The Body and Its Parts: Rhetorics of the Distributed Human Body

By

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A dissertation submitted in partial fulfillment of
the requirements for the degree of

Doctor of Philosophy
(English)

at the

UNIVERSITY OF WISCONSIN-MADISON

2022

Date of final oral examination: 1/24/2022

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Table of Contents

Acknowledgments

This dissertation is shaped by my own experiences as a patient, the experiences of women in my family who have repeatedly dealt with skepticism in the face of health crises, the legacy of Henrietta Lacks, and my observations about the increasing popularization of banking and using commodifiable human biological materials. These combined factors made me wonder if the way that rhetorical studies has conceptualized the body is missing a key element: that body parts are sometimes not part of an identifiable body, but can almost always be tied back to one.

Scholars have taken posthuman or materialist approaches to understanding biological processes, emphasized fundamentally interconnected bodyminds, considered bodily affects and sensations, and theorized rhetorical embodiment. However, I felt that there was a gap that could better address the ways that body parts can both function as their own, autonomous things *and* can almost always be both rhetorically and biologically tied back to individual people. Tension concerning bodily autonomy within the medical system is rooted in a history of exploiting bodies for research, and in the history of the US, built on the foundation of exploiting enslaved Black bodies. This dissertation builds on the work of previous scholars to articulate how, why, and when body parts can be exploited or commodified within the framework of contemporary Western biomedicine and biotechnology.

I could not have completed this project without the consistent guidance, feedback, and general encouragement of my committee members: Christa Olson, my advisor, Michael Bernard-Donals, Caroline Gottschalk Druschke, and Jenell Johnson. From early in my coursework to navigating the job market, each person on my committee has provided invaluable advice and shown enthusiasm for my work. Their willingness to offer their perspectives and engagement

with my work has shaped how I will mentor in the future. I want to particularly thank Christa for her unflagging support, incredible amount of feedback, and above all, the way she encouraged me to always prioritize my wellbeing as she simultaneously challenged me to do my best work.

Being a part of UW-Madison has allowed me to learn with and from brilliant colleagues. I'd like to thank the people who came before me, made me feel welcome, and helped me understand what graduate school could look like: specifically Annika Konrad and Anna Floch Arcello. I want to particularly thank Meg Marquardt, Elisa Findlay, Calley Marotta, Matthew Fledderjohann, Stephanie Larson, Gabbi Kelenyi, Brandee Easter, Neil Simpkins, Ann Meejung Kim, James Warwood, Weishun Lu, and Amanda Pratt. Each person has provided feedback, carpooled to conferences and campus, offered perspectives from their own work, and generally been a good friend. I feel lucky to have worked with such generous and smart people who treated the program as a place to support and learn from one other.

This dissertation would have never been completed without a network of support from family and friends outside of the program who bolstered me in the moments when I needed it most. In the most challenging parts of this process, these people have cooked for me, watched tv with me, offered personal and spiritual guidance, and made me laugh. I want to especially thank Paige and Andrew Joncich, Anna and Nicholas Pergal, Caity and Tim Holmes, Carley and Ray Varo, Nancy and Rick Lindroth, Mandy Hall, Amanda Fledderjohann, and JoLee and Ken Thompson for their unconditional love and support. Jana Thompson and Janice Thompson were the inspiration for my interest in medical rhetoric, and this work is dedicated to them. And to the two most important people in my life: thank you to Miles, whose arrival motivated this dissertation and who constantly reminds me of what's most valuable. And to Matthew Peters: you make anything feel possible.

Abstract

What happens when body parts leave a body? This dissertation takes up questions concerning how discursive boundaries are placed around removed human organs, tissues, and cells. Publicity, education, and regulation concerning removed somatic material affects public perception about what these body parts are and to whom they belong. Case studies including the history of organ donation and its portrayal in public-facing materials, the display of human body parts for educational purposes in medical museums, and public deliberation about health policies in the United States all show that the body has become increasingly distributed across space, people and time. Analysis of these case studies demonstrates a need to carefully consider how body parts function both as objects independent from personal identity and as deeply affective, personal connections to human bodies. Ultimately this dissertation argues for a new framework to consider how the distributed body in 21st century Western medicine shapes how human life can be managed even down to the level of the cell.

Chapter 1

Introduction

Body parts are not always part of a body. They can be 3D printed, removed for biopsy, developed into immortal cell lines, harvested, donated, grafted, and put on display in glass cases for public viewing. Historically, rhetorical studies has analyzed bodies as whole and bounded objects. Rhetoricians have assumed that bodies are wrapped in skin and belong to an individual. Though posthumanism has decentered the hermetic body, it has more often positioned it in relation to other bodies rather than attended to the use of bodily parts. The complex ways that human organs and tissues are extracted, traded, regulated, and displayed exceed rhetorical studies' present available means of defining human tissues as either individual bodies or objects severed from personal identity. In order to understand how bodies move in Western biomedicine, rhetoric needs the means to describe what happens when the body becomes physically and discursively distributed. In my dissertation, "The Body and Its Parts," I explore the liminal space where body parts have been extracted and are suspended between or intentionally divided from holistic bodies. I offer different ways of looking at body parts, ways that take seriously their materiality but also their affective attachments. This dissertation considers bodies as distributable, not integral—a framework that allows critical insight into the 21st century material conditions of Western biomedicine, providing better understanding of how life, identity, diagnosis, and autonomy are defined from the organ to the cell. By understanding bodies as distributable, rhetoric can account for how the control and commodification of human bodies is displaced onto seemingly scientific claims about the ways that even microscopic human body parts work.

In “The Body and Its Parts,” I analyze historical and contemporary data to show how rhetorical education and discourse about human tissues shape ideas about the body, and the implications for adjudicating to whom human tissues belong. Using rhetorical theory, I build on the work of scholars in history, disability studies, and science and technology studies to show how medical discourse shapes public questions about the relationship of extracted tissues to individual bodies. The case studies in “The Body and Its Parts” trace how US public conception of donated human organs and tissues have evolved over time, how medical museums use body parts to both disturb and to educate, and how public interpretation of removed human organs and tissues intersect with public health policy. I use a transdisciplinary approach that shows how dominant discourse in one discipline infiltrates existing ways of talking about or making sense of the body in another. Specifically, I look at how biomedical definitions of the body shape rhetorical studies’ analysis of the body in ways that often go unnoticed. Transdisciplinarity allows me to grapple with the consequences of biomedicine for rhetorical studies and how both medical experts and lay people invoke particular arguments about the body. Working across disciplines is not simply for the sake of interdisciplinarity, but rather to examine how disciplines already work across us. In order to understand the relationship between rhetoric and the body, we must take seriously the ways that biomedicine structures discourse *and* how discourse places limits on and redirects the trajectory of biomedicine.

My chapters draw on archives from medical history, museum studies, and public hearings to move across history and contexts from the mid-twentieth century to the present. I show how rhetorical education has informed the ways that body parts are treated as objects that can be simultaneously gifted, displayed, or commodified. However, while body parts can be treated as things, they are also consistently tied back to the identity of the donor from which they came. I address these complications in Chapters 2 and 3 by focusing mainly on how rhetorical education about the body functions in medical and public contexts, and in Chapter 4, I look at how this education is enacted in public deliberation about how and when body parts are commodified. These chapters work together to show that when the body is distributed, the complex entanglements of identity, medicalization, education, and commodification cannot be teased out without considering distributable bodies as both part and parcel of a person *and* their own autonomous things.

In this introduction, I lay the foundation for where rhetoric of health and medicine has taken us so far in its analysis of bodies and introduce the concept of the "distributed body" as a framework with which I analyze each of the following case studies. This framework allows me to show how bodies become distributed, and for whom this distribution is (or is not) beneficial. I focus on the popular story of Henrietta Lacks as a way to ground my discussion and reveal the repercussions of treating human cells and tissues as completely autonomous from "donor" bodies, particularly when Black bodies are treated not as consenting donors but as resources to be mined. My second chapter, "Sharing Life: A Rhetorical History of Tissue Transplantation," delves into the archives of the University of Wisconsin-Madison (UW) Organ and Tissue Donation program to lay historical foundation for how parts of the body are figured as either gifts, capital, or property, and how the public imaginary around tissues shifts in late capitalism. The university, and the state of Wisconsin writ large, were influential in national research and laws that promoted organ donation from the 1960s on. The framing of donation remained tied to the idea of a priceless, free "gift of life" while hospitals implicitly communicated that organs are valuable commodities. This chapter argues that the early definitional work of framing how the human body should or could be shared in the U.S. shapes the commodification of human cells and tissues today and public conception of the distributed body as property.

In my third chapter, "'Disturbingly Informed': The Material Pedagogy of the Mütter Museum," I show how body parts come to stand in for larger theories about disability, diagnosis, and even super-ability. In particular, I look at how the Mütter Museum displays the mind as legible on the physical body, and body parts become the source for understanding (and more particularly, pathologizing) human behavior. I focus on two displays that relate to mental ability: one that displays peeled skin as an example of the effects of obsessive compulsive disorder, and another that features Albert Einstein's brain as (possible) evidence of his genius. I argue that the materiality of human tissues frames diagnosis as an observable phenomenon of the body and mind, even when the diagnosis remains unclear and the viewer is without a referent to other bodies or contexts. The distributed body, then, becomes something to read and interpret, serving as a way to better understand the "human" in general while also demarcating difference. My fourth chapter, "My Body, My Cells: Bodily Boundaries, Human Tissues, and Rhetorics of Ownership," shows the conflict between lay public arguments about their bodies and biomedical experts' claims about the limits of personal autonomy and the definition of cells and tissues as products. I examine the transcripts of a September 2016 FDA public hearing and show how public actors resist the categorization of their tissues as products and stake claim over their extracted cells and tissues. I argue that the humanities must develop a more robust way of analyzing distributed body parts that can account for individual and cellular autonomy. The ability for distributed body parts to rhetorically move between identification with individuals and with products reveals a larger pattern concerning distributable body parts. This pattern relates back to the story of Henrietta Lacks, showing how donor bodies become a means to an (for-profit) end, and that questions about flesh become questions of property rights at the microscopic level.

Transdisciplinary analysis is particularly important for those who seek to understand how biomedicine has infiltrated even the most seemingly mundane parts of daily life. Bodies are becoming more distributable and more diffuse as biotechnology and regenerative medicine progress. The question of how and when body parts become commodities, and for whom this has benefit, is an urgent question shaped by the history of human organ and tissue donation and rhetorical education about the body. Without the ability to understand the body as distributable, we risk further disenfranchisement of marginalized donors and a misunderstanding of how 21st century biocapital discursively shapes the relationship between person and product.

When organs and tissues are removed from human bodies, they might end up on display at a museum, transplanted into another human with the intent to save their life, or stored in a tissue bank for research or for later use. Rhetorically, these removed bits of somatic material are complicated. They might be called a "gift of life," a "specimen," a "cell line." They might be associated with their donors, tied together with a heart-warming story, or strictly deidentified and presented as their own autonomous products. So what does rhetorical studies make of human tissue with so many different valences? This dissertation argues that, when we fail to see how these body parts are rhetorically constructed, we fail to understand how rhetoric shapes their ability to be transplanted, bought, sold, and donated. This matters because most people born in a hospital in the United States already have samples of their blood being stored at a medical facility and often used for research (Lewis et al.). The story of Henrietta Lacks is an example of how a Black family who did not have access to good healthcare can also be the origin of a famous immortal cell line that has made biotechnology companies millions of dollars (Skloot).

Organ donation is often touted as a necessary and important medical intervention, and while this is true, there is complicated rhetoric and affect assembled around donating parts of one's body, not the least of which is influenced by the use of bodies in medicine as wealths of data rather than as whole persons. And while scientific education is designed to inspire wonder and respect for the human body, it can also have the effect of collapsing personhood with biological markers, leading to interpretation and diagnosis of brains as the true representation of a person. In short, in the United States, Western biomedicine is not only a means of treatment, but a way of understanding what makes a human. Biomedical interpretation of humanity stretches beyond the clinic into homes and state legislation. More incisively understanding how Western biomedicine delimits definitions of human life, particularly related to human tissues, offers different ways of seeing somatic material that can hold in tension its complexity as both thing and person.

A passing mention of Henrietta Lacks does not do justice to the impact her story has had on the broader public and the trajectory of this dissertation. In 1951, Henrietta Lacks, a Black woman, went into Johns Hopkins for treatment for cervical cancer. Without her permission, a doctor took a piece of her tumor, and this small clump of cells became what is now known as an "immortal cell line" called HeLa that contributed to many medical discoveries. However, as Rebecca Skloot points out in her book *The Immortal Life of Henrietta Lacks*, Lacks remained unknown for years, and her family did not receive any money that came from the buying and selling of these human biological materials. Legally, the Lacks family is not owed anything, despite that Henrietta Lacks' cells were biopsied and later used by researchers, pharmaceutical companies, and biotech companies for their own profit. As Skloot notes, "There's no record of [Johns Hopkins] accepting money for HeLa cells, but many for-profit cell banks and biotech companies have. Microbiological Associates—which later became part of Invitrogen and

BioWhittaker, two of the largest biotech companies in the world—got its start selling HeLa" (194). The popularity of Lacks' story and its revelation that human cells can be valuable reveals a public concern with questions about biomedical autonomy, particularly when property rights do not extend to the human body.

The story of Henrietta Lacks continues to be relevant to cultural conversation. Skloot's book was originally published in 2010, and in 2017 Harpo Productions created a film version of the story starring Oprah Winfrey as Henrietta Lacks. In February 2020, Rebecca Skloot visited the University of Wisconsin-Madison to speak about science and ethics, and the talk heavily featured her work on the Lacks story. There have been countless other interviews, podcasts, and articles written about Lacks because the story strikes such a chord with audiences. First, it appeals on a broad level because of a general concern about bioinformation. Second, it reveals the complexity of a medical system in which consent becomes particularly complicated as cells and tissues outlive the donor. Third, it shows how the exploitation of Black bodies in the US for-profit medical system is not a thing of the past. Lacks' story and how it continues to circulate reveals public investment in questions about the limits of bodily autonomy, particularly when the body is distributed within a Western biomedical frame.

This case leads me to the complex nature of rhetorical scholarship about medicine, bodily integrity, and biotechnology. Rather than viewing medicine and rhetoric as more or less distinct fields that shed light on one another, I suggest that they are dependent on and shaping one another, particularly when dealing with questions of the body. In short, all discourse about medicine is rhetorical in nature, and the field of rhetorical studies in turn borrows from medical discourse.

Medicine and Rhetoric as Mutually Constitutive

While what is commonly thought of as contemporary biomedicine arguably did not emerge until the 20th century, rhetoric has long been concerned with the body, illness, and cure. Gorgias' description of persuasion theorizes the ways that rhetoric influences the body on what can be anachronistically identified as the molecular level. Derrida also describes Socrates' comparison of drugs or medicine to persuasion in *Phaedrus*, drawing on the idea of medicinal properties of rhetoric that can function both as "remedy and poison" (70). If rhetoric affects the body in the way that a drug does, it seeps into the biochemical processes of the body. Rhetoric is not merely an external influence that affects the way a body moves—it is entangled with flesh, embedded in DNA, tissues, and organs. As my fourth chapter shows, even describing what a cell is and how it functions is fundamentally rhetorical in nature. Likewise, rhetorical studies also borrows medical terms to describe how discourse functions. By demonstrating the recursive relationship between medicine and rhetoric, I argue that the ways bodies are conceptualized in Western biomedicine require greater attention to the increasingly distributed, dissected, and deterritorialized body that becomes commodified through its parts.

Examining the relationship between medical and rhetorical approaches to the body calls for a transdisciplinary orientation advocated by Debra Hawhee — one that suspends "one's own disciplinary terms and values in favor of a broad, open, multilevel inquiry" rather than layering rhetoric on top of medicine (3). Hawhee suggests that this view enables the study of "the ways multiple discourses on the body… differently constitute bodies and, more pointedly, how language, meaning, and communication *both emerge from and help constitute bodies* (italics mine)" (9). Similarly, rhetoric (like bodies) is not a tool that exists outside of other cultural and material forces. By adopting Hawhee's approach toward bodies and toward rhetorics of health and medicine as a field, this dissertation advocates for understanding the ways that medicine and rhetoric rely upon one another to make sense of the ways bodies are constituted. More specifically, when biotechnology progresses to the point of stripping and commodifying the body in new and minute ways, rhetoric is not only responding to this problem. Rhetoric is already working within a biomedical framework where the body is being treated and interpreted in terms of its parts, and this in turn affects how contemporary rhetoricians interpret the body. Without understanding how biomedicine shapes the field's approach to rhetorical bodies, rhetoric cannot fully critique the models that are structuring popular discourse about the boundaries of the body.

The Threat of Biomedicine

It's also important to be wary of the way that medical terms can hierarchize bodies and create harmful norms. Disability studies and medical rhetoric scholars have pointed out how medical discourse creates categories through which we define normality and abnormality, and thus have damaging effects on bodies and agency (Baynton, Heilker and Yergeau, Yergau, Defossez, Walters, Arduser). Shannon Walters explains that, "Terms of categories of experience such as disabled and nondisabled, normal and abnormal, 'normate' and freak are all mutually constitutive, codependent, and unstable" (3). But rhetorics of health and medicine also help illuminate the ways that bodies circulate in an economy in which "life itself has gradually become conflated with *information*" (Doyle 20.1). With the sophistication of genetic science and biomolecular research, the body has become something to decode, and the line between human and nonhuman, flesh and product has become increasingly blurry. Scholars like Kelly Happe working on the rhetoric of DNA have demonstrated that genomics elides the lived experience of race, class, and gender and instead replaces it with an "explanation of disease patterns as the product of genes" (6).[1] If, as Doyle and Happe suggest, life and disease are codified in these

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[1] See also Lyne, Ceccarelli, Doyle.

ways, bodily rhetorics must account for the displacement of bodily ownership from the autonomous individual to the cellular level in order to understand how bodily boundaries are being discursively drawn. Lisa Keränen lists the molecularization of life as an important trajectory of rhetorics of health and medicine, requiring scholars to examine "biopolitics in the post-genomic era" and ask "what is at stake in the re-splicing of life" as biological and genetic terms become common vernacular (505). This dissertation suggests that, in order to better understand the relationship between rhetoric and the body, it is necessary to attend to the ways that distributed body parts are described, taught, and legislated.

Rhetoric, Medicine, and the Public

Scholars have studied embodied rhetorics from different lenses, but rhetorics of health and medicine combine analyses addressing science, public health, medical research, patient narratives, advocacy and organization, and public address. In "The Rhetorics of Health and Medicine: Inventional Possibilities for Scholarship and Engaged Practice," Scott at el. suggest that while not all rhetorical projects need to be "applied," medical rhetoricians should consider what insight they can give to practical issues like patient-provider communication or public health interventions. This emphasis lies on reaching multiple audiences and thinking about how to implement tactics for engaging publics and policymakers directly (3). Because the practice and discourse of medicine is rhetorical with rhetorical consequences, we can bring a helpful and interdisciplinary lens to health or medical humanities. This emphasis on effecting material change also justifies the role of rhetoric to non-expert audiences, claiming that it's important to include perspective on how discourse can shape patient experiences or the practice of medicine.

Medical rhetoricians have also examined the rhetorical relationship between the body and technology, particularly as bodies become increasingly integrated with technologies. In a special issue of *Rhetoric Society Quarterly* on “Wearable Rhetorics,” Catherine Gouge and John Jones outline the importance of understanding how devices or technologies “impact opportunities for embodied communication, the performance of our digital selves, the changes to social and technical structures brought about by those performances, and how and where individuals are enabled or, alternatively, denied access to participation in civic discourse” (205). This demonstrates the difficult negotiation between “bio” and “tech,” or the ways items like insulin pumps or colostomy bags move the seemingly autonomous body into clear relationship with materials. While this helps to better understand “the material machinations that make possible bodily being,” it also relies upon holistic notions of the body as securely attached to human sensation, or something that can be embodied, felt, and experienced (“Rhetoric, Precarity, and mHealth Technologies” 266). This both calls attention to the limits and porous nature of the body while also situating it as a central and identifiable element within a more complex network of rhetorical relations.

In an age of digital health information in which patients are increasingly in tune with and invited into self-diagnosis and care, medicine is not easily categorized as a discrete sphere separate from public or patient influence. Christa Teston draws attention to the ways that contemporary biomedicine’s grid-like algorithmic protocol assumes that “body data can be isolated from their environment” and the ways that rhetoric can illuminate the problems with managing the body in flux by revealing its “material effects and processes” (*Bodies in Flux* 13). Teston and others have theorized ways of making sense of the body’s effects by explaining its enmeshment in a larger material-discursive network and insisting that “matter persists at mattering” (*Bodies in Flux* 16). This “ecological” view figures rhetoric as a “process of becoming,” situating “suasive activity within (and because of) a ‘wider sphere of active, historical, and lived process' (quoting Edbauer 8)" (*Bodies in Flux* 2). Ecological analyses position the body as something that is always being made and unmade in dynamic relationship to other human and nonhuman actants. Teston's use of material-discursive negotiations with "matter, movement, and time" take rhetoric as a way to complicate the way biomedical evidence comes to matter, what counts as evidence, and who should or should not have access to it (3). In other words, Teston is theorizing the complex role of the body in evidence-based medicine (EBM) in ways that show how medical decision-making is still unpredictable and complicated, despite efforts to demonstrate otherwise.

These subsets of rhetoric illuminating how medicine works deal with practical or applied research, bodies and technology, and biopolitics to reveal the complexity and human, embodied messiness of medicine as an objective science. Technologies, treatments, diagnosis, and even medical evidence have different effects on bodies, and bodies in turn influence the practice of these things. These are important observations that demonstrate the rhetorical nature of medicine, but they do not fully articulate the co-constitutive relationship between medicine and rhetoric.

Rhetorics of health and medicine also take up issues in public health, which explicitly work to trace the social, racial, economic, and other "external" factors of health. Jeffrey Bennett defines "public" as "an idealized communal sphere" and "health" as a "powerful God-term" (12). Through his analysis, Bennett demonstrates that blood donation has become an act of civic engagement that demonstrates active citizenship. He shows "how blood and the body are part of a larger history of segregation, citizenship, and national identity" (3). Celeste Condit also suggests that public discourse has brought about changes in attitudes toward abortion and how this has shaped the development of public policy and private practice. She provides an explanation for "the functioning of public argument in the revision of widely shared meanings"

(*Decoding Abortion Rhetoric* 3). This conceptualizes the public as a crucial part of the way that medical discourse is constituted, its entanglements with notions of belonging, and the way it is legislated and practiced. By acknowledging broader social forces and drawing attention to the implications of public negotiations of meaning, scholars like Bennett and Condit reveal the porous nature of separate "spheres," or the impossibility of a clean division between medical practice, legislation, and public experiences of biomedicine.

Like bodies, discourse communities are always exposed to effects that can drastically alter their ideas of autonomy. Public interpretations and use of medical metaphors are not only driven by medical experts. The public can influence and even redirect medicine. While there are differences in the ways medical experts and the public use medical language, it is also difficult to separate particular discourse communities into distinct or mutually exclusive spheres. Rather, we can think of these spheres as colliding, reconstituting, and redirecting each other. The fields of rhetoric and medicine contain discourses that fundamentally affect each other's methods, practices, and consequences (whether this is always made explicit or not). As Judy Segal states, "Medicine cannot help but be rhetorical; it just doesn't know it" (*Health and the Rhetoric of Medicine* 24). But I would argue that rhetoric also can't help but be medicinal, and that this often goes unexamined.

Medicine in Rhetoric

While medical rhetorics often apply rhetorical analysis to medical terms, alternatively**,** rhetoricians also employ medical tropes to build theories (See Stormer, Black, Gorgias, Edbauer, Derrida). When Edwin Black discussed communism as cancer in his explication of the second persona, he employed specific terminologies to invoke a particular response in his audience. In "The Second Persona," he famously analyzes the "communism as cancer metaphor" as "an idiomatic token of ideology" (115). We can see the use of medical terms in Black's extended discussion of "communism as cancer" which he uses to analyze this medical metaphor, including calling his analysis a "biopsy" (115). Likewise, Nathan Stormer describes how medical rhetoric frames abortion as a national "pathological affliction" (63). While Stormer is dealing more explicitly with a medical case study, he also employs the language of pathology to articulate how social "illnesses" are defined and diagnosed. By invoking images of the body, drugs, disease, and diagnosis, this rhetoric positions linguistic ills as something akin to a disease that can be treated. These conceptions are not unfamiliar to rhetoric as demonstrated by classical figures like Gorgias and Plato's *Phaedrus*. A more contemporary theoretical apparatus like symptomatic readings, for example, explicitly looks for external signifiers of a deeper linguistic disease — one that we can trace to some sort of ideology or motive. These conceptions of rhetoric are unsurprising considering the ubiquity of medical terms in the 20th and 21st centuries and the notion of the self as a medicalized subject. Nikolas Rose describes this process as molecularization, or the way that disease and life itself are "now understood, and acted upon, at the molecular level" (12). John Lyne suggests, "The emergence of genetic testing, counseling, and intervention has in a sense *textualized* the body" (5). These slippages between rhetoric, medicine, and bodies reveal a relationship between these three categories that is not only blurry and difficult to define, but that constitute each other in implicit ways.

There are many harmful ways that medical terms have structured the field of rhetoric and broader interpretations of bodies. For example, the essentializing language of pathology, or reducing an external symptom or behavior to a root cause, has historically been used to justify acts ranging from banning gay men from donating blood, to justifying slavery, to eugenics (Scott, Baynton, Bennett, Ceccarelli, Gronnvoll and Landau, Happe, Yergeau, Johnson, Koerber). Scholars in disability studies have pointed out that it is imperative to attend to the way medical discourse devalues bodily differences and how this can position bodies as disposable. I am not arguing that rhetorical analysis is or should always take a medical or diagnostic approach to language. However, it’s important to attend to discursive similarities between the medical and rhetorical management of life that implicitly rely on predominant models for diagnosis, etiology, and biomedicine.

Attending to the distributed body and the ways that medical terms structure ideas about the body emphasizes a more ecological understanding of materiality that borrows from Jenny Edbauer’s definition of rhetoric. Edbauer says that rhetoric “emerges already *infected by the viral intensities* (italics mine) that are circulating in the social field,” emphasizing how rhetoric manages to “infect and connect various processes, events, and bodies” (14). Medical terminologies *can* help us conceptualize how rhetoric works. Using terms that allow us to conceptualize rhetoric through medicalized terms also refuse to forget the body’s material role in rhetoric. Bodies not only produce discourse but operate as vectors for discourse. Medical terms can help rhetoricians pay attention to the ways rhetoric is transmitted through materials and bodies, and in turn, how materials and bodies shape rhetoric. There is also an evident embedded connection between biomedicine and rhetoric when so many examples of medical terms structure certain practices of rhetorical analysis. Rhetoric’s relationship to medicine is not necessarily only that rhetoric can illuminate medicine or that medicine can act rhetorically. There is a more complicated, transdisciplinary relationship that calls for nuanced exploration of these entanglements.

The Trajectory of Rhetoric and Medicine

In order to trace how the body is entangled with discourse and how it becomes rhetorically dissected through the literal and figurative separation of its parts, I draw from scholars in rhetoric of health and medicine to articulate what happens when the body is dissected, biopsied, and donated. While many rhetorical theorists "re-humanize" the body through affect, emotion, narrative, embodiment, and theories of agency, it is not apparent when tissues, cells, or other body parts belong (or don't belong) to the body.[2] When someone can no longer feel or identify with donated tissue, is it a part of them? If not, what is it? These biologic products are not "information" in the same way that the genome is, nor are they necessarily a "body." How are medical rhetors to identify these bits of tissues, cells, and organs? Catherine Waldby and Robert Mitchell's book *Tissue Economies* takes up the ways that cellular products present these ethical debates concerning property, ownership, and commodification. In an age of advanced biotechnology, property rights no longer simply apply to structures or things. Biocommerce forces us into tricky new terrain where "biotechnical processes and an institutional complex of tissue banks, pharmaceuticals, and clinics" have implications for the social relations of human tissues (Waldby and Mitchell 22). Legally, donors do not have property rights to "products" that come from their bodies, but biotech companies do have property rights when they create cell lines or gene sequences (like Henrietta Lacks' cells being extracted and transformed in the HeLa cell line). Tissue banks, labs, and biotech companies "assist in the work of partially disentangling human tissues from the network of embodied social relations in which they originate," allowing them to "circulate through the body politic in more complex and flexible ways that is possible for whole organs" (Waldby and Mitchell 69). Because they are shareable, manipulable, and

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[2] Using affect, narrative, or pathos has been cited as ways of understanding the body by Jenell Johnson ("A Man's Mouth"), Celeste Condit ("Pathos"), Elaine Scarry, and Kimberly Emmons (among many others). Jordyn Jack, Ellen Samuels, and Susan Wells also provide feminist perspectives on medicalizing or scientific discourse, the body, gender, and identity.

reproducible, for example, stem cells much more closely mirror traditional commercial goods than other human products (like organs or even blood) do. However, because stem cells originate from human bodies and can be identified as part of the human, they present unique ethical questions about rights, property, and ownership.[3]

Examining the body in parts and what happens to these body parts when they are no longer physically attached to a person is a different orientation than one that centralizes the body/mind, or a holistic understanding of embodiment. But what happens when body parts become a part of a tissue economy in which donors have no property rights to these tissues? This question asks us to better understand how we conceptualize the body holistically, and whether or not we always can. I propose an examination of the synecdochal relationship between the body and its parts, and when a part can (and cannot) stand in for the whole.

Conclusion

This dissertation proposes that rhetoric and medicine are more than just interrelated—they mutually inform one another. Understanding the ways rhetoric and medicine are co-constitutive matters because, whether or not a rhetorical scholar is explicitly engaging with questions about biotechnology, understandings of the body are constantly evolving. The treatment and definition of bodies are increasingly molecular, and this affects how the field of rhetorical studies can and should be discussing the physical and rhetorical transformation of bodies. Bodies are far less autonomous and far less whole in 21st century biomedicine, and a theory of the distributed body helps to reveal how and when body parts act rhetorically to represent a whole person or take on their own set of individual rhetorical valences. I argue that

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[3] John Lynch discusses definitional work around fetal stem cells, but I'm suggesting that it's important to examine more recent conversations defining and advocating for autologous stem cell therapies (when your own blood-forming stem cells are collected, manipulated, and reinfused into your body). This takes on new negotiations that do not necessarily include pro-life vs. pro-choice arguments.

the holistic body is strategically presenced and absenced depending on the context. Rhetoric also (like medicine) can dissect the human body by rendering its parts as distinct from the whole and illustrative of larger arguments. This matters because, while rhetoric implicitly relies on certain notions of disease, bodies, and the movement of discourse shaped by modern biomedicine, it has not articulated how these medical structures inform the way we talk about bodies and body parts. The field of rhetoric itself is laced with medicalized notions of the body, and this becomes evident when examining how bodily rhetorics are articulated. Medical terms can be essentializing, but they also help rhetoric to better understand how constructions of the body are changing as it becomes molecularized and manipulable in new ways. This dissertation identifies strategic moments at which rhetorics of medicine can identify, employ, and reject biomedical notions of the body to explicate the way the body circulates in a tissue economy.

I theorize the distributed body as an alternative to the holistic, networked, or ecological body. Distribution implies that there was, once, a centrally located space where everything was held together. I don't move away from the idea of the holistic body completely, nor do I argue that tissues become "things" that no longer are associated with an individual. Lacks' story shows that this is impossible. Even when a clump of cells multiply endlessly, they biologically contain genetic code and rhetorically contain the story of the donor. There is no either/or in this bioeconomy— only both. The distributed body serves as a central framework through each chapter to hold together the idea that the body can be broken down into component parts, but that it also is a complex system that is inextricably tied to an individual. I do not use the term "individual" here to emphasize an ableist idea about independence, nor do I want to discount that bodies and people are always at a locus of power, that they are rooted in histories and communities, and that they are tied to their environments. However, bodies are tied to identity, and individual people have particular experiences that influence and are influenced by their bodies. To ignore this loses the specific texture of a person’s life. The scars, both physical and figurative, that a person carries matter not only to who they are, but to their bodies and their biological legacy.

Chapter 2

Sharing Life: A Rhetorical History of Tissue Transplantation

Organ, eye, and tissue donation are often touted as in-crisis. In the United States, the comparative need for organs related to the supply of organs is consistently cited as a pressing and urgent problem. In 2017, there were 121,000 candidates waiting for organs, yet “less than half of American adults are registered as organ donors in their respective state registries” (Williamson et al. 199). This problem of scarcity has prompted national and local public education campaigns. DonateLife, a national nonprofit founded in 1992, focused on increasing the number of organs, eyes, and tissues, urges visitors to their website to be “socially responsible.” They claim that 95% of Americans are in favor of being a donor but only 58% are registered (source for these statistics is not cited) (Donate Life). However, despite legitimate concerns about the lack of donors for organ donation, the rhetoric surrounding donorship and the transfer of organs assumes that organ donation is a moral imperative that is based on “giving the gift of life.” The claim that life can be gifted shapes perception about the limits of life and living, the attachments of life to particular body parts, and the idea that the human body can be easily broken into parts and shared. Over time, the framing of donation in the US has remained tied to the idea of a priceless, free “gift of life” while hospitals have historically implicitly communicated that organs are valuable commodities.

The field of transplantation is still relatively young. According to the historical timeline provided by the United Network for Organ Sharing (UNOS), the nonprofit that contracts with the US government as the nation’s transplant system, the first successful kidney transplant was performed in 1954, followed by a simultaneous kidney and pancreas transplant in 1966, the liver in 1967, and the heart in 1968. Lung transplantation did not happen until the 1980s (The History of Organ Donation and Transplantation). Positive patient outcomes have increased dramatically over time, and as such, so have the number of campaigns for organ donation. There have been great strides in transplant medicine over the last 40 years, particularly with the advent of the clinical use of cyclosporine, an immunosuppressant "which combats rejection without severely hampering the body's ability to fight infection" (UNOS and Donation Information 3). Such strides in transplant medicine have only increased accessibility of treatment and the urgent call for donors.

This chapter engages in a rhetorical history of publicity about human organ donation to show that public discourse about organ donation has not only been contradictory in nature, but has led people to form particular rhetorical attachments to human body parts that are no longer attached to a donor. Using bodies and body parts as means for medical treatment in the US commodifies the component parts of the human body, and these parts circulate in what Waldby and Mitchell have called a "tissue economy" (31). While organ donation can be a life preserving or saving procedure, the ability and common practice of using the body to treat various diagnoses comes with consequences, particularly related to how the body is rhetorically framed in different contexts. Lesly A. Sharp uses the term "organ transfer" to describe the entire process of organ procurement, organ donation, and organ transplantation because these three branches are inextricably intertwined (*Strange Harvest* 3). In the process of transfer, these organs and tissues exist literally in between bodies, in suspended animation. In the case of tissues, these biological materials can also be stored (or, notably, *banked*) and saved for later use.

While this chapter primarily looks backward to understand how organ donation has shaped ideas about the shareability of body parts, there is also a current preoccupation with different ways that human bodies can be used to "heal themselves" or heal others. Currently, regenerative medicine, or medical research that uses elements of the human body to treat different diagnoses, is an important part of the future of medical research. Learning more about the relationship between rhetoric concerning organ donation and current discourse about regenerative medicine provides a fuller picture of the ways that human body parts are rhetorically transformed into gifts, commodities, displays, and products. In Western biomedicine, the assumed medical model of the human body is non-disabled, white, and cisgender. Whiteness as the presumed ideal of a healthy body, or of a potential donor, is the underlying presumption of calls to citizenship relying on donors gifting their bodies to others. These invocations of being a "good citizen" or member of a public health community ignores the reality that, throughout US history, the ability to choose whether or not and when to surrender one's body is only available to white cisgender men.

Throughout the complexity of discourse surrounding organ donation are commonplaces, or topoi, on which medical professionals, nonprofits, family members of donors, recipients, and living donors build their rhetorical construction of organ transfer. These topoi rely on organs being able to be framed as gifts, or more specifically the gift of life; organs as valuable commodities; organs as vessels of immortality; notions of biological kinship; and the idea of a living or deceased donor "freely giving" a gift even when consent is not made clear. The underlying question concerning consent is particularly fraught as consent serves as a hinge for the ability to rhetorically render an organ as a *gift,* or donation, rather than an extracted commodity or a treatment. This chapter begins with an overview of how organ transfer has developed in the US, discusses both the history of and complication with the term "gift of life," analyzes how death and life are invoked in rhetorically complex ways in the process of organ transfer, and looks at the implications of post-organ transfer being used as evidence of biological kinship. I argue that ultimately, the topoi of organ transfer create a murky, liminal rhetoric space for organs to occupy in which they can function simultaneously as commodities, priceless gifts, and vehicles of immortality.

This chapter focuses primarily on how the lay public is educated about organ donation, the rhetorical tactics used to describe various aspects of the donation process, and how these various tropes have rhetorical consequences for the bodies of donors and recipients. Specifically, I orient around the language of "gifting" human organs and tissues, using this as my primary investigation into a) how medical professionals are taught to speak to donors, b) how news media has portrayed donorship from the 1960s to the early 2000s, and c) how this language sets up contemporary rhetorics about removed human tissues. First, I analyze the UW Organ and Tissue Donation Program's language for training healthcare professionals. This reveals seemingly conflicting narratives provided to donor families and patients about what organ donation means for them and to a recipient. Next, I look at archival newspaper evidence to show how public news media has shaped ideas about the relationship between a donor and recipient, focusing specifically on the language of "gifting" bodily tissues. I then discuss how recruitment strategies rely upon the idea of the gift and shape presuppositions about the urgency of organ donation. Finally, I conclude by moving away from organ transfer and suggest that language about regenerative medicine, more specifically cells and tissues, and postgenomic constructions of the body begin to capitalize on the age of "bioinformation" (Doyle, Happe, *Biocapital*, *Lively Capital*).

Organs in the Archives

This chapter analyzes two sets of archival materials. The first is a set of documents intended to educate organ procurement organizations (OPOs) about recruiting donors or directly appeal to the public to donate organs. I look at materials distributed to healthcare and OPO professionals that instruct them how to talk to donor kin about the body as compartmentalized and sharable *and* the possibility of organs as soul-harboring pieces of flesh and blood. The second set of materials are publicity (mostly newspapers, but also some pamphlets and magazines) that advertise organ transfer as a life-giving and imperative process. I describe the implicit assumptions underlying donor recruitment builds and how this publicity relies on moralizing and evangelistic tropes to move people to become donors.

My archives exist primarily in the University of Wisconsin-Madison (UW) university archives and in digitized Wisconsin newspapers. The UW archives include the University of Wisconsin Organ and Tissue Donation Program archives, an organ procurement program that has been active since the early days of organ transfer. The state of Wisconsin has historically been active and on the forefront of legislation regarding organ donation. In 2000, the state was the first to pass a law requiring at least 30 minutes of instruction in driver's education courses (*Wisconsin People & Ideas* 16). In 2004, the state again became the first in the nation to pass a law offsetting the costs of organ donation for living donors (*Wisconsin People & Ideas* 16). UW also has a prestigious history in kidney, pancreas, and heart transplantation. In 2010, it was ranked no. 1 nationwide in the number of kidney and kidney-pancreas transplants performed there and no. 2 among academic centers nationwide in heart transplant outcomes (*Wisconsin People & Ideas* 15). UW also developed methods for organ preservation and has produced nationally recognized surgeons working in kidney transplant and VAD research related to heart transplants. There is a sense both in the university and the state more broadly that organ donation and transplantation is important, and education about donating is emphasized both formally through legislation and informally through newspaper publicity. While this chapter focuses primarily on the history of organ donation in Wisconsin, the state's progressive stance on organ donation has sparked other such laws and policies nationwide, thus making Wisconsin a site of analysis that can help illuminate the ways donation discourse has evolved over time.

Because organ transfer is a fairly recent medical practice, it is possible to trace how communication about organ donation has been presented in news media over time in Wisconsin, beginning with the 1960s and concluding with the early 2000s. I choose to look at examples over time because, I argue, early narratives presenting organ transfer to the public continue to shape more contemporary narratives. Public-facing documents intended to persuade more people to donate organs also reveal a consistent appeal to individual narrative or story as a way to personalize organ donation. However, it's important to pay attention to the different ways and different times personal narrative is deployed, and when medicalizing language is offered over more personal accounts. Comparing these different uses of personal narrative and the shift away from the personal shows the fraught nature of framing the human body as something that can be compartmentalized and shared, while also maintaining strict and deeply affective ties to individuals.

My early research in both the OPO archives and in newspaper archives revealed a commonplace that I became particularly interested in— namely, the "gift of life." Rather than simply use the term "gift" as a filter for my search, I used the entire phrase "gift of life" both because it is a common term and it has a double meaning: you can give the gift of your own life in the case of electing to donate organs after death, but it also implies that you are giving life to someone else. "Life" is a fraught word that has been stretched to its rhetorical limits. The rhetorical impact of the word "life" is capacious, and when applied to organs in conjunction with the invocation of the word "gift," it implies the ability to transfer life through human organ and tissue donation. It places emphasis on the donor to give. It also suggests that life is transferable via components of the human body, and that there is some sense of giving this transferable life directly to another person.

Throughout organ donation publicity, and even embedded into the Uniform Anatomical Gift Act, the language of the "gift" occurs almost ubiquitously. Kenny Fountain and others have discussed "the ways we often understand organ and tissue donation as 'giving the gift of life'" (Fountain 177).[4] I build on this work to show how a framework of the distributed body can help articulate the tension inherent in the metaphor of "gifting" life and how this provides rhetorical flexibility in identifying body parts as both products and persons. In the 1980s, as organ transfer was becoming a more viable and successful way of treating a variety of medical problems, the actual cost (both literal and figurative) of organ donation becomes submerged within rhetoric about the moral implications of becoming a donor. I chose to examine Wisconsin newspapers specifically because of the state's history of taking a more progressive approach to organ transfer, but the stories in the Wisconsin newspapers are from all over the US and reveal some general findings about the ways that the human body becomes framed to potential donors as compartmental, and implicitly commodifiable, particularly after death. At the same time, the body is also framed as a site of moral and ethical action, creating rhetorical tension between the gruesome realities of organ transfer and the idealistic view of giving the gift of life.

Newspaper publicity shows many commonalities in the framing of donations as gifts to public actors. The media in my analysis includes ads, human interest, exposes, and opinion pieces, but all invoke the term "gift of life." While I do not attempt to determine public response to the invocation of gift related to organ donation, I do make claims about how the consistent

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[4] See also Fox and Swazey, Lock, Sharp.

public framing of donation as a gift interplays with the ways health workers communicate to potential donors. I argue that, by consistently framing donation as "gift," this holds complicated rhetorical consequences for the financial and material negotiation in the process of organ transfer. This also has lasting consequences for the future of regenerative medicine, the view of human cells and tissues, and the ability for individuals to profit from biologic products developed from their own somatic material. In other words, by focusing on donation in terms of "gift," there is an implicit denial that it materially and rhetorically matters to whom, from whom, and for what purpose these "gifts" are given. This is perhaps especially true when particular populations have been historically excluded by the very invocation of the term "gift" (Bennett).

I build on different strands and fields of scholarship to help me articulate the rhetorical complexity involved in promoting organ donation. Susan Lederer's work in the history of medicine provides important historical context for the history of organ and tissue donation's early origins and how this shapes our current ideas about human tissues. Anthropologist Lesley Sharp performed an in-depth ethnographic study gaining insight from transplant recipients, clinical specialists, and the surviving kin of deceased organ donors (*Strange Harvest*). A historical and anthropological perspective helps me understand the social dimensions of organ transfer, and current rhetorical scholarship helps me engage with questions about how discourse shapes and is shaped by publicity about organ transfer. Most current communication scholarship focuses on how to increase the effectiveness of appeals to people who might consider organ donation, but I instead look at how current discourse models for engaging with donors rely on interpretations of the body that are incomplete at best and dangerous at worst. I perform a rhetorical history that goes beyond ideas about communication effectiveness or social construction. Instead, I look at how publicity, discourse, and social and historical forces converge to shape ideas about the ways we can physically share our bodies as medical resources both before and after death.

There is no transplantation without donors and procurement, and the process of procuring organs is not without social, historical, and interpersonal complications. I use Lesly Sharp's term "organ transfer" to highlight the complex interrelation between donor, procurement, and recipient and the complications that arise in the triangulation between them. Sharp also shows how transplant medicine in the United States uses different euphemistic terms for different audiences at different times during the organ transfer process. In particular, she says that the relative value of human organs is understood and described differently by different parties:

> "Whereas official rhetoric insists that organs are gifts of life, some still consider them as little more than replaceable parts, and others view them as harboring the lost souls of the dead. This array of competing constructions arises in response to the contradictory messages professionals supply to recipients versus donor kin. This ultimately leads professionals to block communication between these two sets of parties because their encounters would uncover the depth of ideological disjunction intrinsic to their work." (*Strange Harvest* 26)

However, donor kin and recipients *do* sometimes contact each other, and the public narratives in these cases are very different from the rhetoric of "replaceable parts" that healthcare professionals use. The ability for organs to serve as both component, replaceable, or mechanic parts *and* as "harboring the lost souls of the dead" is a particular rhetorical affordance that structures perception about how and why organs should be donated.

Currently, much scholarship on health communication focuses on ways to recruit more organ donors (Cohen, Williamson et al., Harrison et al., Arriola et al.) or how donor recipients communicate about their experiences post-transplant (Bauer and Orbe). Black participants in various studies described fears that Black men were being killed by police for their organs to be harvested. While these studies touch on the historic and contemporary exploitation of Black bodies, they do not fully delve into how that history has consequences for the current rhetorical formulations of the need for tissue and organ donation/transplantation. Instead of placing emphasis on effectiveness, I examine the discursive basis on which claims about organ donation are made. This shifts the focus away from *how* to get more people to donate organs and instead interrogates the underlying assumptions about the ways organ donation has been historically described. By looking at these discursive foundations, rhetorical analysis is able to reveal ways that structuring assumptions shape narratives about being a "good" public health citizen and who has historically been afforded the opportunity to "donate" their body rather than have their body exploited.

The difference between giving a gift of an organ and having an organ harvested relies on the ability to make decisions about one's own body and having the autonomy to provide consent. In the late 19th century, there were pushes within transplantation medicine to obtain written consent, but this was not truly "informed" consent (Lederer 9). Patients may or may not have understood what was happening with their bodies beyond being told they would undergo some sort of surgical procedure. In the US, there was no true legal precedent for informed consent until 1914, and this was not widely enforced until 1979 (Kumar). However, as Kelly Happe and Gordon Mitchell have discussed, contemporary genetic research further complicates understanding of consent because biological material retains genetic information that has implications for participants beyond their own individual identities. Further research about DNA and the ways genetic research has been used to make claims about entire people groups has led to discussions about group consent, or how to fully and truly inform someone about the consequences of a procedure or research. Kim TallBear has shown that the production of DNA as a "technoscientific object" has been influenced and used by indigenous people as well as Western colonial science, and that it is deployed in many different (and conflicting) ways (31). Despite the emphasis throughout organ donation publicity on educating people about becoming registered organ donors, there is also literature on educating family members of people who have died in order to encourage them to donate their loved one's tissues or organs. This touches on a complication surrounding consent: how does someone who has not, or cannot, be adequately informed and give their free and willing consent become a donor? By the formulation of organ donation literature, after death, the question of consent no longer belongs to the person from whose body the organs or tissues will be taken. This not only affects the treatment of that individual, but also affects family members, the person receiving the donated tissue, and potentially any genetic research conducted regarding the recipient in the future with donor DNA fragments.

The rhetorical complexity of human organ donation shapes current perspectives on what an organ or tissue donation is (both before and after the organs leave the donor body), and the rhetorical relationship between a donor and an extracted organ. The rhetorical history of organ donation has consequences for contemporary public deliberation about human bodily autonomy and the ways that human bodies are figured as capital, even down to the level of the cell.

Establishing the Gift of Life

This History of the Gift

In this section, I focus on the trouble with the rhetoric of "gift." Without acknowledging both the benefits and violence of Western biomedicine, it is impossible to fully account for public concerns about contemporary medical treatments that use human tissues as resources and treatments. Western medical science has a long and violent history of racism, sexism, and ableism. Specifically for the purpose of this chapter, it's important to note that the medical sciences in the United States are rooted in physician roles in the enslavement of Africans, the development of "modern gynecology" by James Marion Sims through surgical experimentation on enslaved women, a market for human cadavers, and unethically testing medical theories on marginalized people both inside the US and through medical colonization (Lederer 69-70). The human body became not only a thing to heal and protect, but a resource that could be stripped, cut apart, and mined. As historian Rana Hogarth has discussed, Benjamin Franklin corresponded with physicians concerning their theories about biological differences between Black and white bodies (2). These stated "biological differences" were used as justification for the potential of enslavement of Black bodies, the theory that Black women felt less pain in birth, and therapeutic innovation and experimentation by European empires in the Greater Caribbean (Hogarth). But as Hoffman et al have demonstrated in their study of racial bias in assessing and treating pain, medical racism is not a thing of the past. Research demonstrates that laypeople, scientists, and scholars continue to "believe that the black body is fundamentally different from the white body" and that Black bodies have a higher threshold for pain (Hoffman et al).[5] In short, medical racism is not only part of US history— it is very much a present threat to Black, Indigenous, and Brown bodies.

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[5] Another systematic review of implicit racial and ethnic bias in healthcare went as far as to state that, "Most health care providers appear to have implicit bias in terms of positive attitudes toward Whites and negative attitudes toward people of color" (Hall et al). Additionally, a study published in 2019 demonstrated that, in the US, "Non-Hispanic black (black) and non-Hispanic American Indian/Alaska Native (AI/AN) women experienced higher [pregnancy-related deaths per 100,000 live births] (40.8 and 29.7, respectively) than did all other racial/ethnic groups" (Petersen et al).

Most recently, the pervasiveness of medical racism has been evident through the disproportionate effect of COVID-19 on Black communities. In September 2020, the *New England Journal of Medicine* said,

> "The Covid-19 pandemic clearly illustrates the intersection of structural racism, social risk factors, and health. Data from the Centers for Disease Control and Prevention on Covid-19 infection and mortality rates show high incidences in specific geographic regions. Further investigation within Louisiana revealed that rates of hospitalization and death in Black patients were twice as high as would be expected on the basis of demographic representation" (Egede and Walker).

In short, skepticism of the medical system in the United States is not only rooted in the history and legacy of slavery, but also in current practices that routinely misdiagnose, ignore, and neglect Black patients. It is perhaps not surprising, then, when contemporary studies cite resistance from Black donors about offering their bodies up to be used for the benefit of the medical system which has and continues to mistreat Black bodies. This adds important complications to the framing of organ donation as a "gift of life" because, for centuries, Black bodies have been mined for resources. The presumption of whiteness in Western biomedicine often ignores the realities of medical racism or dismisses them as "historical" factors that should not come to bear on current claims about how and who should become organ donors.

The Economy of the Gift

In Wisconsin newspaper archives from the late 1960s to early 2000s, "gift of life" shows up both as a metaphor and as the name of an official organization. This phrase is not used exclusively as a descriptor of organs, but builds on familiar rhetoric about the "gift of life" through blood donation. I chose to focus on the language of "gift" because it has an important rhetorical history for the way we think about organ and tissue donation today. The notion of "gift" implies something freely handed over, without expectation of monetary compensation. The 1968 passage of the Uniform Anatomical Gift Act (UAGA) provided a more standardized way for hospitals to procure donated organs and tissues and solidified "an agreed-upon definition and procedure for what the UAGA called anatomical 'gifts'" in order to encourage donation among the public and reduce doctors' fear of legal liability (Fountain 176). Later, the National Organ Transplant Act, which "passed easily with bipartisan support in 1984… outlawed profit from the purchase of solid organs, insuring [sic] that organ transplantation would continue to rely on voluntary donation of the public and not become a commercial venture within the United States" (Festle 62). The framing of donation as a gift and intentional distancing from profiting off of the procurement of human organs and tissues was, of course, important to protect vulnerable populations from being exploited, bodies being mined and harvested for products, and preventing forced organ donation for sale. However, the term "gift" also ignores the fact that profiteering off of the human body *does* exist, if not on the individual level than the institutional one.

The term "gift of life" appeared in earnest in newspapers in the 1960s primarily in regard to blood donation. In the 70s, the term began to refer more commonly to organ donation, though references to blood donation do not fall away. "Gift of life" was invoked for bone marrow donation, blood donation, plasma donation, and also putting unborn children up for adoption. It equates the ability to donate or "give" part of your body in order for someone else to receive "life." In *Banning Queer Blood*, Jeffrey Bennett says, "In the ritual of blood donation, the individual body functions as a medium of culture, always acting as a representation of a larger social form- that of an engaged citizen" (6). He goes on to show that by 1998, the blood industry was a multi-billion dollar industry, and blood was more valuable by volume than crude oil (Bennett 6, 9). In the 1970s, Richard Titmuss published a book called *The Gift Relationship* which emphasized the potentially harmful effects of offering money for blood because he claimed this would attract “populations that were more likely to abuse substances and carry sexually transmitted diseases” (Bennett 9). Conversely, donating blood for free as an altruistic gift, Titmuss argued, would thus increase the safety of the blood supply. Bennett’s analysis of Titmuss and of the shift to blood donation as altruism reveals that, while seemingly selfless and benign, the notion of “gift” is founded upon the idea that only certain bodies should be allowed to donate, and that these bodies are straight and affluent. Bennett says, “Volunteers were a necessity, rhetorically constructed as civic minded, free of disease, and irreplaceable” (9). The value of donation was not only in the material value of the biological commodity, but in the moral value of becoming a donor.

The use of banking terms to describe storing human tissues began in the late 19th and early 20th century. Susan Lederer says, “In the 1930s, American physicians and surgeons appropriated the language and concepts of financial institutions— deposits, withdrawals, and banking— for the storage of bodily fluids and tissues. More than a metaphor, banking captured the transactional nature of commerce in the body” (Lederer 72). This transactional approach to tissues seemingly conflicts with the preoccupation with “gift” language surrounding donorship— namely, that while tissue banking implies a valuable commodity, organ donorship is meant to curtail ideas about bodily value and frame donorship as a free gift that should be given without consideration of the ways that the body commodified. In the rhetoric of donorship, human organs and tissues are treated as resources that can be separated from the distinct, embodied personhood of an individual. This is in part a necessary rhetorical move in order to study, transplant, and repurpose human tissues that no longer exist within the body of the donor. However, rhetoric treating human tissues as resources leans on monetary metaphors that frame the body as something that can quite literally be banked.

Leslie Sharp has shown that organs are referred to as “gifts of life” (a phrase long used by the blood industry), and that there are taboos around the discussion of the financial worth of organs. However, Sharp has seen on “rare occasions itemized price sheets for various organs” to communicate to recipients the enormous cost of the organ transfer process (13). In both the example of donated blood and donated organs, there is an implicit acknowledgement of the value of human biological material at the same time there is a refusal to discuss this value with donors. Bennett shows that blood was more valuable than oil, and Sharp and Festle explicitly draw attention to the fact that, while organ transfer is facilitated through nonprofits, these nonprofits are still privatized institutions that explicitly discuss the value of human organs. The ability to purchase organs was not explicitly outlawed until 1984 (Festle 62). In short, the rhetorical power of framing donation as a “gift” both invests in important ideas about being able freely choose what to do with one’s body or the body of a loved one, but also ignores the reality that organ transfer in the US is reliant upon the idea that organs are scarce and highly valuable commodities that must be procured.

The Problems with the Gift

While the commonplace of “gift” invokes ideas about a neatly wrapped package handed freely from one person to the next, organ transfer is a fraught and highly technical process. There are medications, machines, permissions, and the delicate physical transfer of organs from one place to another. However, while these technical specificities are important for medical organizations, the tension between life and death that implicitly exists within this process makes it a particularly complicated treatment for donors and recipients. Because of the need for more organ donation, most publicity about donorship frames the process as “miraculous,” either explicitly or implicitly in the stories invoked to demonstrate how meaningful donation can be. A qualitative study of transplant recipient communication shows that most individuals who receive organ transplants “consider it a miracle” (Bauer and Orbe 141). Many recipients became avid advocates for organ donation, often out of a sense of indebtedness for being “chosen to live” (146) because someone else had died and agreed that “every interaction has the potential to become a meaningful and educational conversation about organ transplantation” (147). These findings are consistent with recipient testimonies in publicity about organ donation throughout the mid to late 20th century. Notably, the stories of both donor and recipient families are used as recruitment tactics for potential organ donors.

An ad published in the Wisconsin State Journal on December 25th, 2000 asks readers to consider becoming organ donors to give “the most precious gift of all— the gift of life” in light of the holiday season (Bonetti A8). Publicity similar to this article in the early aughts is common during a time when public policy concerning promoting organ donorship becomes a primary concern. This is when Kelly’s Law, passed in 2000, required 30 minutes of instruction on organ donorship in Wisconsin driver’s education courses (*Wisconsin People & Ideas* 16; Tucker). Direct appeals to the public are concretized into law, and more incentives for donorship are provided at the legislative level. The language urging the public to donate and the overwhelmingly positive attention to donation misses the complicated underlying questions that perhaps earlier news media about donation paid more attention to— namely determining death, ethics of consent, and questions about bodily integrity.

Kelly’s Law came into being primarily because of the advocacy of her family. Not long before Kelly Nachreiner died in a car accident, she chose to become an organ donor. After her death, her mother, Mary Nachreiner, wrote to the UW Organ and Tissue Donation program telling the story of her daughter (Nachreiner). Her mother’s advocacy in local schools and alongside state officials led to the proposal of Kelly’s Law (Jaeger 3B). In a photograph depicting the local celebration of Kelly’s decision to become an organ donor and to promote organ transfer, Mary Nachreiner is photographed wearing a shirt that says, “My daughter is a life-saving angel” (Jaeger 3B). Kelly was touted as having given “the gift of life” and her parents urged students to go home and talk about organ donation with their families. Throughout organ donation publicity, families of donors are either featured for their “gift” or are featured telling stories about how meaningful their loved one’s donation is. In 1997, 97 Wisconsin families were honored for their loved one’s “gift of life” with Gift of Life medals (Foster 6A). One family says receiving the news that a recipient was doing well after a loved one’s donation was “like receiving a gift in return” (“Gifts of life”). Families of donors are upheld as evidence that organ donation was “worth it”— evidence that can only be derived from the recipients and the loved ones of the donor.

Gifting and Consent

The persistent calls to donate are not without ethical questions, one of which is the concern with consent. Consent is not a singular event, but an ongoing negotiation within a medical process. One newspaper story from 1974 featured in a Waukesha, Wisconsin newspaper focuses on the potential benefits of donation for the *donor*. Elaine Jesk, a mother of six children, was experiencing kidney failure and was on dialysis 12 hours a week (Lindt 1). Kidney transplants are one of the only forms of organ transfer available to living donors, and thus consent is more clearly achieved from the person donating the organ. In this case, Elaine's brother Richard was a perfect match, but he "has been in mental institutions for the last 18 years" and is described as not being able to "speak for himself" (Lindt 1). His family demanded that they were sure he would have agreed to the transplant if he could, and said, "Richard had never before been able to give anything, and perhaps this was his chance" (Lindt 9). This startling statement suggests, first, that ostensibly because he is disabled, Richard was not viewed as being able to "give" anything by his family. Second, it frames donation (to which it is unclear if Richard is able to consent) would be a benefit to him because he would be able to give the gift of life. Jesk's attorney stated, "We don't function in a society where people can indiscriminately take parts of people's bodies— this case is a good example. We had to go through court to get permission" (Lindt 9). This entire article, in which only Richard's family speaks for him and there is no apparent communication with Richard, frames Richard's life as valuable only if he is able to donate his organs.

This moralizing and urgent stance is not only ableist but reveals the complex nature of consent. Consent is not simply a matter of signing a form and providing permission. Consent is a delicate and careful balance of informing someone of their rights, making sure they understand, provide clear and free permission, and ensuring the safety of all parties. Here, Richard's body is treated as useful only insofar as it benefits his non-disabled sister. As Shannon Walters has pointed out in *Rhetorical Touch*, it is imperative to "let go of the idealized image of an independent, nondisabled, singular rhetor and to embrace the possibilities of new configurations among communicators, speaking and nonspeaking, and multiple audiences across ranges of ability and disability" (199). In other words, the ableist perspective of Richard taken by the newspaper not only cuts him out of the piece entirely (except for the perceptions of his family), but suggests that because he’s not an independent, nondisabled, singular rhetor, that he either cannot communicate or that his family has the sole authority to communicate for him.

In the case of Richard, a living donor, consent is complicated by the apparent lack of treating him as a person of value who can make meaning. However, consent is complicated in other donor cases by the fact that death can often make it difficult to determine what the donor “would have” wanted. In the cases where it *is* clear that individuals wanted to donate their organs, this is often taken up by publications as a way for organizations and families to promote organ transfer. Readers are encouraged to talk with their families to make sure their loved ones know they plan to give “the ultimate gift of charity to another” (Wandschneider 4). The stories of Kelly and Richard show that framing organ transfer as a gift is not a straightforward and benign description of what it means to be an organ donor. The moralizing message behind the urgency for organ donation frames bodies as valuable insofar as they can be used. The public is urged to make a decision (both through registration and in discussion with their families) about whether or not to be a donor before/if they become unable to communicate this themselves. There is an underlying capitalist notion of bodily value relies on ableist, sexist, and racist views of bodies that are seen as having different inherent values based on their ability to perform in particular ways. The “gift” is then heavily reliant on what the giver is perceived to have to offer. Gifts are not freely given when a person does not have the right to choose for themselves.

Navigating the Life and Death of Donation

> “Don’t call this my deathbed. Let it be called the Bed of Life, and let whatever is usable be taken from it to help other lead fuller lives.” - Robert H. Test

In the midst of what is often a traumatic event or decision, families are approached about what to do with their loved ones’ bodies. And rather than couching donorship in terms that are both honest and attentive to the humanity of a person who has died, the rhetoric intended to persuade families to choose donation often couches their hesitations, spiritual considerations, or skepticism as illogical or misguided. Confusingly, “donated cadaveric organs simultaneously emerge as interchangeable parts, as precious gifts, and as harboring the transmigrated souls of the dead” (*Strange Harvest* 14). There is an implicit acknowledgement of the value of human biological material at the same time there is a refusal to credit this value to individual donors.

There is a strong thread throughout the history of publicity regarding organ donorship claiming that the gift of life, in some ways, alleviates the pain of losing a loved one. It becomes a “way to serve humanity one final time after death,” not only immortalizing a donor (as earlier documents suggest) but allowing them to *act* beyond death (“Gift of Life is Promoted”). This frames the donors as alive in more ways than one. There is a sense of being of service after death, or, as a newspaper states in 1971, continuing to be a “value to society, present and future, and even [achieve] a kind of immortality by providing [organs] for someone else” (Harris 4). Not only are organs achieving a kind of immortality through physically living on in another body, but the donor is framed as being able to take action beyond death. This is different than, for example, leaving a lasting piece of art or writing that was created before a person dies. According to the framing in these articles published in the 1970’s, a person is able to do something after death that they explicitly could not do before. In this sense, the permanence of death is blunted through the claims that a donor can do something that only a cadaver can achieve.

Materials distributed internally to medical establishments provide evidence of complicated language trying to mitigate the tragedy of death and the trauma of deciding what to do with a loved one’s body. The UW Organ and Tissue Donation (UWOTD) is an organ procurement program established in 1966 and self-described as one of the most effective organ procurement programs in the nation (About Us). It is affiliated with UNOS and is federally designated to provide service to 108 hospitals in Wisconsin, Michigan and Illinois (About Us). UNOS is "the private, non-profit organization that manages the nation's organ transplant system under contract with the federal government" (About UNOS). While the program and research at the university existed beginning in the 1960's, it was not until the early 1980's that the immunosuppressant drug cyclosporine was introduced, making organ transfer much more widely accessible through its ability to make bodies more receptive to donated organs (Festle 59). As organ donation became even more viable in the 1980's and 90's, public communication about organ donation was ramping up and OPOs and hospitals were developing more unifying policies and language for discussing donation. One example of the development procedures at UW is an untitled handbook (in a folder dated from 1995-1996) for the University of Wisconsin Organ and Tissue Donation Program (UNOS and Donation Information). This handbook provided general guidance about the need for organs, the organ procurement network, legislation, forms, medical issues, donor management, and medical procedure for organ transfer. I explore the handbook in more detail to better understand how hospitals and OPOs were planning their communication to donor families, and how this shapes public discourse about organ transfer.

The handbook opens with several personal essays and poems about donation, all of which use moralizing and religious language to describe organ donation. Such affective language is perhaps surprising in a handbook that includes clinical criteria for acceptance of an organ, but this is not the only example in which overtly personal and moralizing language is used in conjunction with medical information. A manual overviewing the training programs and information on donation options later published by The UW Hospitals and Clinic Organ Procurement Organization *also* uses two poems from the opening of the UNOS handbook:

"God's Lent Child" and "Doug's Gift of Love" (Requestor Training Program 24-25). However, in medical terminologies, the demarcations between life and death are harsh and abrupt. While donorship is most often associated with the use of cadaver tissues, there are different ways to donate organs or tissue. There are live donors, donation after brain death (DBD), and donation after cardiac death (DCD). Live donors can donate blood, plasma, bone marrow, kidneys, and parts of the liver (among other things). Donations after brain death occur when a physician rules a patient "brain dead," but their heart continues to circulate blood throughout the body. Donation after cardiac death usually occurs after a patient has been taken off life support and requires a shortened timeline so as to preserve the organs. These different donors and their families have various roles in the donation process, and their donated organs/tissues also have different rhetorical attachments to their identities, to the recipient's identity, and to the economic or gift-based language used to describe the organs or tissues that have been removed.

The untitled handbook specifically moves back and forth between the terms "donor" and "patient." The section of the handbook titled "Donor Management" (14-15) refers to "brain dead patients." These terms accentuate Lesley Sharp's claim that "Donors are peculiarly liminal beings, caught somewhere between patient and cadaver status" (*Strange Harvest* 4). A donor is certainly a liminal being— one that is treated as a patient under the umbrella of Western medicine that prioritizes keeping the patient alive. Concern about defining death was present in debates about organ transfer from its inception. As skepticism and critiques of medical authority occurred in the 1960s, people outside of the field of medicine were commenting more on the ethics of medical practice and research. A 1968 commission to investigate the implications of medical research revealed doctors' concerns that, as transplant became more viable and more common, it was important to define death and make it abundantly clear how and when doctors pronounced someone as dead (Festle 52-53).

Respirators were able to keep “lungs breathing and hearts beating” even when brains were given fatal diagnoses, complicating the common-sense and common-law understanding that a person was dead when they stopped breathing and the heart stopped beating (Festle 56). In 1968, an article in the *Journal of the American Medical Association* (JAMA) recommended “adopting a new ‘brain death’ standard for determining the moment of death” in which death was defined by “a permanently nonfunctioning brain” which included “unreceptivity and responsiveness, no movements or spontaneous breathing, and no reflexes” (Festle 56). In other words, the definition of death was evolving, and this made some ethicists and members of the public concerned. As recently as 2017, Johns Hopkins published an article on their website articulating the difficulties of defining brain death, in which neurocritical care specialist Adam Schiavi states, “Most people have this notion that you’re recognizably alive and then you’re recognizably dead. What’s happened is that our technological ability to sustain life has moved faster than our moral capacity to deal with the implications” (Nitkin). The liminality of being labeled a “brain dead patient” presents problems that are evident throughout the efforts to define death, particularly in relation to a procedure that requires removing vital organs from one body to save another. And these decisions hinge on *definitional* work that, while informed by biology, relies on interpretation and application of ethical and biological principles that discursively determine the boundaries between life and death.

Immortality and the Body

The body of a potential donor is also undeniably perceived as a source from which another patient can be kept alive. In addition to the definitional work around death, this tension is displayed in the different ways that donors are described within the handbooks prescribing how to talk about organ donation. In communication designed to persuade people to donate organs, there is a recurring idea that one's organs can become immortal through donation. The handbook covers logistical issues such as reimbursement for donor families and hospitals, whether or not to use anesthesia for removing organs from donor bodies, and information about the donor form. Going into detail about determining brain death and the use of anesthesia stands in stark contrast to the language in the essay opening the handbook. "Organ Donors Live Forever" by Robert H. Test makes flowery references to when death comes, not to "attempt to instill artificial life into my body by the use of a machine" and to give sight, a heart, blood, kidneys, bones, and cells from the brain to whoever needs them. The essay concludes by saying, "If, by chance, you wish to remember me, do it with a kind deed or word to someone who needs you. If you do all I have asked, I will live forever" (UNOS and Donation Information 1).

What is particularly striking here is that this essay, and other poems that make organ donation sound like the ultimate gift and means to immortality, are not necessarily aimed toward the public. This UNOS handbook is designed for healthcare workers who are crucial actors in the medical apparatus that makes organ donation possible. It could be that the poems and personal anecdotes about transplantation serve as a resource for medical workers to share with potential donors, but it could also be that these affective statements are covering over the more horrifying parts of the cycle of organ transfer: namely, that someone must die in order for donation to work. Despite often relying on highly technical language that frames organs as replaceable parts, the poetic and affective appeals about donorship and immortality, gifts, and being able to essentially "transfer" a piece of one's life are available as persuasive tools for healthcare workers as well. The inclusion of such language suggests that healthcare workers must also be persuaded that organ transfer is not only a tragedy, but also a beautiful gift they can take part in. The language also implies that healthcare workers should be in a particular frame of mind in order to effectively persuade patients and their families that donation is a good choice.

The UWOTD specifically discusses the importance of building connections between the donor families and the recipient. These associations are emphasized as part of the "success" of the program, and the training materials historically represent emphasis on the donor-recipient relationship. The "Requestor Training Program" is a manual published in 2004 that provides information about how to talk to families about donation, different religious beliefs related to donation, when donation is possible, stages of grief, developing rapport with donor families, documentation, and common staff concerns. Here, the poem "God's Lent Child" (which is also featured in the previous handbook) is included in the "donor family aftercare" section, ostensibly as a means of comfort that can be provided to the family.

The blend of highly technical terminology and logistics of coordinating organ transfer that happen "behind the curtain" in a hospital and in training materials for hospital staff are combined with moralizing and religious rhetoric about the importance of sharing life with another individual. Invocations of immortality are placed in the same documents as how to determine brain death and how to determine whether or not an organ is usable. Families are coached to make decisions about their loved ones based on moralizing arguments about being able to give life or enabling their loved one to "live on" through organ transfer. Meanwhile, the clinical procedures for determining death are part of the "biomedical backstage" in which biomedical decisions are made based on a series of procedures and algorithms (Teston *Bodies in Flux* 2). Christa Teston argues that these "algorithmic protocols," which enable doctors to reduce the complexity of complex medical situations into "manageable bits and bytes… simultaneously flatten and sterilize the complexity of disease [and] the human body” (*Bodies in Flux* 14). These tensions portray the rhetorical gaps that exist between the reality of organ transfer and the urgency hospitals and organ procurement agencies portray regarding the lack of available organs.

Organ transfer is a complex process that blurs the line between living and dying. There is no shortage of ambiguity in the ways that organ transfer is described— seemingly competing descriptions of the process are explicit in the literature shared within handbooks on organ procurement and in talking with donor families. However, organ transfer is presented to the public as an obvious and life-saving imperative that should not be considered in conjunction with religious or mystical views of the body staying whole after death (despite explicit invocations of religious imagery in poems and essays prompting prospective donors to share their bodies). There is a wide rhetorical gap between the lived realities of a loved one’s life ending and the pressure to treat a body as a resource to be shared. This gap is sutured together using euphemistic language like “organ donors will live forever” but also algorithmic, clinical definitions of death. While neither of these descriptions capture the complexity of the lines between living and dying, they are both part of the attempt to wrangle the complexity of organ transfer into the ability to give a gift of human tissues and organs. Donation is both technical and affective, a gift and a clinical necessity, a moral obligation and a moral conundrum. The ability to rhetorically vacillate back and forth between clinical terms and affective appeals frames organ donation in seemingly conflicting (but simultaneously complementary) terms that allow ambiguity between the tragedy of death and the need for donated organs.

Biological Kinship

The US Health Resources and & Services Administration succinctly sums up the basic necessities for matching a donor to a recipient in the following way: blood type and body size factor into a match ("Matching Donors and Recipients"). Essentially, a certain level of biological similarity or kinship is essential to organ donation. Other factors that have historically played a large role in matching include the severity of the receiving patient's condition and the distance between the donor and the patient (some organs can survive outside of the body longer than others). Once an organ is transferred into a recipient, there can be a rhetorical reshaping of a biological relation; a particular kind of kinship is achieved outside of family bloodlines. The stories of kinship between donors and recipients can be found in publicity designed to persuade public audiences that organ transfer is both the right and most meaningful decision for what to do with one's body (or the body of a loved one) after death. Several such examples can be found in The *Wisconsin People & Ideas* magazine which has been published by the Wisconsin Academy since 1954 and is designed to provide information about developments at the University of Wisconsin. An issue from 2008 is focused primarily on the success of the UW organ transplant center, and at that time, the center was ranked first nationwide in the number of kidney and kidney-pancreas transplants (15). The issue features not only the prowess of the surgeons, the Wisconsin Donor Network, and other state agencies, but goes into depth on patient stories. One particular story discusses how the nieces of a lung donor ask to touch the recipient's chest to "listen to his breathing" to remind them of their uncle (20). They also refer to the recipient as "uncle" (20). This is not an uncommon narrative in publicity about donation— though most donations are intentionally anonymous, there are times when donor families and recipients are united, and the references to kinship build on the idea that a part of a body can stand in to represent the person who donated that part.

The liminal status of donated organs is portrayed throughout publicity as a way for a loved one to live on through another. However, in her ethnographic research involving interviewing families of donors, Sharp says that many families are in actuality thrust into an extended grieving process. “If, for example, one’s daughter lives on in the chest of an anonymous recipient, then where is she now?” (“Commodified Kin” 124). OPOs like the UWOTD are centered around making sure there are organs to donate— their successes and advertisements in many ways directly conflict with the goals of doctors who are tasked with keeping their patients alive. The work of OPOs centers around procuring organs and tissues only available after death. The often traumatic and difficult process of a loved one either suddenly dying or having to decide when a loved one is dead, making the decision whether or not to donate their organs (if they have not made this expressly clear), and dealing with the consequences of a loved one’s death being framed as crucial to the life of someone else. Not only is death framed as a gift to someone else, but in the *Wisconsin People and Ideas* article, death is only partially completed because the donor ostensibly continues to live in some sense through another body. While some publicity frames donation as an obvious conclusion by describing the body as a thing that can be compartmentalized and banked, this same publicity might still deploy the idea that personhood *is* attached to these body parts.

A central question implicit to the notion of kinship through shared biological materials is: to whom do these organs and tissues belong? The fact that human tissues can be lifted from one body, temporarily preserved, and placed into another body complicates ideas about bodily autonomy, but at the same time suggests that part of personal identity is maintained at the biological level even after transplantation. Throughout the materials presented in this chapter that are attempting to persuade audiences to become donors, the invocations of ideas about a level of immortality, giving the gift of life, and “living on” through someone else’s body are explicit. But research shows that even after donation, recipients can still maintain questions about to whom the body part truly belongs.

In *Strange Harvest*, Sharp discusses the sense of hybridity that recipients can feel because their "viability as a living organism relies on its being made up of parts from at least two human beings" (23). In order to address the potential concern with feeling like a hybrid body, "transplant professionals regularly describe body parts as inert objects" framing the process of organ transfer as "the repair of a complex and fragile *machine* (emphasis original)" (24). The framing of the body as a machine and organs as removable parts communicates that the "self" or true identity of a person is separate from flesh, and that the body is inconsequential to personal identity. Sharp later points out that the way the body is described to recipients (as a machine) is in direct contrast with how the transplant industry and OPOs portray organs as "fragments of beloved individuals who live on within and grant new life to others" (24). Sharp's analysis shows that the value of human organs and tissues are understood in radically different ways depending on the stakeholders and context. But how can such different and conflicting descriptions of donated organs traffic so easily between parties? Why is there not more of a communicative breakdown between these competing notions of body as machine and flesh harboring the identity of a beloved family member?

The very fact that human tissues and organs can be removed, commodified, and distributed complicates the ways we talk about them. In some rhetorical contexts, it is more useful to frame the body as machinic. In others, it is persuasive to communicate that human tissues maintain identification with the person from whose body they came. Both of these conceptualizations are partial, incomplete, and can have detrimental and material effects on both donors and recipients. On a biological level, however, both of these assertions are not inaccurate.

DNA allows researchers to identify specific people and familial traits in human material as small as cell lines, which can exist long after they were extracted from a person's body. Cell lines in particular can be replicated and developed well beyond a person's lifespan. Human cells, tissues, and organs can, to a certain extent, exist autonomously from a donor or recipient's body. Through technological innovation, they can function as their own unique living organisms even though they are also intricately tied to and vital for human bodies. This complexity is central to the concept of the distributed body— that human body parts can exist rhetorically both as a separate thing *and* can never truly be separated from individual people.

Conclusion

The seemingly competing narratives about the relative autonomy of donated organs and tissues and their attachment to an individual person do not only occur in organ transfer. Today, tissues and cells like corneas, stem cells, cartilage, muscle, and liver cells have become valuable and commodifiable in a way that is far more commercial and often less regulated than organ transfer (*Strange Harvest* 11, Waldby and Mitchell). Though there is arguably not the same level of personal identification with donated cells and tissues as there are with larger organs, there is still a sense, as I will describe in more detail in my fourth chapter, that these donated cells and tissues maintain a connection to the personal, individual identity of their donors.

From the 1968 drafting of the Uniform Anatomical Gift Act to the advocacy in the early 2000's, organ and tissue donation have been framed as life-saving gifts that place a moral imperative on people to make decisions about what to do with their bodies after death. The various rhetorics used to describe the urgency of organ donation present often conflicting and concerning messages about the body as a set of component parts *and* as organs and tissues maintaining a connection to the donor. These conflicting messages are necessary for concealing the traumatic, difficult, and often pressure-filled situations in which organ transfer occurs. An analysis of this publicity shows how various documents, either intended for the public or to educate OPOs on how to discuss organ transfer with the public, has rhetorically shaped the ways body parts that are separated from their original bodies are transformed from person to thing, and often are presented as *both* person and thing at the same time. This chapter examines this history to show how this rhetorical foundation becomes increasingly complicated as cell lines, stem cell research, and other forms of more micro-levels of cellular- and tissue-based products come into being. I discuss this more in depth in my fourth chapter through an analysis of how public actors rhetorically frame their extracted cells.

This rhetorical history also shows the complexity of donation used for public education. Once an organ leaves the body from which it came, to whom or what does it belong? My third chapter looks more closely at how the Mutter Museum, a medical history museum in Philadelphia, frames organs and tissue on display as either medical models that can be extracted to exemplify broader diagnoses *or* as evidence of personal attributes deeply tied to identity. By framing organs as stand-alone objects or as tied to personhood, there is conflicting messaging about the nature of an organ's "use" that reveals the mechanized and highly individualized nature of human tissues.

The framework of the distributed body helps to elucidate these rhetorical complications because it shows how, in Western biomedicine, organs are not treated as things or people— they are often treated as both. This becomes particularly relevant as regenerative medicine and cellular- and tissue-based research and products are even more central to medical research in the 21st century. In late capitalism, tropes of machines, hybridity, and information indicate a shift toward neoliberal economic language, informed by the increasingly industrialized and technologized nature of medicine. Melinda Cooper describes neoliberal investment in the body as “not so much the generalized commodification of daily life… as its financialization” and its “incorporation into the nonmeasurable, achronological, temporality of financial capital accumulation” (Cooper 10). Now, not only are people encouraged to become donors after death to aid in research or live-saving procedures for *others*, but biomedical discourse also encourages banking cord blood cells, freezing eggs, and using platelet-rich plasma for treatments for one’s own body. The body is not only a resource after death, but a resource to treat oneself in life. As Fountain and others have pointed out, human tissue “abandoned during medical procedures” (Fountain 177) can be retrieved by physicians and used for research or developed into lucrative cell lines (Waldby and Mitchell, Skloot). What might have once been seen as disposable is increasingly seen as valuable biocommodities. The human body is only becoming more distributable, and the benefits of this distribution are markedly different depending on who can claim ownership over them.

Chapter 3

"Disturbingly Informed": The Material Pedagogy of the Mütter Museum

The Mütter Museum, completed in 1863, is one of the oldest medical museums in the United States. It contains many human specimens, some with original attachment to the body of a famous person (like Grover Cleveland's jaw tumor), and others without a famous donor or completely anonymous. On display in the lower level of the museum is a megacolon. The megacolon looks, as its name implies, very large. But its size is emphasized by its location next to a model of an "average" colon. However, most displays do not have this comparative element. Visitors look at models or specimens that have been labeled as abnormal, but they do not necessarily have a way to compare displays with their own bodies or a "healthy" specimen. Aberrance is made visible without a referent, creating an air of mystery about how the viewer is to interpret the object. The Mütter Museum has become a tourist destination in Philadelphia where publics are invited to learn about historical specimens, but they are also invited to consider how their own bodies compare or contrast with the specimens on display. While viewers might look for a typical comparative model with which to juxtapose the exhibits displaying some kind of abnormality, the museum only occasionally provides such a model. This makes it more likely that the viewer uses their own body as a comparison. Whether or not the visitor uses their own body to compare or contrast with a display, the museum creates the sense that one can understand something about a diagnosis or ability based on observing human specimens. These specimens become stand-ins for larger diagnoses and affects concerning bodily abnormality, using a material representation to reduce what are highly complex, embodied, and nuanced lived experiences of diagnoses.

This chapter examines how the intersecting elements of exhibit, sight, pedagogy, and material artifacts convene in a medical museum setting to use specimens as material synecdoches[6] for pathologies. I argue that body parts as material synecdoche are relevant for rhetorical studies because they function as stand-ins that are taken at face value to be representative of a diagnosis. However, the material, enthymematic display of body parts does not represent the variations within broader diagnoses, the experience of the donor, or the ways that a specimen's arrangement within a particular exhibit in a particular place for a particular audience might shape viewers' interpretations of their own bodies. Because the specimens are displayed independent of an individual's story, they ostensibly serve as objective representations of a diagnosis. I argue that it is *because* these specimens are separated from whole and holistic bodies that they are able to serve as material synecdoches that can represent the viewer's experience in their own body. The representative nature of these specimens is important to attend to because, when a body part becomes a comparative diagnostic tool for a viewer, it takes on a unique rhetorical and pedagogical valence. It is no longer a specimen on a shelf, but a way to understand and diagnose bodily differences and, in the age of constant risk-assessment, a way to implicitly compare one's own body to a pathologized body part. Ultimately, I argue that the methods of display at the Mütter Museum serve as a visual standing-in, or material synecdoche, for larger theories about human mental ability.

Disability studies has shown time and again that the orientation of staring invites the viewer to see difference as a spectacle. However, in this chapter, I focus primarily on a way of looking that invites the viewer to interpret diagnosis about mental illness as legible on body

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[6] In *Rhetorics of Display*, Lawrence Prelli uses the term "material synecdoche" to describe a monument built for Arthur Ashe Jr, a Black tennis player who was an accomplished athlete and activist (14). However, the term is used in passing and is centered around built structures. Here, I extend the term to focus on materiality that is presented as self-explanatory rather than constructed.

parts. Rather than focusing on staring as a central concept, I focus instead on the ways that body parts separated from donor bodies begin to stand in as educational tools built on the idea that flesh makes abstract medical concepts legible. While viewers are undoubtedly invited to stare, I highlight one particular function within the larger problem of spectacle: namely, that the objects are imbued with meaning simply because they are observable. Medical museums use a visual pedagogy that coaches viewers to interpret body parts as scientific objects, allowing them to ostensibly participate in scientific observation through the medium of curated displays. These rhetorical modes of display frame abnormality, particularly mental abnormality, as legible on human flesh. Because medical museums play a significant historical role in the way the human body is categorized and displayed to the public, this chapter engages in rhetorical analysis of how human specimens are displayed and the material role of exhibits in shaping viewer's interpretation of the relationship between body and mind. In doing so, I argue that not only the description of these remains, but how they are selected, their position within the space of a museum, and the ability for viewers to interact with human specimens decontextualized from a whole body, have rhetorical consequences for interpreting the role of diagnosis and mental ability.

Displaying the Body

The history of the Mütter Museum shows that it has shifted over time from primarily educational purposes for doctors to educational purposes for the public more broadly. Initially, the museum was intended for the use of doctors and healthcare professionals almost exclusively. Over time, and with the investment of a curator named Gretchen Worden, the museum began to shift in orientation as a destination for the public (Strausbaugh). The Mütter Museum was originally designed for medical education during a time when medical museums were preoccupied with classifying human anatomy based on race (History). It has since become a popular tourist location in Philadelphia, drawing in visitors desiring to be, as the museum's tagline suggests, "disturbingly informed" about medical history and the human body. In this chapter, I will first provide context about the Mütter Museum's educational mission related to medical history and Western biomedicine in the US. I will then discuss exhibits emphasizing cognitive ability, or "the mind," and argue that the exhibits teach the public to interpret the mind as visibly inscribed on (and in) human flesh. I focus on two exhibits in particular: the display of slides of Albert Einstein's brain and jars of peeled human skin from an anonymous donor, each revealing very different orientations toward displaying mental ability as physiologically legible.

Because the Mütter explicitly deploys the concept of "disturbing" as a way to talk about human specimens, the body parts on display are framed as interesting, but also somewhat repulsive because of their abnormality. Disability studies scholars help me articulate how and why these bodies are framed as abnormal or exceptional, and the effects of the implicit invitation for the viewer to interpret them as such. Specifically, as Rosemarie Garland-Thomson has shown, the viewer is invited to examine closely and even to stare. Jenell Johnson describes why this kind of staring might occur when people or bodies have been classified as "medical marvels," or extraordinary bodies inscribed by "centuries of symbolic residue" (*American Lobotomy* 10). When people are classified as medical marvels, it "hints at a symbolism so intense it stretches the limits of biomedical knowledge" (*American Lobotomy* 10). The Mütter capitalizes on the concept of the marvel but does so by highlighting body parts even more than whole persons. The pieces of bodies placed in the context of the museum come to stand in as an observable and interpretable scientific display. Even an exhibit displaying a jar of peeled human skin is supposed to demonstrate, by its very presence in a medical museum, a mental disorder that is legible through the discarded skin. These specimens are more than curiosities in a cabinet— by including a diagnosis in plaques or descriptions, they become both curiosities *and* metrics with which to measure abnormality.

When human specimens are put on display and the viewer is invited to observe and interpret them, the viewer is participating in what is presented as scientific observation *and* looking out of sheer curiosity. As my case studies will demonstrate, observing slides of Einstein's brain or jars of skin do not give the viewer a particular knowledge about the persons from which these specimens came, but the implicit suggestion is that they are learning something important just by looking. Material synecdoche invites viewers to visually interpret specimens by attaching medical meaning through the attribution of a diagnosis and association with a material representation of that diagnosis through human tissues.

Medical museums capitalize on bodily differences to attract visitors, but also to educate about how the history of medicine comes to bear on the present. Before universities became the hub of anthropological research and the study of human remains, medical museums were the primary way scientists and medical professionals studied, classified, and taught the public about the physical attributes of humanity. In doing so, they shaped popular perspectives about race, gender, and ability. In "Revisiting Winnetou: The Karl May Museum, Cultural Appropriation, and Indigenous Self-Representation," Lisa King shows that human remains have been displayed in manners that misrepresent controversial practices by Native American people and perpetuate distorted perceptions of Native nations. Samuel Redman describes a desire in the U.S. to collect human remains and catalog them starting around the time of the Civil War and well into the twentieth century (Redman 3), just when the Mütter Museum was coming into being. In collecting and establishing "bone rooms," categorizing human remains, and putting them on display in exhibits, human body parts were translated as objects of scientific research and are now presented as such to the public.

The Mütter Museum has, throughout its history, obtained specimens in morally objectionable ways and subsequently chosen to display particular specimens despite the explicit wishes of the person from whose body they came. A key example of this is Einstein's insistence he be cremated after death so that no one would come to "worship [his] bones" (Lovejoy 51), but the Mütter has chosen to display slides of his brain prominently. There is, at the core of the choice, a willful disregard for the wishes of the person from whose body these samples came that disrupts the ethics of consent. The choice to display Einstein's brain also reveals a motivation to display something deemed sufficiently "educational" or interesting enough at the expense of, and arguably the willful manipulation of, a person's body.

The history of how the Mütter procures specimens is long and varied throughout time, but in short, after the Civil War in the US, there was a surge of collections of human remains, particularly human skeletal remains and naturally mummified bodies uncovered in the American West (Redman 16-17). The people who collected these remains were as varied as amateur collectors, archaeologists, medical professionals in the US army, and individual doctors affiliated with various medical institutions. The drive to collect human skeletal remains was largely driven by Samuel George Morton's skull collection in the mid-19th century. Morton used these skulls to pseudoscientifically support his theories about race and to "prove the inferiority" of Native and Black people across the globe as compared to the white person of European ancestry (25). Morton's large skull collection was used for research and pedagogy about racial pseudoscience, which was highly influential in the foundation of North American physical anthropology (23) as well as justification for the necessity of skull collection in order to conduct "scientific" studies about human abnormality and racial classification theories. This drive to collect human remains was framed as providing research opportunities and ultimately for educating the public about pathologies. While there were avenues for human remains to be collected through "professionalizing channels in archeology and physical anthropology," museums also began acquiring skeletons from other sources such as "medical officers, amateur collectors, looters, pothunters, and treasure hunters" (Redman 65). Redman argues that, "Acquiring, classifying, and exhibiting human remains under the guise of medical specimens contributed to the construction of cultural ideas related to human body and racial difference" (128).

The Mütter Museum in particular acquired specimens often through physicians affiliated with the College of Physicians for Philadelphia (Redman 130). In the late 19th century, a series of anatomy acts were passed allowing for the legal acquisition of cadavers by specific medical institutions (Redman 140). Throughout the nineteenth century, the demand for cadavers had grown, and body snatching (particularly of the poor and incarcerated) was not uncommon. Museums could procure specimens through donation or seek out specimens for purchase. Often donations came from private individuals or medical doctors who preserved specimens themselves (141). In the case of Einstein specifically, the Mütter's website says that Dr. Thomas Stoltz Harvey, the man who stole Einstein's brain after the autopsy of his body, "eventually donated the remainder of Einstein's brain to the pathology department at Princeton Hospital. The Mütter Museum received these slides of the brain from Lucy B. Rorke-Adams," a pathologist who was a Fellow of The College of Physicians of Philadelphia ("Exhibitions: Albert Einstein's Brain").

In short, the ethics of how the Mütter procured all of their specimens remain murky at best, and inarguably, founded in a history of hierarchizing humanity based on race, class, gender, and disability. This is important to keep in mind as, while many labels and descriptions at the museum have been updated, many specimens obtained by the Mütter were done within the context of scientific racism. Scientists categorizing human bones would describe behavioral attributes of different peoples and claim that these were related to anatomical characteristics (like the size and shape of a skull). Specific human remains were taken to represent entire races, and Native Americans in particular were described as needing to be “assigned a lower position on the human scale” (Redman 5). Through the collection and curation of human remains, these claims were granted the guise of scientific legitimacy. These practices put forward the idea that, through observation of anatomical specimens (like skulls), one could learn about the ability and capacity of the person to whom the skull belongs, and through racist extrapolation, about an entire race.

While the scientific racism discussed in Redman’s book is not something medical museums would teach as legitimate science today (though arguably keeping racist collections of remains continues to legitimize these theories), the idea that an observer can learn about the mind from observing a physical body part remains. Medical sciences use outward signs to understand the cause of a particular condition. This diagnostic tracing demands observable, tangible evidence to signify a deeper problem. The orientation toward diagnosis as legible through human bones and tissues not only shapes the racist history of medical scientists claiming that Black and Native bodies were fundamentally different from white bodies and that they were thus subhuman; it also remains in the ways doctors and medical education use models to explain often complicated or intangible “problems.” For example, while phrenology or lobotomy are considered relics of the past, neurology and brain imaging have emerged as ways to better understand how the mind works. However, neurology is not the only way human behavior is studied through the body. The Mütter shows that there are different ways that body parts are displayed as representative of symptoms of mental disability or as evidence of mental super-ability. For example, Einstein's brain is shown as a possible model of exceptionalism through which to possibly attribute his genius. The attention to the physical size and structure of the brain evokes the long defunct theories of phrenology, or the notion that the size and/or shape of this part of the body might reveal something about behavior or mental capacity. Reading mental capacity on physical specimens remains a key way that museums orient the viewer to understand diagnoses, particularly about mental illness or exceptionality, as essentialized in physical attributes rather than as embodied and socioculturally influenced experiences.

Participatory Viewing and Material Synecdoche

The idea that observing a phenomenon or specimen firsthand as a way to better understand it is central to scientific method, but it is also a central tenet of public scientific education. Jordynn Jack describes that a "pedagogy of sight" relies on the notion that seeing is confirming, and that this pedagogy is not neutral. Science relies upon visual confirmation, whether this is literally or figuratively showing evidence to an observer. The underlying assumption is that witnessing confirms the truth of the thing, and it allows for people to make discoveries on their own. Museums in particular invite visitors to see/interpret their displays based on an inherent understanding of the value of firsthand observation. As Milbourne and Hallenbeck point out, the scientific revolution was not only a product of theory but emerged "through the interactions between theory and the embodied scientific practices of those who helped to give theory shape" ("Pedagogy of Sight" 406). These practices are still relevant to rhetorical study because they are "deeply implicated in the ways in which scientists undertake, represent, and communicate their work" (quoting Wickman 22; 406). Science became accessible to the public through technological innovations like the pocket microscope (Milbourne and

Hallenbeck), vivid descriptions published for the general public (Jack), exhibitions and performances (Berkowitz and Lightman; Morus), and museums (Berkowitz and Lightman, Gruber, Redman). The popularization of medical museums and public exhibitions emerged contemporaneously (Berkowitz and Lightman), and implicit in their emergence was the value of allowing the public to witness the spectacular but also more mundane realities of scientific inquiry.

The participatory nature of science, and more specifically, that scientific pedagogy privileges direct observation, is a concept deeply entwined with the scientific revolution and the emergence of public interest in science. As Milbourne and Hallenbeck note, as early as 1805 women were able to use pocket microscopes to participate in an embodied and accessible vision of science (412). Texts instructing women practitioners described personal observation and interaction as “the surest guide to truth” and encouraged practitioners “to value their individual and unmediated perceptions” (412). In the mid-nineteenth century, museums and exhibitions flourished, using both spectacle and display as methods for engaging audiences. Museums in particular obsessively described and categorized specimens, “looking to the objects themselves as a source of knowledge, and in the process helping to shape American intellectual history” (Berkowitz and Lightman 4-5). Science exhibitions, in similar fashion to P.T. Barnum at the time (Morus 105), capitalized on spectacle and performance to teach viewers how to see and understand science. Historically, firsthand observation has been the way that publics were taught to understand and be persuaded of scientific concepts. That museums look to objects as a source of knowledge, and that at the same time, scientific displays akin to circus performances shaped the history of scientific visual culture and the way publics expect to visually consume science. Notably, direct observation as a principle of scientific inquiry is important for the process of scientific discovery. When a researcher does not know the answer to a scientific question, they must gather data and evidence to answer this question. However, public displays of science *already* have an answer or theory attached to an object. The object is then used intentionally to represent or evidence that larger theory. This kind of modeling or method of display is used in medical education, but also for public audiences who may or may not have additional context that helps them situate a specific specimen or model in relation to its pathology.

As rhetorical scholars have argued, museums are inherently pedagogical (Weiser, Obermark, Lynch "Prepare to Believe"). National museums, museums of natural history, art museums, and medical museums all are oriented toward educating the public about significant cultural, scientific, or historical artifacts. While museums can be directive and didactic in coaching the viewer to see an exhibit in a particular way, the Mütter eschews didactic interpretation in favor of an equally purposeful pedagogy of context, juxtaposition, and inference. Visitors have to decide what to take from these objects and are forced to engage with messy and perhaps conflicting interpretations of objects that are, in the Mütter's case, sometimes "disturbing."

More specifically, when specimens on display at a medical museum are primarily concerned with mental ability, they take on a different kind of interpretation that asks the viewer to take another step of association: the implication that physical specimens reveal the workings of the mind, and that they can be relied upon for, or at the very least directly associated with, certain diagnoses. The specimens in the following case studies are material synecdoches because they are embodying diagnoses. As Kenneth Burke states, "The aim of such *embodiment* is to produce in the observer a corresponding state of *consciousness*" and through exhibition, museum curators make connections from mind to body through representative reductions that "may induce the audience to proceed from ‘body’ to ‘mind’” (510). In other words, through rendering complex diagnoses or theories about mental ability as representative through physical specimens of human flesh, museums also implicitly invite the viewers to reverse this connection by trying to read the flesh as a stand-in for mental ability. In the example of the jar of skin, the viewer is left with the apparent evidence of OCD and that is presented as a metric for comparing their own mental ability. The descriptions of diagnoses establish a norm with which viewers can associate or disassociate their bodies. The material reduction of the jar of skin thus becomes a representation in which the part stands in for the whole and the whole for the part. Rather than seeing a jar of skin or a slide of brain tissue, viewers see a possible representation of abnormality or genius, and these associations become implicitly essentialized in correlation with the display of particular human tissues.

The reliance upon observable, physical specimens implies that the viewers are learning something merely from the act of standing before (either physically or virtually) a body part they would not usually see isolated from a whole human body. Particularly with displays that attempt to communicate something about mental ability, we can see material synecdoche at work as an organ, bits of skin, or representative models stand in for a larger diagnosis. Material synecdoche is rhetorical because of the way it uses objects, descriptions, and plaques to orient the viewer’s interpretation of body parts on display. Ultimately, interpreting medical displays is meant to not only teach the viewer about a particular pathology, but to be able to be used as a metric with or against their own bodies. Scholarship about the rhetoricity of museums as well as disability studies and rhetoric of health and medicine provides a foundation on which to discuss how body parts are displayed and how these displays persuade viewers to interpret the way the mind is inscribed on the body. More specifically, removed body parts serve as evidence through material synecdoche connecting the abilities of the mind, the fleshy body, and theories about ability, disability, pathology, and abnormality.

The Mütter Museum and the "Disturbingly Informed"

On entering the museum, because there is often no comparative body, the viewer is implicitly invited to use their own body as a comparative model. While the physical museum does not explicitly guide the viewer to do so, the digital exhibit, Memento Mütter, asks the visitor, "Do you see yourself here?" This provides the viewer with two options: to either identify the pathologized specimen with their own body, or to reject the specimen as unidentifiable with their body. To observe specimens displayed at the museum, you don't have to travel to Philadelphia. The Mütter has also created an online exhibit called Memento Mütter that allows visitors to "get uncomfortably close" to the museum exhibits without having to travel ("About Memento Mütter"). The name is derived from the Latin memento mori, meaning "remember that you shall die." The description also states that Memento Mütter "stimulates reflection on the diversity of the human bodily experience and our attempts to understand our physical selves."

Upon entering Memento Mütter, the question, "What does it mean to be human?" is displayed prominently at the top of the screen. Just below, the website says, "Uncover what it means to be human by exploring these disturbingly informative items from the Mütter collection. Do you see yourself here?" This tagline explicitly invites the viewer to read themself into the digital exhibit of anatomical specimens. There are a variety of digital displays ranging from images of obstetrical forceps, to hands with gout, to the brain of Charles J. Guiteau (who shot U.S. President James A. Garfield in July 1881). A quick scroll takes the visitor to the digital "Skin Pickings" display, which reveals one of the jars of human skin.

The description states that a white, 23-year old woman donated the jar to the Mütter Museum in 2009, and that “it is a visual representation of a mental disorder” attributed to obsessive-compulsive disorder, and more specifically, dermatillomania (repeated picking at one’s own skin). It also states that the majority of “afflicted individuals” are women (“Jar of Human Skin”). By clicking “Explore” underneath the image of the jar, the viewer is taken to a second screen on which they can click and drag the jar to rotate it 360 degrees, zoom in and out, and read additional information. The additional information reads “This is one of TWO jars. The donor sent us another jar in 2012.” “The skin smells a bit like Romano cheese.” and “We may receive more picked skin in the future.”

This virtual interaction with and sensory information about the specimen would be unavailable if the viewer were to physically travel to the museum. Virtual manipulation allows the user to rotate the object, and it also enacts a facsimile of firsthand observation. By describing what the skin smells like, allowing the specimen to be rotated, and providing additional context for the specimen, there is a sense of “hands-on” interaction. Describing a smell would imply a kind of empirical, hands-on description. But comparing the skin smell to cheese also sensationalizes the specimen. This is a deviation from other descriptions that attempt to maintain a kind of distant and empirical description, but it still capitalizes on the idea that physical objects, and their descriptions, hold a special kind of explanatory power. While the smell of the specimen is unnecessary information for learning about OCD, which is ostensibly the purpose of the display, sensory details lend an air of authenticity. If the viewer knows what a specimen looks, feels, and smells like, the experience becomes solidified as a persuasive observable phenomenon that makes mental diagnosis material.

The Mütter's educational mission is to inform through observation that may both educate and disturb. The Mütter claims to be "America's finest museum of medical history," displaying its "beautifully preserved collections of anatomical specimens, models, and medical instruments in a 19th-century 'cabinet museum' setting" (About). It aims to help the public understand the "mysteries and beauty of the human body and to appreciate the history of diagnosis and treatment of disease" (About). The museum contains collections varying from the mummified body of a woman found in Philadelphia, to the jaw tumor of President Grover Cleveland, to the plaster cast and conjoined liver of what the museum still labels as "Siamese twins" Chang and Eng Bunker. The Mütter explicitly prides itself not only in its collections, but the way it displays the collections. 19th century cabinets contain many of the specimens. These cabinets often have the original glass that can distort the view and draw the visitor in closer to interpret what they see. As opposed to the National Museum of Health and Medicine, which uses much more contemporary displays that often include narratives shaping each exhibit, the Mütter performs a historical setting that creates a sense of being transported back in time to eras in which outdated and perhaps disturbing medical methods were in use. While the Mütter does include some narrative for the exhibits, many of the permanent collections are on display without extensive description. The uniformity of the cabinets throughout the museum also suggest that all specimens in the collection are part and parcel of a whole, inviting the visitor to experience the museum almost as if it is a 19th century doctor's private collection.

These ties to the 19th century, or the "age of museums" when many of the most famous US and British museums were founded, occurred within a particular context (Berkowitz and Bernard 4). Because "museums were cast as political instruments, machines for making meaning and imposing particular behaviors on their visitors," historians of science and rhetoricians have long studied museums as a site of knowledge production and persuasion (4). That the Mütter is ostensibly transporting the visitor back in time is an important part of the experience— it allows the museum to display human specimens as they would have at the time of procurement, and it creates a double entendre for the words "disturbingly informed." The viewer might be disturbed because of the graphic nature of the exhibits, but they might also be disturbed by the ways these specimens were interpreted throughout history.

The purpose of the museum is to help the public understand the "mysteries" and "beauty" of the human body and to "appreciate" the history of diagnosis and treatment. These words dovetail interestingly with the tagline of the museum, "Disturbingly Informed." The "mysteriousness" of the body could relate to the display of human body parts that are typically concealed— a lung in a jar is, in itself, an object of mystery because it is so rarely observable. This kind of display allows the viewer to closely observe what they otherwise might only ever see in a human anatomy lab. However, the word "mystery" when paired with the word "disturbing" connotes the "medical marvel" -- objects that begin to take on meaning not only for their material existence and location within an exhibit, but also because of their mysteriousness tied to their abnormality. Most of the objects on display at the Mütter are pathological specimens, meaning body parts that have been pathologized or received some kind of diagnosis. Rather than display human body parts that are considered "normal," pathologizing implies a deviation from the norm.

Einstein and the Super-Able Brain

Perhaps one of the most notable permanent exhibits at the museum is the display of slides that contain samples of Albert Einstein's brain. The specimens are made inherently valuable by the nature of Einstein's notoriety and as a symbol of his genius. While many have noted

Einstein’s requests for his body to *not* become an object of curiosity, the display showing slides of his brain is one of the first things a visitor sees when walking into the Mütter Museum’s exhibits.[7] It is almost impossible to miss and has one of the most detailed descriptions providing a larger narrative for the display.

The interest in and symbolic value of Einstein’s brain has been clear from the moment Dr. Thomas Harvey stole it during an autopsy in 1955. During the autopsy of Einstein’s body, Harvey made the decision to remove and take the brain with him and kept it in a variety of places, including his closet at home. This was done against the wishes of Einstein’s family, but according to the Mütter museum’s display of the brain, he eventually “received permission to keep the brain, but only on the condition that it be used for scientific research.” The “celebrated cerebrum” (Mccartney) was measured, photographed, dissected into about two hundred and forty pieces, and preserved (Paterniti 50). Over time, Harvey also shared the samples of the brain with researchers all over the world. While many claims have been made about the exceptionality of Einstein’s brain, there is little consensus about whether or not the brain *is* exceptional in any materially evident way. This preoccupation with brains, however, is not unique to Einstein. The Wistar Institute in Philadelphia has a collection of brains that once exceeded 200, and has included the brain of Walt Whitman (McCartney, Paterniti). Harvey also closely followed the research on Vladimir Ilyich Lenin’s brain. The idea that noteworthy men’s brains might have something to tell us about super-ability or genius is not novel. The fact that men’s brains are of primary interest is also unsurprising given a variety of gendered and sexist notions about mental

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[7] As many historians have noted, Einstein was opposed to the idea of worshipping individuals and explicitly told his biographer, Abraham Pais, “I want to be cremated so people don’t come to worship my bones” (Lovejoy 51). While this chapter is focused on the ways displays function as ostensibly “autonomous” observable materials and not specifically analyzing the problems with consent and collecting specimens, consent remains a central and defining issue with the ethics of the Mütter’s displays and medical museums more broadly.

capability, one of which is that women’s brains have always been considered suspect and prone to hysteria (Koerber).

It’s important to note that, because the Mütter Museum has existed since 1863, there have been a number of ways specimens have been procured, and they range from individuals donating specimens from their own bodies or collections, to donations from the pathology department at Temple University (Mütter Museum FY 1995 Annual Report), to surgeons who donated removed tissues from famous people (Biography/History). All of these forms of “donation” do not mean that the person from whom a specimen came gave willing and free consent for their body to be displayed. In fact, it can be assumed this is often not the case, particularly for specimens procured before informed consent. Informed consent in the US did not gain legal precedent until 1914 and was not widely put into practice in medical research until 1979 in the Belmont Report (Kumar). Notably, the Mütter is the only place the public can see slides of Einstein’s brain, despite the National Museum of Health and Medicine also containing slides in their archives. Einstein’s case is not unique but has garnered more attention to the ethics of displaying the brain against his wishes largely because he is a celebrated white man. The ethics of displaying the many anonymous body parts is not as publicly debated, but an important consideration for how and why museums choose to display various specimens. This begs the question: how many specimens from Black, indigenous, people of color, and people with disabilities are being used as teaching tools without consent? And *what* are viewers intended to learn from such specimens?

The Einstein display in the Mütter is encased in a stand-alone class cabinet, setting it apart from other specimens that share shelves. “Albert Einstein’s Brain” is displayed in large print, with a photo of Einstein just below. This is significant because most displays in the museum do not immediately connect the specimens to a particular body, and often only connect to a body if the person was famous (like the example of Grover Cleveland's jaw tumor or the liver of Chang and Eng Bunker). The description provides some history of Harvey obtaining and keeping the brain and goes on to say that "scientists who have examined his brain have concluded that it is not normal." Though the brain is an average size overall, one part of Einstein's brain (the inferior parietal region), is 15% larger than in an average brain. It also lacks an "anatomical crevice called the sylvian fissure" which divides the parietal and frontal lobes above from the lower temporal lobe. The display notes that the brain lacks typical degenerative changes in a 76-year-old. Some neuroscientists have speculated that the increased inferior parietal region and lack of sylvian fissure could have increased his mathematical and spatial reasoning skills, but the description concludes by saying the true source of his genius "remains a mystery."

The display itself says that despite some physiological abnormality, there is no "proof" about where Einstein's genius came from. Even though there is no hard "proof," there is the implication that we can learn about someone's abilities, behaviors, and inclinations by observing their brains. That slides of the brain are displayed despite Einstein's desire to be cremated shows that the brain is prioritized as an object of cultural significance over the consent and wishes of the person to whom it belonged. This also shows that the museum is not only interested in abnormality that suggests some kind of "defect" or "affliction," but also that reveals exceptionality. In another Mütter display about brains, Lewis Carrol's eccentricities were attributed to the possibility of an epilepsy diagnosis. Alternatively, Einstein's genius is explained as possibly coming from a physiological abnormality that allows him to think in ways not accessible to the "average" brain. But these notions also trade in the idea that men's genius in particular is exceptional enough to warrant physiological research— that their bodies must be categorized as biologically super-able.

This display, unlike many others, also shows an “average” brain for comparison. This suggests that Einstein’s brain is not average and was not “normal.” A plaque in front of the (anonymous) comparison brain floating in liquid preserved in a glass box says, “This is the brain of a normal human adult. The arrow indicates the inferior parietal region of the brain. This portion of Einstein’s brain is 15% larger than in an average brain.” Notably, the “normal human adult” is not named or credited, and the viewers have no information about where the brain came from. The viewer is invited to read into the specimens making connections to physiology and genius. Not only is the display suggesting that genius can be materially represented through samples of a human brain, but it also implies that viewing the brain can help us better understand what makes someone intelligent. It simultaneously suggests that Einstein was “abnormal” while leaving out the details of his life. The fact that the brain can be dissected and displayed allows the viewer to forget the social, cultural, and identity politics that made Einstein a particular person in a particular place at a particular time. By separating his brain from his larger story, and his body, the museum strips away the context and asks the viewer to use a slide of tissue as a way to understand Einstein’s mind.

By literally placing a piece of a brain in front of a viewer, the display invokes a material synecdoche in which the specimen is acting as the *most* material, visual evidence. This moves beyond reduction into the realm of representation where an organ physically stands in for theories about and interpretations of mental ability and/or cognition. In “Seeing is Believing: The effect of brain images on judgments of scientific reasoning,” psychologists show that “brain images may be more persuasive than other representations of brain activity because they provide a tangible physical explanation for cognitive processes that is easily interpreted as such. This physical evidence may appeal to people's *intuitive* reductionist approach to understanding the mind as an extension of the brain (Weisberg et al., in press)" (McCabe and Castel 349-350, emphasis mine). Both scientists and the lay public alike find visual representation intuitively more persuasive, and perhaps a more empirical way to understand how the brain works. McCabe and Castel go on to say that this kind of "visual evidence of physical systems at work, which is typical of 'harder' sciences like physics and chemistry, is not typically apparent in studies of cognition, where the evidence for cognitive processes is indirect, by nature" (350). The very fact that "genius" is such an indirect and ill-defined ability makes it even more ephemeral and difficult to identify. While imaging certainly functions as a way to visualize cognition, displaying a pathological specimen moves a step farther in the scale of representation into material synecdoche.

Notably, displaying a brain autopsied in 1955 does not fit within the historical setting of the 19th-century glass cabinets that display most of the museums' exhibits. This is a temporal tension present throughout the Mütter because the museum presents itself as a 19th-century historical time-capsule at the same time it uses modern language, methods, and specimens to teach viewers about the body. The visitor is not only invited to look askance at earlier medical practices situated within their time frame, but also to observe specimens marked as abnormal with the perspective of outdated, ableist, racist frameworks that would have been used by a 19th century doctor. An example of this is the fact that the museum still labels the cast of Chang and Eng Bunker as "Siamese twins" despite this being a racist and outdated term. There is rhetorical slippage regarding what exactly the viewer is supposed to be disturbed by, and it becomes unclear if the viewer is supposed to be disturbed by the fact that the museum is displaying

Einstein’s brain or disturbed by the brain itself. There is perhaps intentional ambiguity here allowing a viewer to be an objective observer reading about history and a voyeur of upsetting medical practice. While the 19th-century cabinet context of the Mütter makes explicit the problems with framing a more contemporary specimen as something that we might view through the lens of a disturbing history, this same temporal tension exists in other museums. Namely, museums using specimens as evidence of progress at the same time the museums are reenacting the harmful representations of the specimens’ original context.

Because specimens are procured after death, medical museums are able to take parts of the body that would never otherwise be able to be accessed and displayed for educational purposes. Additionally, as previously noted, while museums often describe them as donations, there is not always a line of consent connecting to the person from whose body the specimen was taken. When viewers are able to observe these objects firsthand, specimens become imbued with rhetorical power because of their materiality and because they seemingly bypass a need for describing or representing something through imaging or words. The materiality of these specimens makes it easier to make the leap from theory to substance and substance to theory—material synecdoche makes it possible to rely on ideas about “hard sciences” and direct visual evidence to frame specimens as real, identifiable, interpretable examples of pathologies. However, the displays do not take into account the sociocultural factors that produced this diagnosis or perception of ability, perhaps particularly for theories about the mind and cognition. Even though most viewers will know who Einstein is, they are not provided with the details of his life that inevitably contributed to his recognition as a genius. In other words, the slides of brain tissue are presented as “hard” evidence, but this display rhetorically selects and represents this tissue in a particular way that invites the viewer to make arguably arbitrary associations between the mind and flesh. The brain as a physical object becomes a way to understand mental ability through its physiology, collapsing the mind and body so that pieces of an organ serve as a material synecdoche for genius.

Skin and Mental Disability

Einstein's brain is not the only exhibit attempting to communicate how we might read mental ability through detached and displayed human body parts. While Einstein's brain is imbued with value because the viewer knows who Einstein is, other displays invite perhaps more direct bodily comparison to the specimens because of their anonymity. In a cabinet of assorted specimens, a jar with paper-like strips sits filled to the brim, unassuming among a series of other identifiable wet specimens. Upon closer inspection, the label next to the jar reads:

> "Jar of Skin — Peeled skin of a 23 year old Caucasian female with Dermatillomania, also known as Compulsive Skin Picking (CSP). Dermatillomania can be an impulse control disorder. This is part of the obsessive compulsive disorder (OCD) spectrum and is characterized by the repeated urge to pick off one's own skin, often to the extent that damage is caused."

In an entirely different area of the museum where there is a skin exhibit called "<u>Our Finest Clothing</u>: A Layered History of Our Skin." Another jar of skin is accompanied by a label that explains the purpose of the object. The label says, "Jar of picked human skin from a female with **dermatillomania** (skin-picking disorder). The larger card reads:

> "Mental Health + Skin — Our mental health affects our skin. Mental disorders can manifest themselves in the skin. For instance, Dermatillomania is classified as an impulse control disorder characterized by the strong urge to pick skin off the body. This jar of

> skin picked from the soles of her feet was donated by a young woman with the disorder in 2012. This is the second jar of skin she has donated."

The skin is not immediately identifiable as skin— the viewer would not be sure what they were looking at and *why* without a label describing the object as a sign of mental disorder. In the description of the larger skin exhibit, there is an explicit connection between the body and mind that is urging the visitor to consider how mental health "affects our skin." Mental health becomes visible not *on* a body, but through pieces of skin peeled off of a body and saved.

The display of the jar of skin collapses distinction between body and mind and uses the jar as a way to display the effects of mental disability without drawing attention to neurology. The display serves as a material synecdoche tying together OCD with physical, identifiable effects that may otherwise not be "visible" on a human body. OCD manifests in a variety of ways, and certainly not only through dermatillomania. However, the Mütter's orientation toward identifying and displaying pathologies does not display complex visualizations showing a spectrum, or identifying different ways OCD might be experienced. The ways that exhibits at the Mütter display mental health diagnoses is through human tissue specimens. Rendering the spectrum of mental disability is reduced to representation through physical objects, more specifically here through the jar of skin. This display becomes a material synecdoche through which the diagnosis of OCD is made legible through a specific, concrete, observable "example" of what OCD looks like through the peeled skin. At the same time, the jar of skin is used as a symbol through which the viewer can access understanding about OCD. The jar of skin works two ways: to both reduce a complex diagnosis to an identifiable and embodied symbol, and to use that symbol as a way to educate the public about what that diagnosis might look like. The viewer then is not only being provided information about OCD but is also invited to read peeled skin as a concrete symbol of a "disorder." The plaque describing the jar explicitly says that OCD is a spectrum, and also implies that while picking skin can cause damage to the body, it may not actually cause damage.[8] However, because of the volume of the skin and the description of OCD as a disorder, the viewer is coached by the enthymematic display to associate peeled skin with something threatening or "disturbing."

The evidence is partially demonstrated through accumulation: the volume of the skin is what makes the otherwise unassuming jar a noticeable object. The accumulation also ties to the explanation of the compulsion, or the consistent and repeated picking of the skin. The fact that there is another jar later donated by the same person also shows that this is an ongoing (rather than isolated) occurrence. The jars of skin imply a prolonged timeline— both through the fact that it would take a considerable amount of time to fill up one jar with skin, and through the multiple jars collected over several years. When taken within the context of the educational mission of the museum to leave the viewer "disturbingly informed," the accumulation is also meant to signify a problem worth looking at. By displaying the skin so that it is easily visible and drawing attention to why the skin is in the jar, the viewer is intended to interpret it as a problem that needs explanation, and to value the skin as evidence for such a problem. The fact that there is so much of the skin on display suggests, perhaps, a problem relative to the scale. It categorizes

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[8] In "The Bodymind Problem and the Possibilities of Pain," Margaret Price discusses the complex experiences of disabled bodyminds and pain. Price cites an example of Person A who is experiencing what a doctor would call "transient psychosis" by trying to strike themself with a lamp and Person B trying to prevent Person A from causing themself pain. Price states, "There are two realities in the room: Person A should, or should not, hit himself. Hitting himself is either a means to *alleviate mental pain* by inflicting a different kind of pain, or an action that will *cause harm*. Both subjects are fully immersed in their own realities. And each one is occupying a reality that is *real*, important, and complete" (273). Impairment can be, according to Liz Crow "problematic for people who experience pain, illness, shortened lifespan or other factors" (qtd. in Price 275). But experiences of pain are real and complex, and the ways these manifest are governed by understandings of pain and desire that are shaped both structurally and individually.

mental illness on a visible scale based on severity relative to the physical size or amount of the specimen.

The use of plaques to provide narrative for a displayed object helps orient the viewer toward a larger concept, idea, or diagnosis that would otherwise not be immediately available upon observation. In “Zoetropes: Turning Fetuses into Humans,” Allison Rowland discusses a memorial with plaques that provide names and sometimes brief anecdotes or phrases for unborn babies. The physical bodies of these fetuses are not present at the memorial, but the plaques instead stand in as “a progression toward material substance, toward the touchable or fleshy or real” (37). Rowland claims this is crucial for portraying the fetuses as human lives. However, in the example of the Mütter, material synecdoche is working in the opposite direction. Rather than providing a trope or description to convey materiality, materiality itself is used to stand in for a theory about or diagnosis of mental disability. The plaques stand in as a way to directly tie material display to a particular diagnosis or bodily evidence representing a larger problem or pathology.

The skin exhibit displays parts of the body other than the brain, which is a deviation from the other explanations of mental or neurological disability in the museum. Elsewhere, mental disability or exceptionalism is often visually and materially tied to neurology. The display of Lewis Carrol’s brain describes his abnormal behaviors as a possible symptom of a particular form of epilepsy. On display below a plaque that details Carrol’s life is a vat of brains suspended in preservative liquid. Einstein’s brain is displayed as a way to understand what contributed to his genius. However, the jar of skin uses a very different visual representation that alludes to a different kind of connection between mind and body. The *effects*, rather than the supposed *origin*, of obsessive compulsive disorder are displayed in part because the donor was living at the time of donation, and also because the skin reveals the aftermath of a disorder of compulsion. The museum does not remain neutral in its stance on compulsively picking skin. It describes dermatillomania as an "affliction," clearly demarcating this as an abnormality and problem. While the Mütter ostensibly claims to represent the "diversity" of human physiology, it does so by pathologizing and negatively describing disability (Lewiecki-Wilson). Brains are framed as an origin of mental ability, and the peeled skin shows the effects of mental disability, using a "symptom" as a symbol through which to diagnose or pathologize a disorder. Through the material synecdoche of the display, mental disability is inscribed on the body through the body's alteration by picking skin.

Notably, though the donor contributed the specimen while alive, the visitor is not meant to understand more about the individual person—- they are being taught something about a diagnosis. The skin synecdochally stands in for the diagnosis of OCD. In many ways, it doesn't matter who the person is at all. The act of donation to the museum and the choice to display it reveal a concern with mental disability and "teaching" the public about what it means and how it affects the body. Mental disability is ephemeral and difficult to capture, but displaying the effects of disability dually emphasizes OCD and/or dermatillomania as an affliction.

That this is a donation from a living donor is a deviation from the historical nature of most of the museum. While there is some discussion in academic literature and popular discourse about the ethics of display (for example, of Einstein's brain after his death) the jar of skin display comes from a living donor who has not only donated once, but multiple times. This is also a strange interjection into what is largely painted as a time-capsule in which the museum shows some of the "disturbing" ideas about medicine from the past. The tagline that the information here is disturbing works on two levels: the first is that the viewer might be disturbed by what they are encountering on a visceral level. But the second level is that there were disturbing medical theories and practices from the past that we no longer hold to today, and the viewer is thus learning not about modern medicine but the *history* of medicine. This is complicated, however, when contemporary materials or exhibits interrupt the idea that the viewer is supposed to be suspended in time. The jar of skin attempts to teach the viewer about a contemporary diagnosis from a living person, and thus, the idea that this is "disturbing" moves away from historical data to a contemporary example. Museums are working to educate the viewer about several different rhetorical problems at once, but all through the use of flesh that is intentionally separated from a donor body. However, in this case, there is a living body to which one might imagine the display being tied.

Conclusion

The etiology of a condition, symptom, or "abnormal" bodily or behavioral manifestations is often difficult to visually portray. The body is a complex system, and the "mind" cannot be understood simply by looking at neurology or the brain. Etiology is necessary for medical treatment, but it becomes extremely complex when attempting to name and pathologize mental ability. Whether attempting to capture what makes someone a genius or showing the effects of mental illness, medical museums use their specimens as material synecdoches that allow the visitor to feel that they've identified an origin. This "origin" has historically not only been about diagnosis broadly, but about racist and ableist categorization of bodies. By separating body parts from the story of the person from which they came, these displays obscure information that helps us understand the complex and intersecting conditions that make up the broad spectrum of mental ability and diagnosis. Brain imaging and descriptions of behaviors that attempt to render cognition legible work on the level of metaphor. Human specimens, however, function as material representations that can ostensibly not be contested. At the same time, the fact that specimens are able to be separated from a body and displayed creates specific rhetorical conditions through which they are rendered as a pure representation of a diagnosis.

Because displayed body parts are separated from the rich context of their donors' lives, they become a way to layer on the viewer's own experience or to quickly extrapolate that all humans with this physiological phenomenon can be interpreted the same way. Even with the case of Einstein's brain, by focusing on his physiology rather than his life, the viewer synecdochally connects abnormalities in the brain with genius. The anonymity of the skin display creates a rhetorical gap where the viewer fills in information based on basic observations about the specimen. These rhetorical leaps are made possible through a scientific reliance on seeing as believing, the ability to separate and preserve human body parts, and the Western biomedical preoccupation with diagnosis and risk assessment. The history of medical museums shows the US imagination about the body has been historically shaped by such displays, and as such, medical museums inform the way publics assess what an abnormal (or perhaps "disturbing") body looks like. Beyond this, when we become overly preoccupied with understanding how the mind connects with the body, there is a risk of using the body as a way to pathologize mental differences.

The problem of pathologization is not isolated to a particular museum, but to any medical display or imaging in which we encounter a body part isolated or separated from the rest of the body. This coincides with an era of medical specialization in which the body is atomized and dissected to be understood in terms of its component parts. An x-ray, an anatomy textbook, or plastinated organs are legible to both professionals and the public as things that exist to find the deviation from the norm. They hold explanatory purposes through their existence separate from the holistic body. When we can look at the different building blocks that make up the body, we can ostensibly diagnose the specific location and etiology of a problem. And while this is certainly important for diagnosis and medical research, there also exists the implicit idea that public education about the body can achieve a certain kind of scientific authenticity through the ability to physically observe a body part, even when the diagnosis is related to mental ability.

Material synecdoche relies on the idea that physical specimens are powerfully persuasive, because they are curated, displayed, and described in particular ways. By positioning the viewer as not only the consumer of information, but as a referent to which the specimens should be compared, the synecdochal relationship works not only to understand medical theories, but to understand what is good or bad about one's own body. These displays implicitly ask the viewer to not only consider the history of medicine, but to consider how their bodies fit into this history and if their own mental abilities might require a medical diagnosis.

Chapter 4

My Body, My Cells: Bodily Boundaries, Human Tissues, and Rhetorics of Ownership

Body parts are for sale. Tissue and blood banks quite literally bank and sell somatic materials. Regenerative medicine research in tissue engineering is hailed as a frontier of medicine, and human stem cells have been used to engineer organs which have then been implanted in patients (Atala and Forgacs 744). Genomes can be edited to change an organism's DNA. These are real, current practices in medical research that pose an urgent question: how does rhetoric's understanding of the human body change in an environment in which parts of the body can be extracted, transformed, donated, bought and sold? Today, bodies cannot be taken for granted as whole and directly tied to a single individual; almost as often, in a Western biomedical context, they exist as component parts. This changes the ways bodies can be regulated and controlled and requires attention to complications that arise when organs and tissues can circulate even on a global level. How do rhetorical frameworks for the body apply when body parts become physically distributed across space and time? Bodily distribution alters how "somatic material" (tissues, genetic sequences, organs, etc.) is defined, perceived to be in relationship to the donor, and understood in economic terms (Keränen 505).

Scholars in rhetoric of health and medicine often deal with questions about "the borders of life" by either discussing the body as a holistic thing or using posthuman analysis framing the body as porous or as an assemblage (Rose 38). However, interpretations of the body as bounded and somewhat insular do not fully explain what happens when the body is broken into component parts. In *The Politics of Life Itself*, Nikolas Rose claims that through molecularization, or the ability to understand how the body works down to the level of molecules, “vitality has been decomposed into a series of distinct and discrete objects” and can be “frozen, banked, stored, accumulated, exchanged, traded across time, across space, across organs and species, across diverse contexts and enterprises, in the service of bioeconomic objectives” (Rose 38). This raises questions about “the borders of life” that cause disputes about the boundaries between life and nonlife, human and nonhuman (Rose 38). In this essay, I build on Rose’s theory of molecularization to argue that when the body is understood and interpreted at the level of biochemistry, a rhetorical perspective can show how molecularization lays a foundation for arguments about the body, and how this affects the ways bodies are defined and figured as distributable products that are not always tied to individuality.

Concerns about the distribution and commodification of somatic material are particularly central to a public hearing in 2016 concerning the regulation of human cells, tissues, and cellular and tissue-based products (or HCT/Ps).[9] The FDA’s invitation for comments drew a range of stakeholders, including biological and device product manufacturers, tissue establishments (where HCT/Ps are stored and distributed), healthcare professionals, clinicians, biomedical researchers, and “the public” (ranging from concerned caregivers, to patients who have seen visible success after using stem cell treatments, to academic bioethicists) (“Public Hearing; Request for Comments”). This hearing allows me to closely examine the seeming argumentative impasse between biomedical experts and many members of the public regarding *whose* these tissues are, and to ultimately argue that rhetorical studies needs better ways of understanding how a distributed body calls for modes of analysis that explain bodies’ newly emerging, distributed capacities. The hearing is also a microcosm of a larger cultural conversation we might

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[9] Examples of the kinds of cells and tissues of concern at the public hearing are bone, skin, corneas, ligaments, tendons, heart valves, some stem cells, semen, and others (and do not include vascularized human organ transplants like kidneys or hearts).

see evidenced in the case of Henrietta Lacks' cells being biopsied (without her consent) and later used by biotech companies for their own profit. However, *when* exactly these cells and tissues become products are central to arguments about to whom they belong and how to apply regulations overseeing the use of tissue therapies. A rhetorical approach to tracing the shifting definitions of bodily boundaries shows not only what is at stake for the FDA hearing, but how the current state of biomedicine might require a different way of looking at how a "body" is rhetorically constructed.

In the video footage of the hearing, eight expert panelists seated on a stage face an audience scattered throughout an auditorium. Behind the panelists, a large screen reads "FDA/CBER Part 15 Public Hearing" with information about the room location, the date, and a logo for NIH Events. Just to the right of the stage, a podium stands at the periphery of the frame. This podium is where speakers may take a few minutes to present their testimonies about why the FDA guidelines should be interpreted a particular way. One speaker, a man in a wheelchair who I'll call Adam, is pushed next to the podium and handed a microphone that he holds with both hands.[10] The angle shifts so that he fills the screen, and Adam begins his speech by thanking the panel seated on the stage above him. He goes on to testify about his experience with relapsing remitting multiple sclerosis (MS), describing symptoms of numbness in his feet and legs, shaky hands, loss of vision, headaches, and slurred speech. After trying many different treatment options, Adam ultimately decided to seek treatment through stem cell therapy in which his own stem cells were harvested and reinjected into his body. He says that after stem cell therapy, he was able to speak and sit up again, and that the side effects from this treatment were virtually nonexistent, particularly compared to the harsh side effects of other drugs he tried.

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[10] Though these testimonies are public, I've chosen to use pseudonyms to add a measure of privacy when speakers are disclosing their personal health experiences.

Adam concludes his statement by saying, “If I cut my finger and sew it back on, it’s still my finger. It’s not my drug” (Public Hearing Day 2 173).

Adam is one of many people prepared to speak about the consequences of regulating HCT/Ps. Speakers give remarks, often with some kind of visual presentation showing data (both anecdotal and quantitative). At stake is the expansion or further restriction of stem cell therapies being offered in the United States, which had already been limited by regulations that came into effect in 2005. The purpose of this public hearing was to “obtain comments on draft guidance documents that guide the interpretation of regulations about HCT/Ps” (“Public Hearing; Request for Comments”). Since 2005, the FDA has issued a number of guidance documents to better implement regulations about HCT/Ps. The FDA is drafting a guidance document that helps practitioners working with HCT/Ps enforce these regulations, and within this guidance, there is a lot of room for interpretation about when human cells or tissues stop counting as part of someone’s body and begin to be classified as a biologic product.

Public interest in the hearing was enthusiastic— the hearing was moved from its original date of April 13 due to “considerable interest,” and the online comment window was extended to accommodate the public response which resulted in nearly seven thousand comments being posted on the FDA’s online platform (Draft Guidances). The ability to extract, patent, and sell somatic material creates new complications for modes of rhetorically analyzing the body. Importantly, donors are legally excluded from any stake in profitability when companies create cell lines, perform genetic sequencing, or manufacture biological products with human cells (Bowen; Waldby and Mitchell). Biological products like HCT/Ps blur the boundaries between donorship and consent, ownership, and ideas of the body as property, calling for new ways of tracing how somatic material rhetorically moves through different identifications with individual bodies, and how and for whom the boundaries of the body are drawn.

Methodology: A Rhetorical Account of Molecularization

In this section, I describe how I use molecularization as both a theory and part of a rhetorical method. Molecularization helps me look at the ways actors in this public hearing make claims about when human tissues count as part of "the body," and how these claims do not always cleanly map onto conceptions of an individual, feeling, sensing body. I argue that current rhetorical frames do not fully account for bodies that can act, move, signify, and be managed through their component parts down to the level of the cell. Because I find Rose's explanation of molecularization as a helpful heuristic for understanding the claims being made about HCT/Ps, I use a rhetorical account of molecularization in my analysis. Through analyzing video and transcripts of the 2016 FDA public hearing, I enact a rhetorical account of molecularization where I place molecularizing discourse into context by considering who is speaking, to whom they are speaking, and the different ways that bodily ownership is invoked. This analysis shows how ideas about bodily ownership shape and are shaped by molecularization, and how definitions and interpretations of the FDA regulations on HCT/Ps take different forms for the different actors gathered at the public hearing. Different forms of interpretation range from identifying cells as personal property, part of an individual body (even after removal), as autonomous products, or as promising trajectories for research. My rhetorical account of molecularization both leans into the discourse operating at the cellular level, while also scaling back and out to examine molecularized discourse as situated within larger discursive and material structures. This is a kind of constant scaling in and out, attending to definitions of cellular functions, while also holding in tension the body to whom these cells originally belonged, medical uses of these cells, and a legal context in which individuals do not technically have property rights over their cells. I argue that this constant movement from the micro to the macro is necessary for understanding how distributed body parts can exist autonomously outside of the body, but are always already in relation to both individual bodies and larger institutions. If we zoom in too far, we run the risk of dwelling in minutiae of scientific discourse that can essentialize and ignore individual experience. If we zoom out, we might alternatively place too much emphasis on individual, holistic bodies and miss the material effects that scientific discourse and medical definitions have on these bodies. A rhetorical account of molecularization that moves *between* these scales allows rhetorical studies to better understand how bodies move, how they are defined, and how they are circumscribed by Western biomedicine.

The collected materials surrounding the FDA public hearing extend beyond the particular two days in 2016 to comments posted online. I choose to examine transcripts and video of the testimonies given at the public hearing because they show how the FDA panelists and different speakers interact at a time specifically allotted for public dialogue at the hearing, speakers are formally given time to present their evidence using a microphone, visual aids, and direct appeals to the panel. The transcripts and footage provide me dynamic, multiple ways of engaging with the testimonies as they were given in real time. It also allows me to see what comments are taken up by the FDA panel— the comments posted online show no evidence of interaction from the FDA. I select several recorded testimonies to explore in more depth because they represent larger themes running throughout the hearing. This is not a corpus analysis, but a way of highlighting particular arguments that demonstrate undercurrents of molecularization throughout the various testimonies. While I am choosing not to include analysis of asynchronous online comments here, reading the testimonies from the hearing allows me to more closely analyze specific details while also representing larger concerns voiced by a variety of actors.[11]

I first build on rhetorical theories of the body at the intersections of health and medicine to discuss the rhetorical consequences of molecularization in more detail. Then I analyze examples from the FDA public hearing in order to show how molecular discourse presents a rhetorical conundrum: while these human cells and tissues can exist autonomously, they also come from a donor body with the intent of being used for another body. Human cells and tissues traffic between notions of human bodily autonomy (or notions of tissues as tied to a self) and notions of cells and tissues as product or biological materials that are *separate* from selfhood. I conclude by suggesting that rhetorical studies take a different approach to analyzing bodies—one that balances a frame that attends to subjectivity with a posthuman frame that takes seriously the body as a thing situated in relationship to other things.

Biomedicine and the (Rhetorical) Body

Public discourse about the human body mirrors a Western shift toward understanding the body at the level of the molecule, but also largely understands bodies as bounded and holistic. Medicalization has infiltrated U.S. public discourse, creating commonplaces around diagnosing and biologically essentializing the workings of the body in ways that often do not make space for bodies defined as non-normative.[12] People are increasingly understanding themselves as neoliberal biological subjects made up of molecules that can be managed, maintained, and modified, and bodily differences are identified as diagnoses that need to be treated or cured. One

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[11] While I don't examine the online comments in this essay, a future longer version of this project will take these into account.

[12] See also *Authoring Autism* by M. Remi Yergeau; "Psychosocial Disability, Autobiography, and Counter-Diagnosis" by Margaret Price; *Disability Rhetoric* by Jay Dolmage.

patient advocate describes the ways health terms are used in close conjunction with identity, citing examples of people discussing their gluten-free lifestyle, a new workout regimen, or identifying as a type-1 diabetic, arguing that many people are identifying as “biocitizens” (Aspell et al. 223). While non-Western medicine provides alternatives for considering a more nuanced approach to the body and disease, biomedical discourse in the U.S. has created molecularized commonplaces for the way the body works and how it should be treated. This not only has repercussions for understanding one’s own body, but for the ways that bodies are treated as data or can be mined for resources.

Rhetorical studies has grappled with questions about the boundaries of bodies through different frames, and rhetoric of health and medicine in particular has almost always portrayed the body as holistic. While posthuman frameworks decentralize human subjectivity, they often still emphasize an identifiable body in relationship and/or co-construction with technology. I argue that analysis of this case study calls for an approach that accounts for distribution of bodily parts call into question the limits or boundaries of a human. Rhetorical approaches rooted in Western humanities center the body as holistic, or identifiable with individual, affective bodies. I argue that in centering identifiable, holistic bodies, we miss how *body parts* alter rhetorical commonplaces for defining what counts as a body and rhetorical tactics of bodily control at the level of the cell. For example, when stem cells are removed from a body and are manipulated for treatment, are the removed cells still considered a part of someone’s body? If these removed cells are not legally defined as part of someone’s body, should they be? Or must we also take into account their removal, manipulation, and physical distance from the human body?

Centering individual actors is an incomplete way to understand the body because it does not factor in systems (like medicalization) in which the body is embedded or the way that the body becomes figured as an object within a larger network of objects. Robin Jensen describes medicalization as “a process in which the expertise of science and medicine (and the public vocabularies that support such expertise) is valued over lived and experiential knowledge and used to categorize aspects of social life as disease or abnormality” (Jensen, “Improving,” 330). We can see evidence of medicalizing rhetoric in discourse about hormones (Jensen, *Infertility*; Koerber), how crime is adjudicated on the state of a person’s mental health (Rose), public debates about biotechnology (Hyde and Herrick), narratives about risk and genetics, and genes as a way to prove “authenticity” or genetic origins (TallBear). Lisa Keränen argues that attending to the body down to the level of genetic information is an important trajectory of rhetoric of health and medicine— one that examines the way the body is conceived in a post-genomic era and challenges scholars to consider the stakes of redrawing the boundaries of human life as humans are “increasingly [thinking] of themselves in biological and genetic terms” (505). Appeals to genetics, for example, often ignore history, violence, and social context, as well as biologically essentialize race, class, and gender without attending to lived experience (Happe; TallBear). I build on but slightly deviate from this work to argue that a fuller understanding of how the human body functions today requires attention to the *physical distribution* of the human body that fundamentally alters how life is rhetorically managed through its component parts. This in turn reveals how the biomedical limits of the body are shaped in public deliberation. While HCT/Ps can certainly be tied to the life and identity of a donor, these tissues also exceed the life of the donor because they can be preserved, banked, stored, and transplanted for various purposes. When Adam argues that his cells are part of his body and should be able to be used in whatever way he sees fit, he bumps up against the rhetorical complication that arises when human cells or tissues are removed from a body and are suddenly suspended between persons and individual identities.

While posthumanism suggests we consider the body's porous relationship to its environment and to medical technology, posthuman frameworks often describe bodies as assemblages, nevertheless centering identifiable bodies (Gouge and Jones; Jack; Teston). This does not quite explain what we should make of bodies that have become materially distributed and rhetorically severed from individuals. Christa Teston cites a quote by Wells and Huxley from as early as 1932 describing bodies as "cell communities," and that "these cells… can behave with remarkable individuality and independence" (qtd. in *Bodies* 173). While posthuman perspectives show that bodies are not "discretely bounded," they also do not fully articulate how to understand bodies when cells, tissues, and organs can be removed and used for therapeutic purposes (J. Brown qtd. in Teston, *Bodies* 174). I argue that removing tissues *from* the body creates new questions for rhetorical studies about how and when these tissues are commodified and how they should be regulated. Because these tissues can be physically distributed, they create complicated arguments about when precisely human matter stops being part of the human and is instead classified as a drug or product. This is not necessarily a question about how individual bodies are porous, but rather how individual bodies become distributable objects that exceed notions of a single, identifiable body. When bodies are distributable, this enables different arguments to be made about how they should be regulated and to whom they belong.

The FDA public hearing on HCT/Ps presents a complicated question: when pieces of the body are extracted and are themselves technologized, how does rhetoric negotiate the relationship between cellular or tissue "product" and the holistic "body?" When I say holistic here, I mean that cells or tissues are considered in their individualized, embodied context— that they were extracted from a donor who considers their body to be autonomous, and that this person identifies these cells or tissues as part of their body (even when they've been extracted). Arguments based on molecularization emphasize an embodiment that is not bounded or discrete, but that can be physically distributed and manipulated. I am certainly not the first person to argue that the "creation of commercial products from human tissues has raised questions of profit and property, consent and control" (Andrews and Nelkin 8). However, distributed bodies have implications for rhetorical studies specifically because they alter how we define a "body" in the first place. If, in Western biomedicine, bodies are defined in terms of their component parts, this requires nuanced ways of understanding how these parts resist compartmentalization, how they move and change depending on their contexts, and how to incorporate multiple ways of seeing bodies that both acknowledge human individuality and component, semi-autonomous parts.

At the level of discourse where medical definitions are being interpreted, contested, and applied to specific cases, it becomes evident that it's important not only to pin down what exactly a cell does, but to understand motive, application, and from whom the cells are taken and to whom they are going. It is in this both/and that I apply my rhetorical account of molecularization by attending to how definitions of cells interact with conceptions of holistic, individual bodies. I move back and forth between cellular, bodily, and structural analysis to show how molecularized definitions of the body are situated within larger systems. This enables me to track how definitions flex, move, or limit bodily capacities in contexts where they should be more expansive.

In light of this, I ask how the discourse of molecularization mobilizes human tissues in ways that create questions about whose and what these tissues are. Molecularization shows how life and disease are codified at the molecular level and power is exercised at a microscopic scale.

Bodily rhetorics should then account for the displacement of ownership from the autonomous individual to the cellular level. A theory of molecularization shows how biomedicine conceives of bodies in terms of component parts (whether cells, hormones, tissues, or DNA), and these conceptions lead to ways of using and treating the body. John Lynch and Carol Reeves show that the process of scientific discovery is fraught with attempts to claim the “ability to name, define, and describe [a scientific] phenomenon” (Reeves 332) and negotiation in creating “real definitions” on which shared views of reality are built (Lynch 4). The available discourse of biomedicine, steeped in questions of ownership and definitional complications, gives speakers at the FDA public hearing a schema with which to talk about bodies, namely that human tissues are either person or product, and never both. This has further material implications for what to do with the body. Molecularization helps me describe the commonplaces for discussing the body as made of component parts and sets the stage for analyzing the FDA public hearing: specifically, how did we come to talk about human cells and tissues as both a product and part of the body?[13] Ultimately, I suggest that the distribution of bodies requires a different way of analyzing medical discourse. I offer a way of looking at human cells and tissues that accounts for cellular autonomy, individual human experience, and the structures of Western biomedicine.

Bodily Autonomy and the Rhetorical Limits of Ownership

In this section, I analyze testimonies from the FDA public hearing to show a tension between a public commitment to agency and bodily autonomy and a biomedical quest for

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[13] John Lynch talks extensively about embryonic stem cells and definitional work in *What are Stem Cells? Definitions at the Intersection of Science and Politics.* While stem cells are central to the discussion and the 2016 FDA public hearing, the focus is almost exclusively on stem cells taken from adults. This shifts arguments away from specific concerns about embryonic stem cell research and toward broader conversations about cells and tissues that are taken from adult bodies, often for the purpose of treating the donor. For a more in-depth analysis of stem-cell-specific discourse, see Lynch’s monograph *What are Stem Cells?*.

scientific advancement. I show how distributed body parts are rhetorically wrangled through very different frameworks of interpretation, revealing the ways individual arguments do not fully capture the complexity of tissues that can be identified as both person and product. In particular, I discuss four examples that highlight different rhetorical consequences of the distribution of human cells and tissues.

First, I examine different rhetorical strategies used by actors to make claims about HCT/Ps as property and how this relates to the language used in the FDA's guidance documents. Second, I show how speakers try to make arguments for why cells that come from their bodies should be owned by them, even after removal. Third, I show how the FDA skips over the question of whether or not donors should be able to claim that HCT/Ps belong to them, even as the FDA invites public comments and negotiates how medical definitions should be interpreted. Finally, I discuss how preoccupation with cellular function frames cells and tissues as autonomous from the human donor's body, while simultaneously invoking this invisible body through gendered terms that create expectations about the function of particular parts of the body. A rhetorical account of the FDA public hearing shows that the consequences of molecularization are sometimes competing and can be invoked to make very different arguments about the boundaries of the human body and who has the right to determine said boundaries.

My Body, My Cells?

While many speakers who testify at the 2016 hearing argue for broader access to cellular therapies, they deploy different arguments about better understanding the functions of cells from their bodies. They want to either a) assert ownership over their cells and deny that they are products or b) acknowledge HCT/Ps are products but that they are their property. One stakeholder with osteoarthritis says, "I am having a hard time understanding and talking about just the autologous stem cells, my own stem cells. How is this being considered regulated as a drug? When I look at that little vial, the little sliver of SVF, stromal vascular fraction that is sitting at the bottom of that test tube, those came out of my body and those are my cells" ("Public Hearing; Day 2" 139). This speaker is explicitly claiming these cells as part of his body, inextricable from his own, personal identity. He also asserts ownership over these cells— that they are *not* a drug and belong to him. The speaker redirects the FDA's questions about regulations to the embodied experience of patients, and with this, the difficulty of negotiating ownership of cells and tissues. His stem cells are sitting in a test tube outside of his body, and the ability to remove and use these as a therapy relies on treating the body at the cellular level. However, that these cells can be removed, the patient argues, does not mean they are precluded from being associated with his body. Individual autonomy fails to fully encompass the complexity of removing and manipulating these cells once they are extracted from an individual's body, but at the same time, these cells are able to be identified with the patient because they *came* from his body (and in this case, are going back into his body).

In this instance, the patient is not suggesting that the cells should not be removed or used therapeutically, but that he should have the right to be able to determine what's done with somatic material that he donated with the intent for his own use. While molecularization describes how exactly cells can be used, donor bodies can also be easily elided despite their material role in the ability to form HCT/Ps in the first place. Molecularizing discourse emphasizes the body's workings and maximizing the body through manipulating or treating it at the level of biochemistry. It also frames bodily material, whether cells, tissues, or organs, as component parts that can be treated strategically *and* used as treatment in an age where regenerative medicine is hailed as some of the most promising new medical research. A rhetorical perspective shows that rather than dismissing this patient's claim based on laws that say donated tissues do not belong to donors, tissues cannot be completely rhetorically severed from individual identity.[14] When cells are extracted, manipulated, and turned into a product for treatment, they came from a donor's body and contain the donor's genetic information. Even at a biological, molecular level, they can still be tied to an individual person.

Another stakeholder (who I'll call Amanda) who was not present at the hearing submitted a video to be played during her scheduled time slot. In the video, she describes that she is there to talk to the FDA panel about "the patient perspective" and what "the patient community wants in cellular medicine" ("Public Hearing; Day 2" 213). She describes the symptoms she's experienced from multiple sclerosis. While she cites researchers and specific cellular therapies with precision, she also provides video of the changes she experienced after treatment. She shows before and after photos, and footage of her being able to walk after years of not being able to do so. Meanwhile, her narrative describes the benefits she received from treatment. She says, "My response was very positive, very immediately. Feeling returned to my hands. I could feel my fingerprints again" (214). Amanda continues to invoke the benefits she saw through her treatment while also citing researchers and roadmaps to regulating cellular therapies. Amanda does not refuse to engage with the FDA's definition of cells as a product, and in fact, she continues to call the treatment "cellular therapy" rather than solely using the term "my cells." She blends her own narrative with the epistemology that the FDA is using to define HCT/Ps, citing evidence that is accepted as empirical *and* performing the evidence of her own personal

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[14] Interestingly, there is not the same kind of resistance to this kind of identification with bodily material when it relates to organ donation. The internet is saturated with videos of parents listening to a transplanted heart to "hear their child's heartbeat again." At the same time, vials of donated blood are not strongly associated with individual identity in the same way. Identification with bodily material varies greatly.

experience. Amanda's testimony shows the complexity of this particular debate. Amanda is among many speakers that do *not* claim the FDA should refrain from regulating cellular treatments, but that the regulations should allow patient choice and perspective, particularly when it comes to using one's own HCT/Ps. There is substantial rhetorical flexibility in HCT/Ps and their definition. That these cells and tissues can be extracted and (even temporarily) moved away from the body does not, in the arguments of many speakers, separate tissues from identification with their embodied selves. The FDA argues that the very fact that HCT/Ps *are* extracted from the body severs an individual's claim to them, especially when they are manipulated or used for a function other than their "main" or "original" function in the body.

Molecularization has created commonplaces for talking about the body in terms of cellular function. These testimonies show, however, the rhetorical consequences of identifying the body as a series of component parts, particularly when a patient argues that these parts should be theirs even after extraction. For example, because stem cells can be banked (think also cord blood cells), they can become separated from individual identity through time and space. In these speakers' arguments are elements of materiality, temporality, and discussions about notions of property rights. Does it matter if stem cells are removed and quickly reinjected into the same body? Would these arguments be invalidated if these cells were saved and injected into another person? Rhetorically, it is difficult to address these questions because there is a fine line between cells being part of someone's body and a product. Part of this difficulty has to do with the removal of tissues from a body, but even within the FDA's definition of HCT/Ps, there are complications with pinning down the exact moment or situation in which a cell becomes its own thing separate from individual, human identity. It is also apparent that, whether or not the FDA considers identification with human tissues a valid argument, speakers do link extracted tissues to their identity. This identification especially makes sense in a Western medicine where individual responsibility and ownership over one's body is a foundation of medical practice and preventative medicine.

The Promise of Stem Cells

In the various testimonies given at the hearing, molecularization frames the ways that stakeholders make arguments about the regulation of HCT/Ps based on how cells function, both in a donor's body and once they have been extracted from the donor's body. Even when different stakeholders argue for broader access to cellular therapies or transplants, their construction of *whose* these cells are and their proper relationship to the donor body varies greatly. For example, one of the stakeholders present at the public hearing was Steven Brody, a doctor and the "chief scientific officer at StemGenex" (which is a medical clinic offering stem cell therapies to treat diagnoses like Parkinson's and multiple sclerosis) ("Public Hearing; Day 1" 76). Dr. Brody has clear investment in these draft guidances allowing for autologous stem cell transplants because he works at a clinic where patients can pay to receive these treatments. Autologous stem cell transplants are a process in which a person has tissue harvested from a part of their body (often from bone marrow or adipose tissues), stem cells are isolated from this tissue, and then these stem cells are injected into a part of the body needing treatment. Dr. Brody argues that autologous stem cell transplants are reliable because a) he believes that he can extract stem cells in a safe way that will not drastically alter their characteristics enough to require them to be labelled as a "manufactured" product and b) that the FDA's definition of the kind of cells he's extracting is incorrect based on their purpose or "main function" in the body. By using this language, he is speaking directly to the FDA's concerns about interpreting the regulations— he specifically invokes molecular discourse by discussing the function of cells, the right kind of technologies to use when extracting these cells, and more specific definitions the FDA can use to make these treatments more available. His testimony is working at the level of cellular function in the body *and* discussing the biotechnology that stores or alters cells once they are extracted. In response, an FDA panelist asks him questions to further clarify his statement, to a certain degree validating Brody's approach by engaging in dialogue (as only select speakers are asked questions by the panel). Brody's argument is centered on the ways cells function both inside and outside of the body. This emphasizes the ability to manage human cells and tissues and use them for optimization, but without much attention to the bodies from which these cells came.

However, another speaker who is also invested in access to stem cell therapies makes a claim of ownership rather than focusing cellular function. "Alexandra" discusses her experience with rheumatoid arthritis and says she is "currently in remission because of stem cell therapy one and a half years ago" ("Public Hearing; Day 2" 106). She also reveals that she is a professional pharmaceutical rep who knows about marketing and sales in medicine, including biologics (products produced from or that contain components of living organisms). She describes the medical benefits she observed post-stem cell treatment and shows the panel before and after photos of her labs. Building on the collection of evidence from her experience and the information from her labs, she concludes by asking the FDA to "accelerate availability" of stem cell treatments and to "please not classify my own cells as a drug." She says, "They are my own cells and I ask that you respectfully treat them that way" (112). Alexandra establishes a kind of professional ethos and uses evidence from her own medical treatment, but she ultimately makes an ethical argument about these cells being *hers*. This departs from Brody's argument because it does not rely on cellular function— it relies on her own embodied experience and the claim that cells taken from someone's body belong to them. She is staking claims of autonomy over her body as she indicates a concern with this slipping away.

Both Brody and Alexandra make arguments about having access to cellular therapies. While Brody specifically discusses cellular function, and in doing so appeals to the same kind of molecular discourse that the FDA uses in defining HCT/Ps, Alexandra shifts the conversation in a different direction. She makes claims of ownership over these cells and refuses to acknowledge their status as a "product." Her testimony relies on elements of molecularization because it talks about the use of cells as a treatment that works better than traditional pharmaceuticals, and the physiological benefits of these treatments. But she also troubles notions of the medicalized body as essentially biochemical and of extracted cells as autonomous from the donor's body. An underlying understanding of these cells as both part of her body *and* as a product is possible because she already interprets her body as a collection of molecules, cells, and tissues. At the same time, she strategically deploys claims of ownership over these component parts of her body.

Person or Product

It's important to note that by the FDA's standards, a draft guidance clarifies the *already* established regulatory framework, and while this clarification could lead to more lenient or restrictive interpretation of the guidelines, the FDA is not discussing radically changing the regulations themselves. These hearings involve marshalling scientific evidence but are always "imbued with values" that structure how this evidence is collected and interpreted ("The Rhetoric of Female Sexual Dysfunction"). As Christa Teston et al. point out in "Public Voices in Pharmaceutical Deliberations," the FDA's seemingly democratic move to open up a public forum to determine the clarity and usefulness of the HCT/P regulations should be held in tension with the prioritizing of Evidence-Based Medicine (EBM) in which patient testimony is often dismissed as anecdotal. The stakeholders are being asked to help clarify when the regulations should apply and when exceptions to the regulations make sense. Second, HCT/Ps have already been defined as *products* in the regulations published by the FDA that are already in effect, and when they are taken from a body and manipulated, these cells and tissues are understood as "manufactured" (Regulatory Considerations). While the FDA is open to discussing what counts as a "manufactured" cell, how to define when it has been manipulated beyond its original function, or better determine the limitations of using one's own cells for therapeutic purposes, they are not discussing the *ethics* of labelling human tissues as separate from a donor's body.

Many testimonies at the public hearing show concern that the FDA's guidelines are not specific enough, and that the FDA has cobbled together regulations that do not truly address the various ways cells and tissues in the body work. This, in one sense, argues for even closer parsing of the body to truly understand the difference between cellular functions: a highly molecularized understanding of the body. Several speakers suggest that the term "stem cell" (which is brought up as one of the promising forms of research and therapy that these regulations can restrict) is used too casually, and that many of the cells referred to in this category actually are not stem cells. John Lynch has shown that most often stem cells "are defined as cells that have a capacity for self-renewal and a capacity for differentiation, and the existence of these capacities in the present creates the possibility for future applications" (19). However, some speakers argue that the terms invoking stem cells at the hearing are too ambiguous, and this ambiguity is cited as being the reason that the "revolution in cell therapy" is being stymied for the sake of avoiding "quackery" in the U.S. ("Public Hearing; Day 1" 130) that often touts stem cells as "a cure for everything" (Lynch 27). In short, many of the respondents who claim scientific expertise argue that, if the FDA wants to regulate HCT/Ps, it must be more careful to delineate when these laws apply to various different cells that can be used for many kinds of therapies or research. This move toward incisive definition deploys molecularization to emphasize how cells and tissues work rather than the role of the public in determining regulations about materials that come from their bodies. Even when the role of the donor is considered, this often employs the language of the FDA's regulations. Stakeholders do definitional work that demarcates how different cells function and why that might call for different regulations. This is not to say that it's *wrong* to make arguments about patient rights through defining cellular function, but that this is the *primary* way that stakeholders make arguments about HCT/Ps. This adopts molecular discourse and discusses how cells can be technologized, manipulated and used for treatments, while other stakeholders call attention to a problem to be addressed *before* the definitional work. Namely, that they were not consulted about their cells being classified as a drug in the first place.

The stakes of defining a cell as a product or drug are high— HCT/Ps are part of a larger economy of biocommerce that attracts venture capital and has been part of the global economy since the 1970s (Waldby and Mitchell 24). Catherine Waldby and Robert Mitchell show how cellular products present ethical debates concerning property, ownership, and commodification. In an age of advanced biotechnology, property rights no longer simply apply to structures or things. Biocommerce yields tricky terrain where "biotechnical processes and an institutional complex of tissue banks, pharmaceuticals, and clinics" have implications for the social relations of HCT/Ps (22). Legally, donors do not have property rights to "products" that come from their bodies, but biotech companies do have property rights when they create cell lines or gene sequences (like Henrietta Lacks' cells being extracted and transformed in the HeLa cell line).

Tissue banks, labs, and biotech companies "assist in the work of partially disentangling human tissues from the network of embodied social relations in which they originate," allowing them to "circulate through the body politic in more complex and flexible ways that is possible for whole organs" (Waldby and Mitchell 69). Because they are shareable, manipulable, and reproducible, stem cells much more closely mirror traditional commercial goods than other human products (like organs or even blood) do. Stem cells can differentiate, meaning they have the "capacity to become any type of cell, making [them] ideal for regenerative medicine" (Lynch 23). However, because they originate from human bodies, they present unique problems for property rights law and questions about ownership (Bowen). In this capitalist frame emphasizing ownership, the role of the person seeking treatment options that come from their body is elided.

Because molecularization has largely coded the body as information that can be gathered, stored, interpreted, and maximized, it is not a great logical leap to then consider the ways this information can be extracted and shared. As scholars have pointed out, people are urged to govern their own bodies and manage their "riskiness" (Keränen; Rose; Scott; Stormer). Contemporary Western biomedicine has figured the body as a kind of technology that can (and should) be constantly self-managed and assessed for risk.[15] Thus, when parts of their bodies can be used to treat their own illnesses, why would donors *not* be involved in this process and able to use material from their own bodies? The FDA here suddenly positions patients in a different way— they may have parts of their body that can help them, and they may be able to access these parts with the help of a medical professional, but they are not allowed to use these therapies

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[15] An important rhetorical component of the interpretations of the FDA guidelines is the management of risk—both for patients' personal risk and for researchers and companies willing to take risks in order to develop new methods of treatment. Rose discusses risk management in depth in *The Politics of Life Itself*, and risk is certainly part of molecularization and his interpretation of neoliberal biopolitics. While there is much more to say here, in this essay I've chosen to spend more time highlighting definitional work and interpretation as it relates to component body parts and their relationship to the holistic human body.

because their bodily material is defined as a product when it's extracted. Even while individuals are encouraged to manage their bodies, they are limited in their ability to do so because of regulations that are in place for protection, but also frame human bodily material as capital that can be developed and used by companies seeking to monetize somatic material.

Gender Matters

In response to the draft guidances on HCT/Ps, a key discussion centers around the definition of "basic" or "main function" of cells or tissues, revealing rhetorical complexity at a molecularized level. The FDA regulations claim that, in order for a tissue product to be exempt from a long approval process, its use must not differ from the "main function" in the donor's body. This is called homologous use. As many speakers point out, there are problems identifying the main function of a tissue or cell, and it perhaps makes more sense to adjudicate *effects* in a recipient rather than function in the donor. For example, the case of breast tissue is presented by multiple speakers as evidence against the notion of "main function." Multiple speakers point out that the problematic medical definition of the "main function" of a breast is "to produce milk, [or] lactation, after childbirth" ("Public Hearing; Day 1" 235). One speaker shows that this definition proposes that breasts are defined by a potentially very short time after childbirth, ignoring the existence of breasts for the dominant majority of a person's life. This classifies breasts as an organ solely defined by childbearing, writing off the function of breasts entirely for many people. The definition of the "main function" of breast tissue means that using fat tissue for breast reconstruction or augmentation falls *outside* the "main function" of breastfeeding and would thus not be exempt from the FDA regulations.

Defining breast tissue at the cellular level reveals key repercussions of defining an HCT/P by its "main function." At stake is the construction of the "function" of bodies, and the focus on ontological categorizations of the body rather than consideration of the effects these cells or tissues might have when applied to another body or part of the body. By focusing on a cell's "primary function" in this case, the definition of breast tissue misses how these tissues are inevitably bound up in frameworks of gender, identity, and even in medical practice. A speaker representing The Cure Alliance, a nonprofit group working to end chronic, debilitating, and fatal disease, notes the 2600 "American men who battle breast cancer each year" ("Public Hearing; Day 2" 73) and emphasizes that "a woman's breasts are not just for babies" is not a new concept (72). The definition of main function also shows that when tissues are stripped from their context and experiences of donor bodies are ignored, it is still impossible to completely dissociate tissues with the body's experience of gender or race or class. The manifold problems of defining breast tissue as a tool for breastfeeding reveals the importance of a rhetorical perspective on molecularization— namely that how tissues are defined, and the consequences for the valuing and devaluing of particular bodies and body parts, are in direct relation to *whose* bodies tissues come from and how they are used. Rhetorical analysis of molecularization traces the relationship between the tissue, the donor body, and medical definition. The "scientific" approach of adhering to tissue function reveals that these definitions rely on gendered (and raced and classed) interpretations of what a body is, whose it is, and why particular bodies matter.

This particular example demonstrates the importance of complicating Rose's initial conception of molecularization. Arguably, the impulse of the FDA to define tissue's primary function relates to the ability to clearly pinpoint how the body works and how to treat it, or how to best use these extracted cells as treatment—a very molecularized approach to understanding the human body. However, it is impossible to completely disentangle biochemistry from the experiences, cultural location, and gendered experiences of a particular body. Trying to scientifically define the main function of breast tissue also results in defining this body part entirely in relation to motherhood, ignoring the very real function of breasts outside of this essentializing and restrictive view. The consequences of molecularization here are that even uses of breast tissue for reconstructive purposes are limited because there is no consideration of how bodily tissues are embedded within a complicated network of relations, including but not limited to their material and biological makeup *and* the embodied experiences of the person from whom this tissue is extracted.

Because treatment methods like fat transfer can use human tissue from one part of a person's body to treat another part of their body, the in-betweenness of extracted tissue complicates what we can call it. While fat grafting and stem cells certainly do come from living donors, they also become their own separate entities once they leave the body. If rhetorical studies focuses only on the embodied experiences of donors, the ability for the extracted tissue to take on its own, new meaning can be missed. If rhetorical studies chooses instead to analyze removed tissue as its own autonomous object, we risk falling into the trap of definitional work that cannot fully account for embodied experiences and larger systems of power that create the possibility for that tissue to be extracted and used as product. Instead, a rhetorical account of molecularization suspends the impulse to dwell either in the human body or the technologized biological product. When medical definitions inevitably fail to capture full human complexity, and when focus on human agency fails to reveal the effects of cellular medicine, we must develop the ability to understand how the human body is rhetorically changing as quickly as biotechnology can alter it. Just as removed tissues occupy a liminal space between body and product, we should sit in the in-between, moving our analysis back and forth between biochemistry (the micro) and the situatedness of human bodies (the macro) to track the ways that somatic tissues move from person to product, flesh to miracle, human to nonhuman.

Conclusion

The discourse surrounding HCT/Ps reveals people searching for a way to understand the boundaries of the body in a distributed world. As Michael M. J. Fischer states, “Life is outrunning the pedagogies in which we were trained,” despite the public having to face regulations that have very material effects (qtd. in Rajan 37). While posthuman and ecological frameworks for the body help rhetorical studies to parse what happens when bodies are enmeshed with technology and their porous and affective relationships with their environments, they cannot fully address discourse that relies on the assumption that “the body” is not contained. Bodily distribution in which tissues and cells are donated or extracted is not merely a consequence of medical science— it’s intentional, highly regulated, and surveilled.

Rhetoric is crucial for explaining how distributed bodies move because this regulated movement is adjudicated through discourse that slips between notions of liberal subjecthood and the commodification of “somatic material” (Keränen 505). Better understanding how molecularization shapes some of these bodily arguments reveals the consequences of Western medical discourse for the boundaries of the human body. Public actors make arguments about why they should be able to control their own health decisions, the workings of the body at the molecular level, the impulse to define the body as a series of component parts, and the increasing commonality of collapsing the material body with the self. These factors can help rhetorical studies better understand the complex discursive formulations of the body as property or product. Ideas about to whom the body belongs and what it is will become increasingly complicated as regenerative medicine progresses. With the rapid development of transplantation and tissue engineering in the 21st century, it will become more and more difficult to negotiate the rhetorical strategies invoked in defining the bioethics of tissues that exist outside of the human body (*NIH Fact Sheets - Regenerative Medicine*). Because of the trajectory of tissue research, it is vital for rhetorical studies to attend to the ways cells and tissues are regulated and the consequences this has for individual consent, ownership, and bodily autonomy.

While I argue that rhetoric offers ways to understand distributed bodies, the inverse is also true—distributed bodies hold new possibilities for modes of rhetorical analysis. Specifically, rather than relying on preexisting models that centralize human agency or move beyond human agency entirely, I suggest placing rhetoric and molecularization together. Rose's theory of molecularization needs a rhetorical perspective to develop a fuller picture of how human bodies operate in Western biomedicine. By rhetorically accounting for molecularization, we can apply both close and distant methods of looking at the body, working to hold in tension the way bodies work at the level of biochemistry while also acknowledging their situatedness and ability to feel. This challenges how we think bodily rhetorics operate, urging us to occupy new spaces that the body inhabits when it is neither person nor product. This shapes our ability to understand what makes a "human" and what becomes a commodity, even down to the cell.

Chapter 5

Conclusion: The Rhetorical Production of Biomedical Autonomy

A video on the Mayo Clinic's Center for Regenerative Medicine's website presents a compelling title: "The Promise of Regenerative Medicine." The quote "healing from within" appears in text early in the video, and a doctor named Eric Dozois in scrubs states, "If we could take a patient's own cells and get them working on the patient's problem, we could have a tremendous amount of impact on the care of medicine" ("The Promise of Regenerative Medicine"). Regenerative medicine is hailed as a promising emerging field and the video describes the Mayo Clinic center focusing on regenerative medicine and therapies. Heavily emphasized is the fact that this form of treatment uses human cells and tissues. The narrator states, "For example, physicians use materials from the patient's *own body* to assist in the healing process." The promise of regenerative medicine is, in part, that the body can essentially heal itself with a little bit of outside help.

This medical trajectory is consistently praised as the future of medical treatment, and current debates about stem cell therapies show that many public and scientific stakeholders are invested in the idea that the materials already existing in the human body have the potential to treat various problems that have long been either untreatable or difficult to treat. However, implicit in this research trajectory is a question that has existed since at least the early days of organ transplantation: who does this body part belong to? And, perhaps more broadly, what is it?

As this dissertation has suggested, the use of human tissues for treatment, education, and microscopic commodification troubles the idea that body parts are always attached to a person's own body. In fact, in Western biomedicine, human tissues have been treated as autonomous things with the power to heal, teach, and persuade. Historically, when human material has been taken *out* of the body, it has been viewed differently than when it is physically attached to a person. This makes sense— a blood donor can't track where or to whom their blood goes, nor does the average donor try to claim that donated blood as theirs after it's been removed. However, as Mitchell and Happe have noted, in contemporary biomedicine where DNA can be traced and tell a story about the original donor long after extraction, the identity and history of the donor is never truly severed from biological material. And genetic information can also have broader repercussions for broader communities and scientific racism (Mitchell and Happe; TallBear). When we look at historical examples of organ donation or of displays at the Mutter Museum, those donated body parts also are not truly rhetorically severed from the donor. They retain threads tied to identity, purpose, and life lived when those body parts were still part of a person. In short, donated or extracted pieces of the body can never be truly severed from individual *or* community identity. But at the same time, a scientist performing research on human tissue samples often does not know much, if anything, about a donor's identity. While there are remnants of a name in terms like HeLa cells, researchers didn't and do not call those cells Henrietta Lacks. So what is rhetorical studies to make of this tension?

Summary of the Research

To answer this question, my first chapter, "Rhetoric and The Body Distributed," introduced my concept of the "distributed body" as a framework for the following case studies. I then discussed three different archives to show how the distributed body emerges in the 20th century, how it is communicated to the public, and how it affects policy. My second chapter, "Sharing the Gift of Life: A Rhetorical History of Tissue Transplantation," delved into newspapers and archival documents invoking the trope of donation as a "gift of life," laying a foundation for how parts of the body are implicitly commodified and how the public imaginary around tissues shifts in late capitalism. In my third chapter, "'Disturbingly Informed': The Material Pedagogy of the Mütter Museum," I showed how, through the public education of the museum, body parts come to stand in for larger theories about disability, diagnosis, and even super-ability. Finally, in my fourth chapter, "My Body, My Cells: Bodily Boundaries, Human Tissues, and Rhetorics of Ownership," I analyzed transcripts from a U.S. Food and Drug Administration (FDA) public hearing concerning the regulation of human cells, tissues, and cellular and tissue-based products to show how seemingly conflicting conceptions of the distributed body affect public policy.

These case studies have shown that the ability to remove, preserve, and use human tissues create complications for how rhetoricians—and humanists more broadly—take up questions about bodies and embodiment. This project begins from the assumption that tissues suspended outside of bodies create unique and specific rhetorical problems because they can be figured as raw material, products, or treatments, in addition to being identified with the bodies from which they came. Because the body has become distributable at varying levels (from organs to cells), this distribution is altering how public discourse defines bodily autonomy. Rhetorical studies should hold in tension the complexity of removed and manufactured human tissues as well as the rights of the individuals and the bodies from which extracted tissues come. This is perhaps particularly urgent in the advent of personalized and regenerative medicine in the postgenomics era.

The Trajectory of the Distributed Body

Late capitalism has and continues to fundamentally shape the ways that somatic material is perceived. Research in the life sciences is "increasingly performed in corporate locales, with corporate agendas and practices" since the 1980s and 90s, and this "institutional shift" is situated in "the epistemic and technological changes happening within the science, especially the trend in the last half century toward understanding biology at the cellular and molecular level" (Rajan 18). As Melinda Cooper suggests, "What neoliberalism seeks to impose is not so much the generalized commodification of daily life" but "its incorporation into the nonmeasurable, achronological temporality of financial capital accumulation" (10). A combination of a shifting economy, the advancement of technology, changes in scientific research funding, and neoliberal reliance on risk-management and self-assessment have created an economy in which biotechnology is proposed as the solution "to the problems of industrialism," and the body becomes simultaneously better understood and more difficult to pin down (Cooper 11).

The way that bodily tissues are circulating today has become complicated by advanced biotechnology, biobanking, cell lines, and regenerative medicine. Catherine Waldby and Robert Mitchell have shown that cellular products present new ethical debates concerning property, ownership, and commodification in late capitalism. In an age of advanced biotechnology, property rights no longer simply apply to structures or things. Biocommerce forces a tricky new terrain where "biotechnical processes and an institutional complex of tissue banks, pharmaceuticals, and clinics" have implications for the social relations of human tissues (Waldby and Mitchell 22). Tissue banks, labs, and biotech companies "assist in the work of partially disentangling human tissues from the network of embodied social relations in which they originate," allowing them to "circulate through the body politic in more complex and flexible ways that is possible for whole organs" (Waldby and Mitchell 69). The increased attention to the body at the molecular level, and the ability to both treat the body and extract somatic material at microscopic scales, shifts perception of the body as a machine to the body as information. And this information is highly valuable.

A rhetorical examination of distributed tissues deviates from science and cultural theory because it emphasizes the role of *discourse* in contemporary bioethical debates about human tissues. I argue that it is within these debates, not the cells or tissues themselves, that the entanglements between agency, biopower, and the material makeup of the flesh come to the fore. This matters because, for example, attempting to define what exactly a stem cell can do on a biological level isn't going to solve epistemological, ideological, or ontological questions about whose and what a stem cell is. Within biomedical discourse, human tissues are constantly being decontextualized and recontextualized in relation to the bodies from which they came. Discussions about tissue autonomy affect what bodies are allowed to make claims to ownership, patient consent, and public policy. I suggest that a growing public concern about bioethics and human tissues is emerging. As biotechnology progresses and continues to develop modes of treatment involving the manipulation of human tissues, it becomes more urgent to understand where and for whom the lines of human life are drawn.

Conclusion

The distribution of the human body requires a rhetorical framework that accounts for the ways that bodies are interpreted and explained within the context of 21st century Western biomedicine. This dissertation does not argue for or hold up Western biomedicine as the correct heuristic for understanding the human body, but rather gives rhetorical studies the critical tools to understand the effects of increasingly molecularized discourse on the human body. In other words, if we do not understand the ways that the life sciences are defining the body, rather than being able to intervene and critique these modes of rhetorical distribution, rhetorical studies must instead deal with the after-effects. Instead, I argue that the trajectory of contemporary biomedicine demands a more robust vocabulary for how the body is interpreted, the stakes for future medical research, and the current effects on the ways that bodies are understood and treated. A framework of the distributed body provides pathways for understanding why people are simultaneously conditioned to treat their bodies as machines they can maintain, but also have little to no control over how their bodies are used when blood, tissues, bone, ligaments, and cells are taken from them in seemingly mundane scenarios. The stakes, both rhetorical and material, are vast and far reaching when a small clump of cells can be developed into a biotechnological miracle, or cord blood cells become highly valuable and bankable commodities.

When the body can be banked, who gets to cash in on the commodities? When the body can be sequenced and spliced, and its materials made into highly valuable products, who is benefitting from those products? These are not small questions, and they are not only about individual rights to biologic products. Instead, the distributed body demonstrates that there are pressing concerns about non-linearity of consent, the ability to understand the limits of the human body, and repercussions for communities whose bodies have historically been used as research sites or resources to be mined. This dissertation demonstrates that the problem of distributed and commodified human tissues is not only present in the history of medicine but will continue to be a site of research and investment into the future. A rhetorical framework for how biomedicine shapes ideas about autonomy and community, private and public, and gifts and commodities is necessary for better understanding the way the human body functions within a Western context where biomedicine increasingly shapes ideas about the self.

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