bodymind.

As an art form that targets the body and seeks to conjure sensations in its audience, ASMR can be viewed as a biological imaginary that recognizes the complex, involuntary nature of visceral processes and responses. While scientific studies of ASMR are underway, little is known

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[300] For an ever-evolving discussion of ASMR’s reported positive effects, see r/asmr + anxiety, Reddit, https://www.reddit.com/r/asmr/search/?q=anxiety&restrict_sr=1&sr_nsfw=

[301] Emma L. Barratt and Nick J. Davis. "Autonomous Sensory Meridian Response (ASMR): A Flow-like Mental State *PeerJ* 3 (2015): e851, no page number.

[302] “Suffering from Anxiety Attacks? Let me comfort you (ASMR RP Soft Spoken)”, YouTube, uploaded by WaterWhispers, December 13, 2013: https://www.youtube.com/watch?v=hidK0FqcgzY&list=PL7qQ1x___X4UONAvlcG3vKkej-x5zVy0Sb

about why certain people have these responses. One small neurological study found that those who experience ASMR had reduced connectivity between different regions of the brain, indicating that "it is possible that ASMR reflects a reduced ability to inhibit sensory-emotional experiences that are suppressed in most individuals."[303] This uninhibited neurological activity is similar to that found in people who report synesthesia (blending of the senses), or frisson (a sensation of "chills" in response to audiovisual stimuli). But as clinical research accelerates through initiatives like the interdisciplinary ASMR Research Project, Lauw notes that "little has been said about the performance of ASMR artists."[304] This is particularly true when it comes to ASMR artists who do not match the young, white, female "faces" of the mainstream movement.[305] Beyond the algorithmically favored whispering white woman, a diverse array of artists are using the aesthetic and physiological features of ASMR to cultivate somatosensory awareness through art, design, and performance.

Key examples of this work were recently brought together in the first exhibition dedicated to the experience and artistry of ASMR. Shown at the Swedish Center for Architecture and Design in Stockholm, *Weird Sensation Feels Good* (2020) explores the phenomenon as "a cultural movement that transcends language and culture in favor of bodily 'feels'.[306] The exhibition's archive includes unintentional ASMR that online communities have been drawn to for

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[303] Stephen D. Smith, Beverley Katherine Fredborg & Jennifer Kornelsen, "An Examination of the Default Mode Network in Individuals with Autonomous Sensory Meridian Response (ASMR), *Social Neuroscience*, 12:4 (2017), 361-365, DOI: 10.1080/17470919.2016.1188851.

[304] Lauw, p. 5.

[305] Brittany Wong, "ASMR is Overwhelmingly White. Here Are Some Black Artists To Watch", *Huffington Post*, September 27, 2020: https://www.huffpost.com/entry/asmr-black-artists-to-watch_l_5f6b7732c5b6189caefb035c.

[306] *Weird Sensation Feels Good*, The Swedish Centre for Architecture and Design, 8 April - 1 November 2020, https://arkdes.se/en/utstallning/asmr-weird-sensation-feels-good/

relaxation, like Bob Ross paintings or footage of Björk lovingly taking an old television apart, as well as work created with ASMR in mind. Mounted on screens throughout the gallery space, we see footage of tactile interactions with fluffy dogs, slow-paced cooking videos in pastel hues, and intricate close-ups of woodblock carvings. The exhibition also indexes art that uses ASMR as a vehicle for aesthetic experimentation, such as two strangely sensuous works of motion graphic design. In Anny Wang and Tim Söderström's looped video *House Without Rules* (2017), a camera pans vertically through rooms of a house as if we are watching scenes from an ascending elevator. The objects in the rooms are seen to defy the laws of physics: fixtures morph and bounce away, thick rugs ripple on the floor, globular furniture rises like bubbles. And in selections from Andreas Wannerstedt's *Oddly Satisfying* series (2018-19), three dimensional sculptures are presented as motion graphics in which metal threads are woven together and a plastic-like substance is liquified into geometric shapes.

Several important ASMR themes are present in these graphic works: objects take on malleable textures and behave in unexpected ways, the visuals are repetitive and hypnotic, and the result is both meditative and slightly unnerving. While consuming this content, visitors to *Weird Sensation Feels Good* are invited to wear soft white bathrobes, listen to slow-paced whispered audio guides, and recline on a puffy kilometer-long couch that lines the walls of the exhibition. These features induct visitors into a curated sensory landscape that is filled with potential tactile and audiovisual triggers before they even consume the exhibition content. By creating an archive of unintentional ASMR that predates the term, showcasing a variety of contemporary ASMR creators from Swedish sound artists to Japanese cooking shows, and incorporating sensuous graphics and designs in which the rules of objecthood and texture are bent, *Weird Sensation Feels Good* underlines the expansive and malleable nature of the budding

ASMR archive. While ASMR most popularly refers to corners of the internet, the exhibition suggests that its features are portable: primed for incorporation into a variety of media and genres that seek to operate on a sensory register by augmenting and transforming our reception of every-day objects and surroundings.

One creator exploring this portability in depth is Melinda Lauw, the artist and performer who relocates ASMR from private spaces to public performances in order to investigate its therapeutic potential in real time, and in a collective setting. A US-based Singaporean artist working with textiles, digital art, and live performance, Lauw's work broadly examines the capacity of objects and interactions to trigger sensation. Her textile art maps an ambiguous relationship between synthetic and sensate bodies, such as tufted sculptures connected by yarn cords (*Umbilical*, 2013) or wall sculptures unfurling wooly tongues (*Waxing*, 2013).[307] In her guerilla art, she creates moments of tangible softness in public spaces: placing stuffed baby penguins across a busy pedestrian street, for instance, or crowning each spike on a wrought iron gate with tiny, stitched hats. This investment in tender interactions and unexpected encounters with nonhuman objects was what led her to ASMR. As Lauw states, "I'm interested in the sincerity and affectiveness of ASMR videos…this also feeds into my broader interest in slippages where our bodies impulsively react to images, sounds, objects, and situations around us.[308] Since 2016, her work with the theater group Whisperlodge has sought to curate those bodily slippages through live performance.

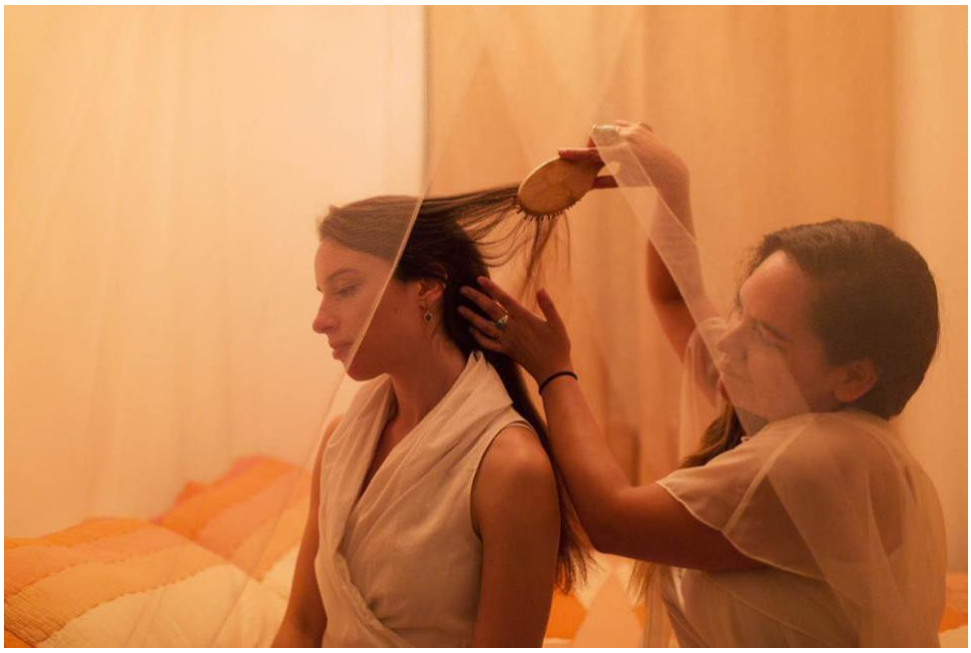
Cofounded by Lauw and theater maker Andrew Hoepner, Whisperlodge is an immersive performance designed for no more than ten people at a time. Individually attended to by a

[307] Melinda Lauw, *Umbilical*, 2013: https://melindalauw.com/Umbilical and *Waxing*, 2013: https://melindalauw.com/Waxing.

[308] Melinda Lauw. "ASMRtistry," 2014: https://melindalauw.com/ASMRtistry.

performer, participants are blindfolded and led though a series of interactions that are "designed to relax the body and mind, expand awareness, and heighten the senses."[309] Blending immersive theater, guided meditation, and sensory spa, Whisperlodge performances experiment with the artistic and restorative properties of ASMR in a live setting. Before the performance, audience members are asked to observe their outside surroundings with deep breaths and moments of silence, before being blindfolded and led inside with a performer "guide" by their side. These companions check in with participants throughout the performance, asking if they are comfortable being blindfolded, touched, or approached by others. They are then led through a series of dimly lit spaces that offer opportunities for heightened somatosensory awareness. In a room akin to a sound bath, audiences lie down on the soft ground for performers to whisper into their ears or sing softly. In a room resembling a classroom, a performer encourages the participant to relax and breathe deeply as they draw their attention to apparently innocuous objects like drawing materials and paper. Whisperlodge also creates a clinic-like scenario in which performers might stroke participants with latex gloves, trace their ears with a q-tip, or flicker a light around their eyes, as well as a boudoir in which a performer crinkles bed sheets, traces a feather on visitors' skin and offers aromatherapy.

[309] Melinda Lauw. "Whisperlodge", April 2016: https://melindalauw.com/Whisperlodge



Whisperlodge Performance

The sensory potential of objects and interactions is further magnified by the immersive, participatory nature of Whisperlodge performances. Audience members are invited to take extra time to play with the objects they are drawn to and consider their capacity to generate moments of sensory intensity. In these strange and affectionate scenes, Whisperlodge uses the formal features of ASMR – including the repurposing of everyday objects, the simulation of sustained attention, the use of deliberative, repetitive gestures and vocal manipulation, and the recreation of intimate scenarios – to activate the sensorium. As they encourage audience members to focus on their bodies, choose their own interactions, and sit with sensation, Whisperlodge performers actively close the gap between creators and consumers of online ASMR; crystallizing the sense of individualized care and connection that many ASMR videos induce. In the absence of narrative, the performance is sequenced on a sensory level and driven by subjective bodily responses in real time.

By centering the sensate body as the locus of the performance, Whisperlodge reveals the stakes of ASMR as a potent biological imaginary that not only gives shape to but seeks to *activate* biological processes and responses. The performances elicit these bodily responses by playing with sensory deprivation and amplification. As audience members are blindfolded, bathed in silence and sound, gently touched, and encouraged to meditate on or interface with everyday objects differently, they are led though scenarios that render familiar settings (school, doctor's office, spa, domestic space) strange. This coupling of quotidian setting and sensory acuteness works to defamiliarize everyday bodily experiences: in place of the constant but often unconscious processing of surroundings that we typically engage in, Whisperlodge participants are invited to attune themselves to the body's unpredictable reactions. In turn, these events

require performers to hone their awareness of participants, keeping track of a stranger's bodily responses as they move though the experience together.

For those who experience the subjective physiological response of ASMR, Whisperlodge holds evident appeal. But the collective also emphasizes a broader goal of enhanced bodily awareness by experimenting with sensory deprivation and amplification. As the cofounder of the troop Hoepner explains, "that moment people walk back into the world...the wind is loud, the light seems brighter…that's the gift of Whisperlodge."[310] His statement frames the performance as an attempt to enhance somatosensory awareness in the long term as an antidote to the sensory deadening of modern life: "whether or not you get the tingles, you'll feel deeply calmed and cared for."[311]

Of course, the care and sensory enlivening that Whisperlodge promises is not guaranteed. The possibility remains that one will not be positively affected, or affected at all, by Whisperlodge's elaborate array of triggers, and audience members can decline to participate at any time. One reviewer wrote that "dragging yourself out to some haunted mansion to be blindfolded and prodded by a stranger is its own kind of stress, one that might outweigh whatever relaxation you could possibly get from it."[312] As with any work of ASMR, the effects of the performance are dependent on mood, affective orientation to the performers and triggers, and biological processes that we do not fully understand. And yet, it is this very volatility that makes ASMR a compelling instance of the biological imaginary. ASMR recognizes and

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[310] Andrew Hoepner. Interview with Scaachi Koul, *Follow This*, 2018: https://www.netflix.com/title/80217889.

[311] "About Us", Whisperlodge: https://whisperlodge.nyc/about.

[312] Scaachi Koul. "I Love ASMR In Videos, But I Hated It In Real Life", *Buzzfeed*, August 23, 2018: https://www.buzzfeednews.com/article/scaachikoul/asmr-videos-whisperlodge-netflix-follow-this.

irreverently plays with the subjective nature of the feeling body — including the enigmatic quality of sensation, the ambiguous nature of neurological reactions, and the liveliness of mind-body pathways in ways that evoke the ways in which the body is always mutating and transforming beyond our regular levels of perception.

Whisperlodge's replacement of objectivity with subjectivity is particularly apparent in the "clinic room." Here participants are led though a funhouse rendition of a medical encounter as performers examine their hands, offer head massages, trace their ears with a q-tip and murmur gently though the process. Like other aspects of the performance, this segment takes features of digital ASMR including common triggers and a sense of individualized attention and care, as well as a trend in ASMR communities to recreate a variety of clinical scenarios.[313] The effect is a clinical encounter rendered bizarre. Devoid of probing questions and rushed appointments, the scenario is designed to bestow a feeling of undivided attention and heightened somatosensory awareness that are seen as deeply soothing within many ASMR communities. This scenario reverses the power dynamic of clinical interactions and the medical gaze, creating an atmosphere that is based not on diagnosis but on shared curiosity about the participant/ "patient's" sensations. This integrated approach to the body and creation of dreamlike therapeutic spaces serve to subvert the medical gaze and underline somatosensory fluctuations as a source of intrigue, play, and creativity rather than anomalies to be fixed. By exploring the capacity of unpredictable bodily responses and intuitive reactions to engender intimacy and exploration in a live performance space, Whisperlodge demonstrates the utility of ASMR for conceptualizing the unruliness of the biological body not as a dilemma but as a delight.

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[313] For an exploration of the frequency and popularity of clinical scenarios in ASMR videos, see Tessa Love, "The Bizarre Psychology of Medical ASMR Videos," *Elemental* January 24, 2020: https://elemental.medium.com/the-bizarre-psychology-of-medical-asmr-videos-42193c203a2b.

For Lauw, the focus on bodily variation and erratic somatosensory responses is one way in which ASMR can be used to create more accessible immersive theatre. Discussing how she adapted the experience for Deaf audience members, for instance, she states:

> There are so little immersive experiences that are [accessible]. Immersive theater has the unique quality of making an audience member feel special, valued and seen, and for people dealing with any kind of limitations, that provides an even greater potential impact. It definitely also applies to all sorts of accessibility issues, physical, emotional, and monetary.[314]

In devising performances around the unruly, spontaneous nature of sensation that can respond to audience responses and comfort levels in real time, as well as offering a pay-what-you-can lottery and adapting their work for specific audiences, Lauw uses ASMR to broaden the accessibility of immersive theatre. The multisensory, subjective features of ASMR as both a bodily and cultural phenomenon recognizes biological fluctuations and welcomes divergent bodily experiences, offering one way in which the biological imaginary is engendering accessible art forms rooted in the recognition of bodily difference.

Acceptance of bodily heterogeneity is at the center of ASMR — both as a broad cultural movement that invites physiological processes for relaxation and pleasure, and in terms of specific ASMR communities that deal more explicitly with disability and illness. From meditations and positive affirmations to in-the-moment responses to anxiety attacks, ASMR artists who take anxiety and mental illness into account attempt to temporarily relieve distressing bodily and cognitive experiences. Where the "proof" of relief comes from personal testimony and digital content rather than medical scientific discourses, ASMR artists and consumers enact their own forms of inquiry into the sensory nature of illness and disability. This works

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[314] Melinda Lauw. Interview with Lacey Pawlowicz, *Become Immersed*, March 14, 2019: https://www.becomeimmersed.com/whisperlodge-asmr-deaf-interview/.

holistically with the bodymind in distress, offering a highly sensory model of management and care that is both accessible and adaptable to individual needs. From its genesis on digital message boards of people scrutinizing and marveling at their own bodies, to its dissemination through new forms of enquiry and cultural production, ASMR disrupts diagnostic approaches to embodied anomalies and augments the scientific method with idiosyncratic cultural experiments that induce pleasurable and intense sensations and work to temporarily relieve debilitating experiences like depression, panic, and anxiety on the level of the feeling body.

Conclusion: The Rerouting of Anxiety

This chapter has examined accounts and acknowledgements of the anxious bodymind in motion, which invite a deeper consideration of how so-called mental states are enacted throughout the body. Taken together, these forms defy the mind-body binary, challenge medical and mainstream understandings of mental illness, and provoke dominant models of mental illness with a sensory awakening. Inspired by these forms, I have attended to the somatosensory registers of anxiety with the goal of defamiliarizing medical models of pathology and complicating social models and cultural accounts of the condition that locate anxiety in our surroundings at the expense of the material body. Alongside other chronic conditions like fatigue, burnout, stress, and dysmorphia, it has recently become popular to term anxiety a social trend commonly associated with millennial angst. In contrast, Jenny Slate's *Stage Fright* burrows into the alimentary, digestive, and cognitive ramifications of her chronic anxiety. In so doing, it reveals what we overlook when we disengage from the biological aspects of impairment. Her performance suggests that chronic anxiety encompasses and demands a heightened awareness of internal

bodily processes, which I argue have been marginalized at the expense of pathologizing or universalizing accounts of mental illness. T

he *Anxietina* series further complicates these accounts by interrogating the overwhelming sensory experience of anxiety while affirming the ways in which the condition tinges people's interpersonal relationships and perception of the world. As the series gives shape to the debilitating physiological effects of anxiety like sensory overload and somatosensory amplification, it also translates these symptoms into the non-realist trope of "superconnection" to consider how anxiety produces altered relationships to each other and our surroundings. While *Stage Fright* and the *Anxietina* series index the ways in which anxiety effects cognition, perception, and sensation, the final section of this chapter considered ASMR as a cluster of texts that seek to target and rework debilitating and difficult mental states on a sensory level. By mediating subjective sensory experience, sometimes with the explicit aim of providing anxiety relief and other forms of care, ASMR enlivens contemporary methods for managing and accounting for anxiety.

ASMR may be a surprisingly or unfamiliar cultural lens for considering how anxiety is culturally portrayed and alleviate. But its simultaneously subjective and collective nature allows us to grasp anxiety as an individual condition that has a inherent psychobiological complexity while contemplating how anxiety circulates in shared spaces. In this moment of overlapping crises, there is a therapeutic benefit to thinking about anxiety's psychobiological and relational aspects – not for the sake of pathologizing or universalizing the condition, but for understanding the interconnected nature of common debilitating conditions which variously impact the body politic. I will expand on this point in my conclusion, which will contemplate how the COVID 19

pandemic is changing our perception of individual and aggregate bodies, and how biological imaginaries are being put to use to respond to acute forms of bodily uncertainty.

Conclusion: Biological Curiosity

Let us consider a cultural realm that twists medical scientific data, build communities of dissent, and take a deeply speculative approach to the internal body: the COVID-19 conspiracy theory.

As the pandemic took hold of the world in Spring 2020, biological images and terms saturated our cultural consciousness to an unprecedented degree. Images of viral cells ringed with spike proteins, ravaged internal organs, and toxic droplets multiplied through the media landscape, while the language of variants, reproduction rates, and mRNA became commonplace in intimate conversation and daily digests. Navigating the pandemic has required us to wade through a barrage of complex, often contradicting, and seemingly never-ending information emanating from medical scientific, political, and cultural sources — not only for those who are mindful of the immediate and long-term effects of the disease, but for those who warp its nature and deny its existence. From 2020 on, elaborate claims that COVID-19 was a biological weapon manufactured in China, invented by Bill Gates, spread through electromagnetic systems, or simply a hoax that posed little or no risk to our bodies came to supplant fact-based information for millions of people. This catalyzed racial violence, anti-mask protests, anti-vaccine propaganda, and violations of public health guidance on a global scale.[315]

COVID-19 misinformation metastasizes through media commentary, personal testimony, political rhetoric, digital forums, documentaries, pseudo-medical messaging, and so-called wellness cultures. A trademark of these cultural scripts is their appropriation of biological language, aesthetics, and data to subvert medical scientific authority: from pseudoscientific justifications of COVID-19 "miracle cures" like ivermectin and hydroxychloroquine, to slick

[315] See Mark Lynas, "COVID: Top Ten Conspiracy Theories." Alliance for Science at Cornell University, April 20, 2020: https://allianceforscience.cornell.edu/blog/2020/04/covid-top-10-current-conspiracy-theories/.

documentaries that purport to bust the myths with hard scientific data. For an example of the latter, we might look to *Tracking Down The Origins of the Wuhan Coronavirus*, a "documentary" that promises deep readings of "scientific data" and consultations with "top scientists" to expose the virus as a Chinese weapon. At a time in which all bodies remain vulnerable to the far-ranging, debilitating effects of the pandemic, this flurry of misinformation has become a dangerous cultural and pseudoscientific discourse that is manipulating medical scientific data beyond recognition.

The pandemic lends urgency to the themes of this dissertation: biological flux, its wayward nature, its representation, and its political effects. However, it also pressurizes the cultural and political utility of taking a speculative approach to the life sciences and the internal body, especially in a moment when the meaning of scientific truth is widely disputed. Over the course of this project, I have been arguing for the power of cultural forms that subvert biological data and aesthetics to pose new narratives and compositions of the body. In contrast to scientific absolutism, I have characterized biological imaginaries as forms that assess medical scientific data with a speculative approach that addresses the internal body as a repository of strange sensations, wayward processes, powerful adaptations, and arresting transformations. My first and second chapters focused on texts that question sanctioned medical scientific doctrines, from the dominant view of treatment as an absolute good and the overlooking of female, trans, and gender nonconforming people in clinical research (Chapter One), to the oppressive history of medicalized gender and the ongoing intersex health crisis (Chapter Two). My third and fourth chapters also sought to trouble medical scientific discourses, but grappled more explicitly with how artists are responding to the body myths that have worked their way into lay and medical discussions of bodily alterity: from the popularization of genetic essentialism and innate racial

"truths" over the complex realities of genealogical uncertainty and biological profusion (Chapter 3), to the bifurcated view of mental illness as either a social phenomenon or a mental affliction rather than an intricate psychobiological process (Chapter 4).

Whether they are harnessing medical technology to explore the debilitated body on their own terms, invoking the medical subjects of the past in new contexts, spectacularizing biological adaptations as models for political organizing, or experimenting with the capacity of art to manipulate the sensorium, my case studies extract opportunities for invention from the imperfect realms of medicine, medical history, the life sciences, and technology. For those who have long been marginalized, misunderstood, and further debilitated by medical science – women, the disabled and sick, racialized people, transgender people, intersex people, and gender non-conforming people – I have argued that the subversion of these discourses can be a powerful strategy for embodied insight and political critique.

At the same time, the emergence of pandemic conspiracy culture that hijacks biological language and imagery in order to skew medical science and ultimately change people's fundamental understanding of their bodies – often with debilitating and deathly consequences – has highlighted the dangers of scientific speculation and medical skepticism in contemporary discourse. As a cultural study, my dissertation does not purport to offer the policy solutions or systemic education plans that are needed to resolve these circumstances. However, culture is also the domain in which we can closely examine the relationship among our bodies, competing beliefs about the body, and the conditions under which our bodies flourish, struggle, and change. By way of an open-ended conclusion, I therefore offer a few examples of recent cultural forms that utilize biological imaginaries to make sense of this relationship through the lens of the COVID-19 pandemic. These texts affirm the material realities of bodily precarity while

spotlighting the dangers of misinformation, political oversights, and medical scientific lacunae in the midst a health crisis that is far from over. I end on the broader question of bodily uncertainty and contemporary "medical mysteries," offering one example of how we might embrace a more sensitive orientation to visceral experiences.

Imagining Inoculation

Drawing together medical scientific and artistic methods, the visual artist Linda Alterwitz makes the unseen regions of the body discernible. Her photographic series *Injection Site: Making the Vaccine Visible* (2021-) envisions the impact of vaccination at the site of inoculation. Using a thermal camera, Alterwitz photographed her subjects' arms between fifteen minutes and four weeks after receiving a COVID-19 vaccine.[316] The resulting images reveal different patterns of heat and inflammation on participants' upper arms, with patches of tissue clumping and rivulets of blood seeping into different formations. In contrast to common visualizations of vaccination, which typically depict the microscopic interaction of antibodies and immune system without necessarily evoking a tangible human subject, Alterwitz's subjects are legible as both biological and social creatures. We see different levels of heat radiating through their bodies, but also the rings they place over their latex gloves, the earphones dangling over their shoulders, their bra straps and sleeves being pushed down and pulled up. This visual combination of inner and outer worlds emphasizes not only the interpersonal interactions that vaccination entails between medical subject and provider (and, in this case, subject and artist), but the reciprocal action of body and drug, biology and sociality.

[316] Linda Alterwitz. *Injection Site: Making the Vaccine Visible* (2021-): https://lindaalterwitz.com/project/injection-site-humanizing-the-vaccination-process-2021/

Linda Alterwitz, *Injection Site*

As numerous public health reports have shown, the "personalization" of immunology is a crucial resource in efforts to counter vaccine hesitancy.[317] Being upfront about side effects, adjusting care to cultural contexts, and responding to individual concerns have all been shown to increase vaccination rates.[318] Alterwitz's documentation of minute individual responses to vaccination asserts this need to personalize, not only before but *after* vaccination. As demonstrated by calls for further research by people who suspected disruptions to their menstrual cycle or experienced anaphylaxis after receiving a COVID vaccine (which are now being investigated in new research studies), personal testimony, tailored care and targeted research all remain just as crucial in the

[317] To be clear, vaccine hesitancy is not the same as being fundamentally anti-vaccine. See Samuel Pullan and Mrinalini Dey. "Vaccine Hesitancy and Anti-Vaccination in the time of COVID-19." *Vaccine* 39.14 (2021): 1877-1881.

[318] See, for instance, Shixin Cindy Shen and Vinita Dubey. "Addressing Vaccine Hesitancy: Clinical Guidance for Primary Care Physicians Working With Parents." *Canadian Family Physician* 65.3 (2019): 175-181. https://www-ncbi-nlm-nih-gov.ezproxy.library.wisc.edu/pmc/articles/PMC6515949/

wake of the shot.[319] Unfolding in different bodies over different time periods, Alterwitz's portrayals of vaccination affirms that the interfacing of external and internal substances is neither a neutral nor homogenous process. Rather than depicting purely "positive" or "adverse" reactions, then, her photographs emphasize the heterogeneous reality of vaccine responses that remain worthy of both cultural scrutiny and medical scientific research — and, crucially, would endure even in the desirable but unlikely event of a united political front. By deploying medical technology to depict biological variation in response to vaccination, Alterwitz leaves the effects of this process unforeclosed.

The unforetold nature of inoculation has long positioned it as an object of both wonder and horror. Contemporary incarnations of the inoculation horror story arrive in insistences that the COVID-19 vaccine contains tissue secretly harvested from fetuses, or microchips to track our every movement.[320] But, as Eula Biss reminds us, the choice to vaccinate also involves degrees of apprehension that are deeply rooted in our cultural consciousness. An early myth of inoculation – in which the Greek nymph Thetis submerged her infant son Achilles in the river Styx in a desperate bid to secure his immortality, only to leave his heel dry and create his fateful weak spot – invites us to acknowledge the fundamental precarity of the human body even as we work to protect it. Put simply, "no mortal can ever be made invulnerable."[321] With her intimate

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[319] On the vaccine and periods, see Alison Edelman et al. "Association Between Menstrual Cycle Length and Coronavirus Disease 2019 (COVID-19) Vaccination: A US Cohort." *Obstetrics & Gynecology* 139.4 (2022): 481-489. For allergic reactions, see Wannada Laisuan. "COVID-19 Vaccine Anaphylaxis: Current Evidence and Future Approaches." *Frontiers in Allergy* 2 (2021): https://www.frontiersin.org/articles/10.3389/falgy.2021.801322/full.

[320] See Ike Sriskandarajah. "Where Did The Microchip Vaccine Conspiracy Come From Anyway?" *The Verge*, June 5, 2021: https://www.theverge.com/22516823/covid-vaccine-microchip-conspiracy-theory-explained-reddit.

[321] Eula Biss. *On Immunity: An Inoculation.* Minneapolis: Graywolf Press, 2014. Electronic copy, no page number.

portrayals of subjects who have opted for the COVID-19 vaccine, Alterwitz turns away from triumphalist narratives of vaccination as a conveyer of absolute bodily protection. Instead, she uses a biological imaginary to humanize the vaccination process while holding space for the fundamental uncertainty of embodiment at a time in which even the most robust option for protection remains only ever partial.

Tactile Disruptions

The pandemic has created an abundance of imagery for visualizing bodily vulnerability. In the early stages of the pandemic, graphics showing the spread of an infected sneeze dispersing through a subway car or sliding through the slipstream of a pedestrian, microscopic images depicting the virus surviving on surfaces, and medical photographs of its impact on the internal body (reduced lung function, damaged organs, lost sensory functioning) all created an archive that fed public desires for information while stoking anxieties about viral loads, wandering particles, and the impact of these materials on our body. Our limited visual and sensory access to this impact, coupled with the intense anxiety that can be induced by confronting it, motivated anthropologist, fabric artist, and clinician Katharina Sabernig to visualize COVID-19 through fabric art.

In her knitted art objects, Sabernig interrupts conventional graphic representations of the internal body. Noting that the viscera are usually only revealed to laypeople in the event of a personal medical emergency or procedure, her work seeks to temper feelings of dissociation or overwhelm that can accompany confrontations with the interior body gone awry by using a familiar and tactile medium. This does not mean that her knitted sculptures abstract biology. In knitting accurate uterine fibroids, histological diagrams of cervical cancer, or immune

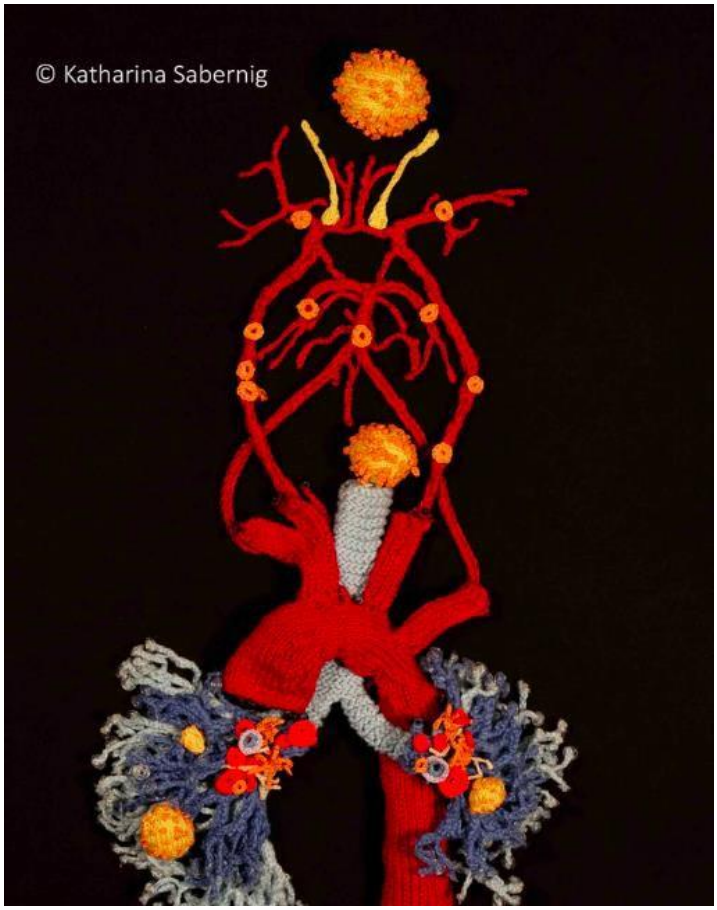
compromised bronchial trees to scale, Sabernig constructs naturalistic depictions of the viscera that can be used by patients and clinicians alike. Her work has been exhibited in galleries, displayed in hospitals and doctor's office, and used in medical training programs. By inviting students to supplement human specimens with knitted sculptures, Sabernig confronts both the nonconsensual use of marginalized bodies and the voyeurism that has traditionally structured the gaze and practices of Western anatomy.[322] In these ways, her art constitutes its own form of "tactile disruption", or the use of softness to create sensory awareness of bodily difference in the artistic (and, in this case, clinical) space, as described by the artist and performer I discussed in my third chapter, Wit López.[323]

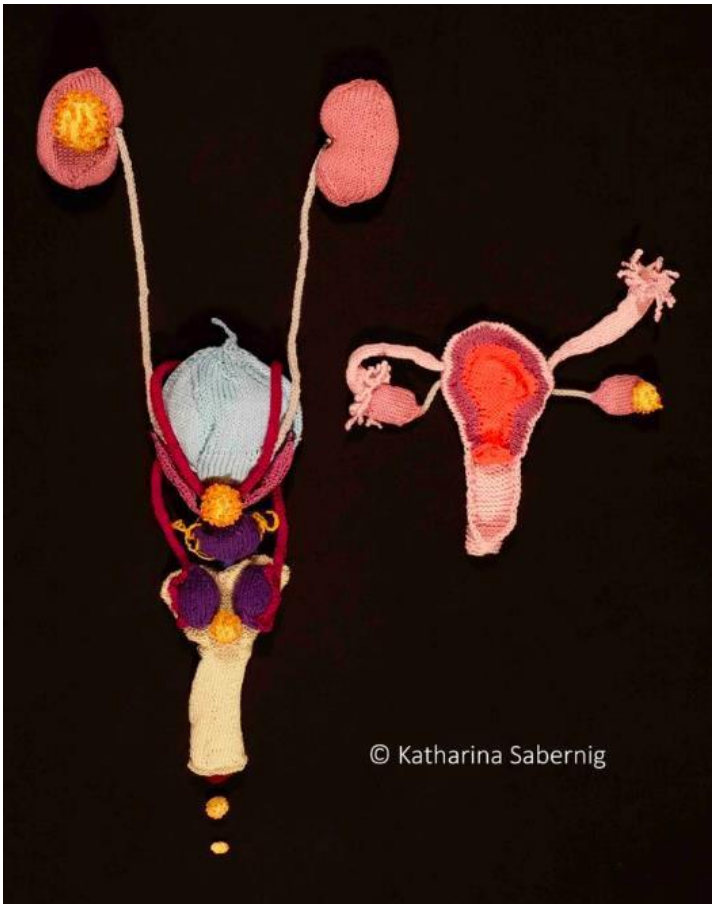
From 2020 on, Sabernig turned her attention to the nature and impact of COVID-19. Her *Corona Extra* series uses long colorful threads to depict the genetic sequencing of different variants, tufted wool to represent the altered cellular structure of an infected body, and intricate stitching to index the debilitating effects of the virus on the respiratory, gastrointestinal, central nervous, and urogenital systems. By using a sensory medium to mediate states that require isolation from others, Sabernig also references the duality of our material lives in the socially distanced age. For many people, lockdowns constituted a moment of both reduced and heightened tactility: cut off from other bodies in a variety of ways, the popularity of crafting and handiwork soared as we feared and demonized person-to-person contact. As a medium, knitting also gestures to that period of muffled domesticity and solo crafting that provided privileged and

[322] See Katharina Sabernig. *Knitted Anatomy* exhibition booklet withNeue Galerie Graz, March 2022: https://issuu.com/universalmuseum/docs/sabernig_heft26_einz?e=11605875/92158688.

[323] Wit López. "Radical Softness and Tactile Disruptions" at Carleton University Art Academy, April 1, 2021. For a recording, see https://www.youtube.com/watch?v=tAb5SPbR7FA.

uneven forms of respite during a global health emergency. But Sabernig's graphic depictions of COVID gut this illusion of cozy respite.





Katherina Sabernig, *Corona Extra*

Even in soft colorful forms, Sabernig's depictions of disease remain squeamish. One piece explores how the virus moves through the lungs to enact pulmonary embolisms, while another displays tufted COVID-infected cells stoppering the gastrointestinal tract. The latter invasion can result in "diarrhea, vomiting, loss of appetite, abdominal pain and, in particular, loss of gustatory sense…[and] non-specific symptoms," according to the artist's note.[324] With close pleats evoking intestines and stuffed pouches forming the stomach, this densely knitted and embroidered gastro-sculpture is further textured by the pom-pom like viral cells that attach themselves to different enteric structures. While the work offers us a concrete visualization of COVID's effects on the viscera, Sabernig also emphasizes the untold and open-ended effects of the virus on different bodies by referencing "non-specific symptoms" in her accompanying note. In this way, she uses visceral imagery to reveal specific biological behaviors in new media and formal contexts while gesturing at the highly variable behavior of the virus and the many unknowns that remain about its nature. This invites us to contemplate the somatic complexity of a virus that continues to spread invisibly through our communities and confound researchers. By utilizing a biological imaginary to render COVID-19 in fabric art, Sabernig provides both educational and artful

Katherina Sabernig, *Corona Extra*

[324] Katharina Sabernig. *Corona Extra* (2020-) https://www.knitted-anatomy.at/corona-extra/.

explication of the virus while making the sensuous and somatic strangeness of this historical moment newly palpable.

While these sculptures do not provide an antidote to despair, they invite us to confront visceral vulnerability in new contexts while couching the threats of COVID-19 an unfamiliar format. Against the tendency to turn away from the body, to seek answers in whispers of conspiracy, artful advice, or defiant claims that the body is not, in fact, under threat after all, Sabernig offers an unflinching look at internal realities while declining to offer easy answers about the nature of the virus as it moves through individual and aggregate bodies.

From Medical Mystery to Biological Curiosity

With its multiple manifestations, COVID-19 has created new states of bodily alterity. From the early days of the pandemic, accounts circulated of people struck by debilitating symptoms that lingered long after the period of infection. While we now name this experience as long covid, relatively little is known about the condition. In addition to medical scientific uncertainty, the general lack of access to care or information has created conditions for misinformation to thrive — from those who proclaim long covid a hoax, to those who peddle unproven advice and snake oil solutions.[325]

In the bewildering behavior of the disease, the systemic dismissal of the people it effects, and the explosion of alternative theories and cures that can help or harm those who seek them,

[325] As the communications scholar Katy Pearce explains, "people [with long covid] are really suffering, and most don't have the energy/bandwidth to push their medical providers to help them and/or they don't have medical care…They're turning to these online groups for advice, but because these groups are full of people that also don't know what they're doing, it is a hotbed for misinformation and the propagation of snake oil and sometimes risky behaviors. But these people have nowhere else to turn." See Katy Pearce, Interview with Anne Helen Petersen. *Culture Study*, July 31, 2022: https://annehelen.substack.com/p/the-comfort-despair-and-disinformation?utm_source=email&publication_id=2450&post_id=66308232

long covid is taking on the bent of a "medical mystery" in our collective imagination. While the common cultural and medical scientific response to medical mysteries has been to enfreak, dismiss, or overlook, the rapidly increasing numbers of people who are experiencing long covid reveals the need for a very different approach to bodily uncertainty — one which acknowledges the value of scientific research and the importance of healthcare, but also seeks models of care, storytelling, and understanding that circulate beyond medical scientific realms.

One general example of a more sensitive approach to bodily uncertainty comes in the form of a podcast. Since 2018, KCRW's *Bodies* docuseries has been exploring the instabilities of health and embodiment. Hosted by Alison Behringer, each episode focusses on an individual or community that experiences a so-called medical mystery: unexplained pain, community outbreaks of illness, cognitive and behavioral issues, rare disorders.[326] Its depictions of embodiment are often visceral: guests explains the texture of debilitatingly heavy periods or the agonizing experience of walking during an outbreak of genital warts; one episode records the hacking coughing and vomiting of a child whose school playground oozes a strange black substance; and another details the cognitive aftereffects of intimate partner violence.

Many *Bodies* episodes begin with the subject seeking medical attention for their ailment — but medical science never, ultimately, offers them the answers. Instead, each episode is a journey into the visceral realities of different conditions, an exploration of the biological, social, and medical forces that influence those material states, and a story about living in a marginalized body under the weight of these invisible forces. For instance, an account of horribly painful sex becomes an investigation into the pharmaceutical and political downplaying of the side effects of hormonal birth control. A story of cognitive overwhelm and exhaustion at work comes to

[326] See Alison Behringer et al. *Bodies* (2018-). KCRW: https://www.kcrw.com/culture/shows/bodies.

confront the lack of research on autism as it presents in women. A hunt for the "ideal" male physique reveals the complex biological realities of intersex embodiment. An experience of ovarian cancer opens onto a history of unsafe cosmetic products that were explicitly marketed to Black women. And an exploration of pregnancy during the COVID-19 pandemic reveals the complex psychobiological effects of crisis on parent, fetus, baby, and care providers alike.

In each episode, Behringer and her interlocuters tug at the strands of personal and political medical histories, biological data, embodied experience, identity politics, and social context. They often lament the insufficiency of medical services and the incomplete nature of biological data, particularly when it comes to the most marginalized bodies. And yet, the solution is not about gutting trust in medical scientific institutions altogether. Rather, *Bodies* models a holistic approach to bodily flux: one which underlines the importance of recognizing someone's plight in the first place, considering the multiple forces that influence their experience, probing the material body for answers, and responding creatively. Subjects often process their experiences by creating art across different mediums and genres, from filmic depictions of Black crip sexuality and body art that marks the physical scars of emotional distress, to written accounts of being a neurodivergent sex worker and creative campaigning for the bodily autonomy of those who experience achondroplasia. In these diverse forms of self-expression and storytelling, participants in the *Bodies* project find relief and community.

Ultimately, the real mystery under consideration in this series is a web of overlapping identity categories, embodied experiences, and social factors that make up one person's experience of bodily flux. As Behringer states:

> One of the common injustices in many of [our] stories…is how the medical establishment and a lot of big structures in our society want us to be one thing. But we are many things, and that can be lonely in a world that doesn't make space for complexity.[327]

This statement gets at the crux of one of the key arguments of this dissertation: that neither a purely social nor a purely medical lens can fully account for the complex experience of living in an unstable, multiplicitous body and world. Forms that wrestle with this truth – be they filmic depictions of the intersection between sick and trans medicalization, poetic accounts of medicalized gender and intersex embodiment, experimental depictions of lineage and the racialized pain that transforms over time, multimedia efforts to depict and induce discomfiting sensations, or audio projects that shed light on states of bodily unrest – can all help us to recognize the nuances of alterity.

In an oversaturated moment of global health crisis, vicious public debates that take the body as their battleground, and ongoing political uncertainty, these forms offer us more sensitive and granular accounts of bodily difference that detail the deep-seated entwinement of fleshy, personal experience and systemic injustices. Rather than seeking to attach one absolute meaning to the body – be it a symptom, an identity, a social phenomenon, or a diagnosis - these forms encourage us to appraise biology from a stance of *curiosity*. They lead us deep into the body not to discipline its behavior or solve its mysteries, but to make its multitudes newly apprehensible and palpable. I have sought to present biological imaginaries as an opportunity to consider these internal multitudes that often escape our view and elide our understanding. By using these material realities as the basis for posing new configurations of embodiment, creative expression,

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[327] Allison Behringer et al, "Changing Shape." *KCRW Bodies Podcast*, May 27, 2020: https://www.kcrw.com/culture/shows/bodies/eating-disorders-gender-body-dysphoria-trans-sand-chang

and political refusal, biological imaginaries take shape as new modes of world-making that are inspired and informed by internal worlds.

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