Critical Non-Dualistic Theories of Embodiment:

Autoimmunity, Psychosomatics, Dorsality

By

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A thesis submitted to the Faculty of Graduate Studies of

The University of Manitoba

in partial fulfillment of the requirements of the degree

MASTER OF ARTS

Department of Religion

University of Manitoba

Winnipeg

Thesis Abstract

This thesis suggests that problematic dualistic frameworks, still common in contemporary critical and ethical theory, are challenged most overtly in writing that, in engaging issues of embodiment, does not overlook the biological sciences. The thesis proceeds through four chapters. The first of these chapters serves as a general introduction by providing a brief history and analysis of dualistic frameworks, outlining their problematic status as a foundation for interpretive and ethical theory, especially in the context of the emerging field of critical animal studies. Each of the three chapters that follow engages a core theme of embodiment that has recently emerged within critical and ethical theory: Jacques Derrida's concept of autoimmunity; Sigmund Freud's work on depression, hysteria, and PTSD, along with Elizabeth Wilson's reading of Freud's work as psychosomatics; and the work of David Wills, whose theory of dorsality (along with that of prosthesis) suggests an original technicity, or automaticity, at work at the origin of the human species and at the origin of biological life itself. Significant in each chapter is the way in which each theorist draws on concepts, research, or analogies that come from biology in order to strengthen his or her concepts of embodiment. Each chapter, furthermore, suggests possible applications of the theories explored in the primary thinker's work. These applications, in the way that they resist dualistic frameworks by drawing upon biology, can be seen to have potential positive impacts.

Acknowledgments

A thesis such as this would not have been possible without the assistance of a number of individuals. I would like to take this space to thank those without whom this thesis would not have been possible. I would like to thank the numerous friends, co-workers, peers, and family members who offered their support and understanding during the completion of this thesis. In particular, I need to thank my parents for their care, love, and support, and Chance Sander for an especially large amount of patience and understanding over the last two years.

I would also like to thank the work of those around the University of Manitoba that assisted me through the writing of this thesis. The support of the Department of Religion and its support staff are greatly appreciated, as are Dr. Justin Lewis and Dr. Louise Renee for the time they spent working on my thesis committee. Above all, I need to thank my advisor, Dr. Dawne McCance, for her support, assistance, and guidance throughout the process of writing this thesis. Her care and instruction allowed me to develop the skills and knowledge necessary to complete this undertaking.

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Chapter One

Introduction: Dualism and Critical Animal Studies

Still present in contemporary critical and ethical theory are modes of thinking that rely on dualistic frameworks, that is, two-term conceptual structures that elevate one term even as they demote or exclude another. These problematic modes of thinking are challenged overtly in writing that, in engaging issues of embodiment, does not overlook the biological sciences. This thesis centers on this critical-biological nexus, particularly on some inseparable doubles—doubles or multiples, rather than dualistic exclusions—that emerge from three selected contemporary instances of critical-biological intersecting. At the same time, this thesis demonstrates the inadequacy of conceptual dualism.

My thesis analyzes themes of embodiment in three selected instances, drawing on both primary and secondary sources. Through this analysis, I suggest at each stage of my thesis how my selected sources question prevailing dualistic frameworks, and as well, how they provide alternative frameworks. However, before these analyses can be undertaken, it is necessary to provide a background on dualistic frameworks. This introductory chapter provides this background before proceeding to outline the following chapters. First, this chapter outlines one origin of contemporary dualistic thinking through an analysis of René Descartes' work; second, this chapter explores the negative impacts of such Cartesian frameworks within critical animal studies; next, this chapter explores two major philosophical thinkers, Peter Singer and Tom Regan, their approaches to these animal issues, and why their particular solutions are insufficient at overcoming such Cartesian frameworks and creating a solution.

Dualistic Frameworks – Descartes and His Successors

Dualism and dualistic frameworks have been common in philosophy and religion going back to antiquity. However the most common contemporary dualistic framework, mind/body dualism, is often claimed to have risen to modern prominence as a result of René Descartes' work. His work was highly influential during his time, and many of his successors carried on his legacy. Descartes' work did much to advance a number of scientific fields, but it is primarily his contributions to philosophy for which he is now remembered. Descartes is perhaps best known for his idea that the rational mind is distinct and separate from the material body of an individual. This mind/body dualistic framework—as well as a human/animal dualism that I explore later—is established within his *Discourse on the Method of Rightly Conducting One's Reason and Seeking Truth in the Sciences* (most often referred to by the abbreviated title, *Discourse on Method*).

Descartes' mind/body dualism is centered around, and also dependent on, his argument for the existence of a divine creator. Therefore, before his logic of this duality can be stabilized he needs to establish the existence of a creator. Proceeding to do so, he lays out the method of reasoning that allows him to arrive at such a conclusion. Descartes begins by noting that "there is usually less perfection in works composed of several parts and produced by various different craftsmen than there is in the works of one man" (5). In other words, Descartes believes that it is possible for one man, such as himself, to provide a better explanation of the truth than the compiled works of many scientists or philosophers whose work is dependent upon the works of previous thinkers who came before them: "our convictions come much more from custom and

example than from any certain knowledge; and yet when it comes to proving truths that are hard to discover, a majority vote is downright *worthless*, because one man on his own is much more likely to hit upon such truths than a whole population is" (6).

Having established himself as capable of arriving at certain truths that had not yet been arrived at by means of the sciences, Descartes forms four moral maxims to accompany and outline his method of critical reasoning: "The first was to obey the laws and customs of my country, holding constantly to the religion in which by God's grace I had been instructed from my childhood." His second maxim is to, "be as firm and decisive in my actions as I could, and to follow even the most doubtful opinions, once I had adopted them, as constantly as if they had been quite certain"; third, Descartes would "try always to master [him]self rather than fortune, and change [his] desires rather than changing how things stand in the world." The only masterable thing about oneself, in his opinion, is one's thoughts; Descartes's final maxim is to "devote my whole life to cultivating my reason and advancing as far as I could in the knowledge of the truth, following my self-imposed method" (11-12).

Using the method of pure reasoning and his four maxims, Descartes begins to contemplate the nature of his existence, using his experience as an example of all other human existence. He arrives at the conclusion that, even if everything he experiences is an illusion, the fact that he is thinking must mean that he exists (14). From this simple conclusion comes another: "I saw that while I could pretend that I had no body and that there was no world and no place for me to be in, I still couldn't pretend that I didn't exist. [. . .] This taught me that I was a substance whose whole essence or nature is simply to think, and which doesn't need any place, or depend on *any material thing*, in order to exist" (15). With this secondary conclusion,

Descartes posits the notion that the rational mind and the body must be distinct and separate. This is indeed the conclusion at which he arrives: “Accordingly this *me*—this soul that makes me what I am—is entirely distinct from the body, is easier to know than the body, and would still be just what it is even if the body didn’t exist” (15). Descartes' mind/body duality is established from his conclusion that he must exist.

Descartes next wonders about perfection, specifically why he is able to conceive of something with greater perfection than himself: “Where did I get my ability to think of something more perfect than I am? [. . . From] something that was in fact more perfect than me" (15). This perfect thing, Descartes reasons, must be God (16). The conclusion of God's existence allows him to make further conclusions about the nature of bodies. Descartes notes, "I had already recognized very clearly in my own case that *intellectual* nature is distinct from *bodily* nature, and as I observed that if a thing is composed of simpler elements in any way, that shows that it is dependent on something else, and that dependence is obviously a defect” (16).

Therefore, Descartes reasons that if God is perfect he could not be composed of two natures as humans are. Furthermore, “if there were any bodies in the world, or any intelligences or other natures that weren’t wholly perfect, their being must depend on God’s power in such a way that they couldn’t stay in existence for a single moment without him” (16). Indeed this nature, and any conceivable knowledge of it, must have been established by God and implanted in the minds of mankind (19). Descartes thus places the creation of the world in God's hands, but allows this creation to develop out of chaos on its own. God's role as creator, in Descartes’ opinion, has ended; however, “God’s activity in now *preserving* the world is just the same as his earlier activity of *creating* it, so the ‘miracle of creation’ is with us in full

strength even now, whether or not the material world began in chaos" (20).

Satisfied with the dual nature of human beings, Descartes moves on to the subject of the "lower animals" to show the way in which they differ from humans. He posits a second dualistic framework wherein humans are separated from all other animals based on special mental capacities that these "lower animals" lack. The necessity of such a difference is established by Descartes at the beginning of his work, where he states that, "as for reason or good sense, I'm inclined to believe that it exists whole and complete in each of us, because it is the only thing that makes us men and distinguishes us from the lower animals" (1). Initially, Descartes explains, God must have created the human body out of the same matter that all other things are made of, but this body would at first be lacking any form of rational soul; "And when I looked into what functions could occur in such a body I found *precisely the ones that can occur in us without our thinking of them* and hence without any co-operation from our soul. [. . .] These functions are just the ones in which animals without reason may be said to resemble us." As for the functions of thought, Descartes could not find these things at first within the body until he supposed the existence of the rational soul that God must therefore have later provided (21).

Descartes explains the workings of the body, particularly the heart, and concludes by comparing the body to well-designed machines: "You won't find that at all strange if you know how many kinds of automata or moving machines the skill of man can construct with the use of very few parts, in comparison with the great multitude of bones, muscles, nerves, arteries, veins and all the other parts that are in the body of any animal, and if this knowledge leads you to regard an animal body as a machine." He continues in conclusion: "Having been made by the

hands of God, it is incomparably better organized [. . .] than any that can be devised by man, but still it is just a *machine*" (22). While designed by God, the animal body is no more than a simple machine; furthermore, unlike the bodies of man, it does not house a rational soul. Therefore, in Descartes's view, animals are nothing more than soulless automata. Hatfield, in the Descartes entry of the *Stanford Online Encyclopedia of Philosophy*, confirms this reading, adding that, "In mechanizing the concept of living thing, Descartes did not deny the distinction between animate and inanimate, but he redrew the line between ensouled and unensouled beings" (section 4).

Descartes provides two tests by which to prove that no other animal body contains the rational soul that exists within that of man: "The first is that they could never use words or other constructed signs, as we do to declare our thoughts to others." Although it is possible to conceive of a machine that provides words or sounds in response to events, this is not the same as human language, he warns (23). "Secondly, even though such machines might do some things as well as we do them, or perhaps even better, they would be bound to fail in others; and that would show us that they weren't acting through understanding but only from the disposition of their organs" (22). The lack of speech and true understanding are what prove for Descartes that animals must lack a rational soul. Descartes concludes his section on animals with a stern warning: "there is no error that leads weak minds further from the straight path of virtue than that of imagining that the souls of the beasts are of the same nature as ours [. . .]. When we know how different the beasts are from us, we are better placed to understand the arguments proving that our soul is of a nature entirely independent of the body, and thus not liable to die with it" (23). Descartes therefore sees his mind/body dualism as being inseparable

from his human/animal duality.

Descartes's dualism is certainly not without problems—some of which were identified within his lifetime—such as how matter and intellect are able to interact if they are distinct. Such problems vexed both Descartes and his followers. Despite this, Descartes left philosophical and ethical thought a lasting legacy. His work inspired a number of followers including Geraud de Cordemoy, Arnold Geulincx, Antoine Le Grand, Nicolas Malebranche, Pierre Regis, and Jacques Rohault, as well as Henry More, until he later turned against Descartes. Other notable philosophers such as Spinoza and Leibniz were influenced by Descartes, but developed their own systems. Many of Descartes's ideas have also seen revivals. According to Hatfield, "his mechanistic account of the psychology of the sensitive soul and his view that animals are like machines were revived in the nineteenth century." Descartes's mind/body dualism is no longer accepted by most philosophers in the same form that Descartes formulated it. Despite this, the mind/body problem remains. "In distinguishing the domain of the mental from that of the physical, Descartes struck a chord. Many philosophers accept the conceptual distinction, but remain uncertain of the underlying metaphysics," Hatfield writes, it is still unclear to many philosophers what constitutes the mental and whether it is a purely physical phenomena or something else. He concludes that, "in this case, a problem that Descartes made prominent has lived far beyond his proposed solution" (section 6).

As noted, Descartes' dualism has made a resurgence in contemporary thinking. Leonard Lawlor notes that the current views on animals often lead to situations in which they are denied ethical treatment on the basis that they lack certain qualities or attributes that humans have. Such views are often very similar in construction to those originally proposed by Descartes,

wherein animals are seen as only machine-bodies, while humans are humans because of their minds (Lawlor 71-73). The issues created by Descartes's dualism are not limited exclusively to animal ethics. Even within human ethics and equality, mind-body dualism is a problem.[1]

Animal Suffering and Critical Animal Studies

Dualistic frameworks have negative implications within a wide range of fields in that they justify a variety of exclusionary, and thereby detrimental, ideals and policies. As was the case with Descartes, the human/animal dualistic framework has been used to separate and undervalue animal life by viewing it as machine-like in nature. The emerging field of critical animal studies provides many excellent examples of the negative impacts of dualistic frameworks, both on ways of thinking and ways of acting.

Richard Twine, in *Animals as Biotechnology*, offers an explanation of what animal studies and, for our purposes, critical animal studies comprises. According to Twine, interdisciplinary animal studies have been developing for the past forty years. This area of research differs from animal research—based out of the natural sciences—and emerges mostly from the humanities and social sciences: "animal studies has re-evaluated the role and presence of non-human animals in a wide range of disciplines where they have been for the most part ignored." Critical animals studies is a field in which human-animal relations have been highly politicized (1). Animal Studies can be a branch of *critical* theory to the extent that "its emergence in academia is partly bound up in that of social movements advocating for

[1] See, for example, V. Spike Peterson's "Whose Rights? A Critique of the 'Givens' in Human Rights Discourse," (*Alternatives: Global, Local, Political* 15.3 (1990): 303-344), which looks at the harm created by dualistic thinking as it effects equal rights between both genders.

change to particular intransigent human-animal relations" (2). This field of study tends towards a critique of the exclusion of the non-human and the assumed distinction between humans and animals. As such it also includes interrogations of "the *human*, as a critical openness to rethinking what we understand as 'human' and to reconceptualize its historical and cultural consolidation as constituted by being 'not-animal'" (2).

Twine notes that the issues in animal ethics can be linked to dualistic thinking, often in the kind of "humanism" that privileges the perspective of a "rational, disembodied, masculine actor"; however, modern areas of theory, such as in Twine's own field of sociology, have begun to question this dualism (4). In order to overcome human/animal dualism, Twine suggests, a *posthumanist* approach, which moves beyond looking at other life from a purely human perspective (11). A focal point for highly humanist interactions with non-human animals is contemporary biotechnology.

Twine notes that the idea of biotechnology is not a "new" or recent development, and furthermore, that organizations such as the Biotechnology Industry Organization (BIO), which serves as an umbrella to represent a number of biotechnology companies, prefer to distinguish between "old" and "new" biotechnologies, where "old" designates domesticated animal technologies that date back to around 10,000 years ago. Yet, Twine is suspicious of any moral separation between "old" and "new" techniques, not because he sees the "new" as benign, but because he does not think it credible to assume that the "old" is (14). He recommends that our technological interactions with other animals should be crafted in a manner that "may enrich mutual human-nonhuman flourishing" rather than "those that become extensions for pre-existent power relationships" (14). Unfortunately this is rarely the case, as the majority of

human interaction with animals, in terms of sheer numbers, contributes to the suffering of animals, a matter that critical animal studies seeks to address.

In contemporary contexts, animal suffering occurs across a number of different areas.[2] Perhaps the largest and most recognized form of animal suffering occurs in "factory farming" in which the tools of mechanized industry are used to breed, raise, slaughter, and process animals for human consumption (McCance 8, 25). Meat hunting is another concern. Here animals are hunted nearly to extinction for profit, and even in areas where it is no longer legal, poaching is a major concern (32, 34). Animal experimentation and the genetic alteration of animals are also well known areas of animal suffering. Animals are frequently used in medical and product testing, often undergoing painful tests in captivity (45). Elsewhere, animals are genetically altered to perform a particular function, which often goes hand-in-hand with factory farming to produce higher yield from meat and milk producing animals (54). Yet another area of animal suffering is zoos. In zoos animals in captivity are often kept in small displays for the benefits of humans. Boredom, and sometimes poor living conditions, is a major concern for such animals (72). These examples constitute the largest and most common examples of animal suffering by humans, but these examples are hardly exhaustive.

Prevailing Work in Critical Animal Studies

Within critical animal studies two voices stand out as the leading responses to issues of animal

[2] These areas of animal suffering have been developed at length in a number of different texts. As such areas of suffering are well established, it is not my purpose here to explore them at length. Both Singer's *Animal Liberation* and Regan's *The Case for Animal Rights* provide in depth details of contemporary animal suffering.

suffering. Peter Singer proposes a utilitarian ethics that he applies to animal issues, while Tom Regan proposes a rights-based system as an ethical response. While there is merit to both theories, both succumb to the same issues of dualistic exclusion and separation that contribute to issues of animal suffering, and thus, both major theories are insufficient to address such issues. Here, a brief exploration of the ethical approach proposed by each theorist is followed by an analysis of how each theorist's approach perpetuates the dualistic human/animal framework, particularly in its relation to the mental capacities standard that Descartes proposed.

Singer's response to the violence against animals, explored in *Animal Liberation*, is based on utilitarian principals inherited from Jeremy Bentham. Bentham founded the Reforming Utilitarian School of Moral Philosophy. Simply, Bentham's ideal is that "each count for one and none for more than one" (5). He suggested that it is suffering, not any characteristic (such as intelligence) that should determine treatment and equality, because suffering is not just another characteristic like speech, but rather the prerequisite to having any interests at all (7). Because a being suffers there is no moral rational to refuse to take consideration of that suffering; therefore, suffering provides a defensible boundary for argument, unlike say intelligence, which requires the drawing of an arbitrary line. Suffering is not arbitrary; a being either does or does not suffer (8-9). Singer reminds us that, contrary to philosophers like Descartes, or past scientists who claim that animals have no ability to suffer in any way, there is no philosophical or scientific proof or argument for denying that animals suffer (15). Therefore, because animals suffer, Singer proposes that we should do whatever is in our power to reduce or eliminate that suffering. In particular, he advocates becoming a vegetarian—though his

definition of this is actually closer to that of a vegan (170-76)—as this will reduce the suffering we inflict on animals (159). Simply reducing the cruelty an animal experiences during its life and death is not sufficient, as this will still lead us to view animals as a means to an end, which is exactly what created a situation of animal cruelty in the first place. Furthermore, a cruelty free manner of raising animals to eat is not practical to feed large urban populations, and would turn meat into a luxury item for the rich (160).

Singer's assertion is that because animals suffer they should be treated equally to humans with similar capacities. By using this argument, he hopes to avoid a “specieist” view of animals that is based in a dualistic human/animal opposition. Despite this, Singer still returns to the notion of capacities while constructing his ethical approach. This is most apparent in the moral calculations he introduces in cases of unavoidable suffering. Realizing that situations of suffering or death are sometime unavoidable, Singer proposes that humans should be granted preferential treatment in such situations because humans have a greater capacity to suffer than other animals, due to their more developed emotional and nervous systems (*Animal* 16). Treatment in situations of unavoidable suffering or death is thus managed based on comparisons of mental capacities, with adult humans as the point of reference. Here, Singer’s argument fails to detach the idea of greater human capacities from his ethics of animal treatment. It seems as though Singer has a need to value human suffering and life as more important than animal suffering and animal life, while at the same time putting an end to needless animal suffering and death.

Singer’s approach fails, to some extent, to avoid the human/animal dualistic framework that can be seen in the work of Descartes. While Singer sets out to counter the “specieist” view

of animals that he identifies in philosophical works such as Descartes's, he nevertheless bases some of his ethics of animal treatment on comparisons of mental capacities. Singer's approach to animal ethics, therefore, proposes a significant improvement to the treatment of animals in contemporary society, but fails to wholly detach itself from the human/animal dualism that brought about such issues.

Regan's rights-based approach to the ethical treatment of animals differs in a number of important ways from Singer's. Explored in *The Case for Animal Rights*, Regan's approach begins by distinguishing between "moral agents" and "moral patients." According to Regan, moral agents have the ability to bring moral principles to bear when determining what morally ought to be done in a particular set of circumstances, and then have the ability to freely choose to, or choose not to, act as their morality would determine appropriate. As the result of these abilities, Regan believes that such individuals should be held accountable for their actions. In contrast, moral patients lack the abilities necessary to formulate or bring to bear moral principles. As such, their actions cannot be determined as either "right" or "wrong," though they can still be on the receiving end of "wrong actions" from moral agents. Most animals would fall into this second category (19-20).

Regan believes that a rights based argument is the best strategy to ensure fair treatment of animals. In his view, all beings that are granted rights must be treated as equals, and moral agents, such as most humans, should be held accountable for not supporting and acknowledging these rights. Only rights, in Regan's opinion, if properly applied to all, can guarantee equality without unfair treatment based on abilities or capacities (*Case* 21).Regan's "subject-of-a-life" criterion determines who does and does not receive rights, where a subject-

of-a-life is an individual with "inherent value" that has "beliefs and desires; perception, memory, and a sense of the future, including their own future; an emotional life together with feelings of pleasure and pain; preference- and welfare-interests;" and a variety of other social and psychological traits (22). The traits required to qualify as the subject of a life are significant, and Regan simplifies the requirements by saying that the term "subject-of-a-life" applies only to "'mentally normal mammals of a year or more'" (quoted in McCance 38). This criterion would therefore exclude all non-mammalian life (although Regan adds birds as recipients of rights in *Empty Cages* [60]), human and non-human infants and fetuses, and those suffering sever mental inability (such as permanently comatose individuals).

A significant number of moral patients, and all moral actors, meet Regan's "subject-of-a-life" criterion, and therefore both should be recipients of rights, according to him. Furthermore, in Regan's opinion, this criterion avoids favoring certain individuals over others based on certain traits (such as language or mathematical ability, etc.), because an individual is either the subject of a life or not the subject of a life. Furthermore, the rights afforded to subjects of life are identical across all recipients (*Case* 22). The primary right that Regan proposes for such recipients is one of equal respect: "*We are to treat those individuals who have inherent value in ways that respect their inherent value*." Under such a right, Regan believes that "it is not an act of kindness to treat animals respectfully. It is an act of justice" (23). [3]

According to Leonard Lawlor, in *This is not Sufficient*, Regan's approach, while not being capacity based, has the problem of homogenizing all animal life (humanity included) under one

[3] For more of Regan's approach to animal ethics, see also his work in *Defending Animal Rights* (Urbana: U of Illinois P, 2001) and *Empty Cages: Facing the Challenge of Animal Rights* (Lanham: Rowman and Littlefield Publishers, 2005).

form of treatment. Lawlor explains the dangers of this approach: "this idea does not avoid the risk of making the animal continuous with the human" (9). Furthermore, when one places humans and animals on exactly the same level, "one ignores the difference that requires living beings to be treated in a variety of ways" (25-26). This is not to suggest that a dualistic separation of human from animal is necessary, but rather that homogenizations of all life can be equally problematic. Alternatively, it could be argued that, much like Singer, Regan relies on a comparison of the mental capacities of animals and humans in his approach, and thereby does not avoid dualistic frameworks. Regan's criterion for claiming rights, being the "subject of a life," is based upon the mental capacities that he attributes to the adult human, as his ethical standard. His rights-based "capacities" approach creates a dualistic divide of living beings who have inherent value, and are therefore deserving of rights, and those who do not qualify as having inherent value, and thus do not have moral rights. While Regan's approach does afford better treatment for a significant number of animals, his approach does not rethink dualism so much as move the dividing line between animals and humans that Descartes proposed.[4]

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[4] Other notable approaches within critical animal studies include: Jane Goodall, whose work focuses on wildlife conservation, through a view in which people from around the globe come together to protect wildlife and their environments, best exemplified in her *Hope for Animals and Their World*, which is the starting point for "a dream in which caring people of all ages, from all over the world and all walks of life, show that it is possible to help, rather than harm, the rest of the world around us" (Maynard xv); Paola Cavalieri's *The Death of the Animal,* which takes the form of a Socratic dialogue between differing philosophical approaches to animal rights, exemplified through two fictional characters, Alexandra Warnock and Theo Glucksman, who take on the roles of arguing an analytic approach and a continental approach respectively. Cavalieri's book explores through this dialogue a greater argument that is occurring between these branches of philosophy on their approaches to animal issues, and eventually sides with the analytic tradition (Singer, Forward x-xii); Josephine Donovan and Carol Adam's *The Feminist Care Tradition in Animal Ethics* collects essays from a number of feminist authors on subject on animal ethics, explore another approach that has been gaining ground. The collected essays explore a feminist "ethics-of-care" (and responses to it), first proposed by Carol Gilligan, which attempts to address animals through "women's 'conception of morality' that is 'concerned with the activity of care . . . responsibility and relationships.'" Such an approach would be less focused on rules and regulations

Twine suggests that for an approach to animal ethics to be successful it must have an "appreciation both of the inseparability of the human, animal and ecological ethical issues and of the social and political contexts of the ethical" (17). This would, in essence require an approach that does not focus on dualistic separations of human from animal. I return to this to topic in the conclusion of this thesis.

Outline of Thesis

In the three chapters that follow, this thesis examines core theories of embodiment and the ways in which they both critique and move beyond dualistic frameworks. Each chapter focuses on a major thinker in critical theory whose work has dealt with one or more theories of embodiment. Significant in each chapter is the way in which each theorist draws on concepts, research, or analogies that come from biology in order to strengthen concepts of embodiment. Each chapter, furthermore, suggests possible applications of the theories explored in the primary thinker's work. These applications, in the way that they resist dualistic frameworks, in part by drawing upon biology, can be seen to have potential positive impacts.

My second chapter examines Jacques Derrida's "autoimmunity," suggesting how Derrida uses the concept to theorize the working of such social systems as democracy, as a form of organizing personal and socio-political bodies. This chapter explains Derrida's analysis

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and instead offer a "more flexible, situational, and particularized ethics" (Donovan and Adams 1-2); Scholars and theologians of various world religions suggest ways that various religious views can be used to approach the question of the animal (McCance 105-19); Work from within cultural studies explores the way in which different cultures portray the relationship between humans and animals (123-24); Critics of art and architecture show how the development of artistic forms through the course of history has shaped our views on animals (128); Some works of fiction suggest alternate approaches to animal ethics, such as J. M. Coetzee's novel *The Lives of Animals*, which suggests an "ethics of sympathy," and has created many responses from within critical animal studies (130, 133).

of autoimmune disorders, an analysis derived from, but also distinct from, medical categorizations of autoimmune illnesses. It begins with an exploration of Donna Haraway's work with immune system discourse, to show how such discourse is often dualistic, and how such dualism can have negative consequences. This is followed by a brief look at how autoimmune illnesses are understood in a medical context. Next, I show how Derrida's idea of autoimmunity connects with and expands on the biological concept from which it is drawn. I examine Derrida's concept of autoimmunity as a thinking of social, religious, institutional, and political bodies, relying both on his texts and on a number of secondary sources that clarify and expand on his ideas. The second chapter then engages three examples of autoimmunity at work in political bodies: the autoimmune response demonstrated by the Roman Catholic Church in its dismissal of, and also reliance on, "teletechnology"; the suspension of democracy in Algeria in order to protect a future democracy; and Derrida's reading of 9/11 events, and the responses to "terror" which followed therefrom.

My third chapter approaches the concept of individual embodiment through analysis of selected texts of Sigmund Freud and Elizabeth Wilson. My focus here is on mental health issues that both theorists examine and speculate upon; such issues provide a picture of the individual that is often at odds with common mind/body dualistic frameworks. This chapter begins with a close reading of Sigmund Freud's work on memory, to show how his work posits memory as corporeal and embodied. Through this understanding Freud comes to explain "war neuroses," or PTSD, as a wound upon the memory. This chapter then engages work by Elizabeth Wilson as she reads selected case studies by Freud, as such a reading comes to break down firm separations between mind and body by suggesting that the illnesses experienced by Freud's

patients are not localized wholly in the brain. Next, I read Wilson's work on depression, which draws on the work of Freud and Peter Kramer, and suggests that mental illnesses such as depression can be seen as a weakening of neurological connections as a result of trauma. This chapter also explores resistances to the use of biology in critical theory and how Wilson comes to see such resistance as reductive and dualistic in of itself. Drawing from both Freud and Wilson, this chapter concludes with a suggestion that issues of mental health should be viewed from the perspective of the whole body.

The final chapter of my thesis proceeds through an analysis of four major themes that stretch across the work of David Wills, who proposes a new way of looking at biological life and its relationship with technology and suggests an original technicity, or automaticity, at work at the origin of the human species and at the origin of biological life itself. These themes have been elaborated in a number of places, but particularly in *Dorsality*.: the first of these themes is *articulation*, the technological movement that begins in single-celled organisms; second is *prosthesis*, a technological "limb" on a biological body; third is *dorsality*, the "turning-back" or "turning-to-the-back" that exists as a movement found at the origin of species, a movement that relates to both *articulation* and *prosthesis* and that turns humanity into "something technological"; fourth is *technological* (or "machinic") *life*, a theme that, again, relates to *dorsality*, and that leads to a theorizing of all sexed animals as defined by an originary technicity. Through an analysis of these themes, I show that Wills's work is centered on a breaking down of dualistic separations of life and death, organic and inorganic, animate and inanimate, and most importantly technology and biology. My chapter concludes with an analysis of Wills's work in which I show that these themes displace the idea of humanity as

masters and creators of technology and can be used to rethink, not only our relationship with technology and biotechnology, but also with non-human life.

My thesis closes with a conclusion in which I provide first a review of the topics covered in the previous four chapters and an outline of the major conclusions drawn from each chapter. After this, I return to Derrida's work and the question of animal ethics to explore how Derrida's approach differs from those presented in this chapter. I suggest that Derrida's work avoids separating humans from animals by showing that animals do not need language in order to communicate their suffering to us, and that knowledge of animal suffering should be sufficient in and of itself to provoke actions that might alter our dualistic treatment of animals.

Chapter Two

Autoimmunity

In his later writings, Jacques Derrida began to focus on the concept of autoimmunity—drawn from biology, but adapted to his critical theory—in order to analyze and explicate the workings of political bodies. Derrida's concept of autoimmunity is best understood not as an allegory or metaphor, but as an extension of a biological concept onto those living systems that theoretical and political bodies are. In addition, as Michael Naas contends, Derrida's "autoimmunity" is but another term for "deconstruction" ("One Nation" 19-20). This chapter examines Derrida's concept of "autoimmunity" carefully, suggesting how he uses the term to theorize the working of such social systems as democracy, itself a form of organizing personal and political bodies.

This chapter begins with an analysis of how the immune system is often viewed from a dualistic perspective, the potential dangers that stem from such dualistic immune system representation, and an alternative non-dualistic approach to immune system discourse. Next the chapter presents a brief exploration of how, in biomedical theory, autoimmune illnesses function within the biological body. Following this, I examine Derrida's analysis of autoimmune disorders, an analysis derived from, but also distinct from, medical categorizations of autoimmune illnesses. This section approaches Derrida's concept of autoimmunity as a thinking of social and political bodies. Next, the chapter provides three examples of autoimmunity at work in political bodies, as suggested in Derrida's writing on autoimmunity: the autoimmune response demonstrated by the Roman Catholic Church in its dismissal of, and also reliance on, "teletechnology"; the 1992 suspension of democracy in Algeria in order to protect a future

democracy; and Derrida's reading of 9/11 events, and the responses to "terror" which followed therefrom. This second chapter concludes with some suggestions on how the translation of this biological concept into political bodies discourse can continue to be resourceful, after Derrida, in enabling a better understanding of the way in which political bodies operate.

Immune System Discourse

Immune system discourse, in both biological and political settings, tends to foster a dualistic view of how the biological immune system operates. As such, political and social models that rely on this discourse are often equally dualistic. Donna Haraway, in her essay, "The Biopolitics of Postmodern Bodies," examines this dualistic tendency and the negative impacts that it has. Her reading of the immune system, furthermore, provides an alternative non-dualistic view that extends to both Western politics and Western medical theory.

I introduce Haraway's work on immune system discourse by referring first to Emily Martin's "Towards an Anthropology of Immunology," which takes strong issue with the dualistic image of the immune system. In this essay, she sets out to identify central images of the immune system that prevail in popular and scientific discourse (410). She identifies two primary images. First is the image of the immune system as a communication network where "the boundary between the body (self) and the external world (nonself) is rigid and absolute." The exterior "nonself" world is seen as foreign and dangerous (411). A second, and common, image of the immune system is of a "scene of total war between ruthless invaders and determined defenders" (411). When this image is extended to a view of the political body, the body as a nation state, Martin notes, "foreign" cells become illegal aliens that the nation is forced to

exterminate in defense of itself. This image of the nation soon becomes one of a brutal police state (412). This imagery is not limited to popular perspectives on the immune system in that "total war" images populate the scientific understanding of immunology as well—stretching from the language of scientific journals to medical textbooks and classroom instruction (414). Martin suggests that such imagery has a variety of possible negative impacts, including: harsh political national policy (415); development of hierarchical structures of the body within biomedicine (416); assignment of gender roles to cells and body anatomy (416), as well as perpetuation of gender roles in general (418); and stigmatizing of HIV/AIDS affected individuals (418-19). Given these negative implications, an alternative approach—one that does not depend on a dualistic image of the self battling and/or destroying the other—is highly recommended by Martin (419-20).[5]

Haraway's approach offers an alternative to this dualistic image of the immune system. Her own research on immune system discourse considers similar metaphors to those observed by Martin. Haraway compares biological discourse in general to that of space exploration, where researchers boldly set out to colonize new territory (205; 221). However, in the case of immune system discourse, Haraway also sees war imagery as the common metaphor. This "Star Wars-maintained individuality" with its viral invasion of the "cell-as-factory" is both easy to understand and conceptually lucrative, according to Haraway (224-25).

With these metaphors in mind, Haraway contends that the immune system acts as a "potent and polymorphous object of belief, knowledge, and practice" that functions as an "icon

[5] Lisa Weasel, in "Dismantling the Self/Other Dichotomy in Science: Towards a Feminist Model of the Immune System" (*Hypathia* 16.1 [2001]: 27-44), also deals with the self/other dualistic framework, drawing lightly from Haraway's own work.

for principal systems of symbolic and material 'difference' in late capitalism." The immune system, in the dualistic way it is commonly understood, functions as a map that guides recognition and misrecognition of self and other. As a symbol it constructs boundaries that separate the self from the other "in the crucial realms of the normal and the pathological" (204). In this way the immune system exists both as a subject of research and of clinical practice, and as an iconic object for the culture of high-technology, particularly as of the mid-twentieth century (204-05). Because the immune system seems to hold particular power as an icon, Haraway's goal is to further identify how this icon functions in popular discourse, and to provide an alternative image.

Haraway finds that there are difficulties in speaking of the immune system from both a biomedical and political viewpoint. Since the mid-twentieth century, she contends, biomedical discourses have been increasingly organized around different sets of technologies and practices that have separated the medical body from the symbolic political body. Nevertheless the question of "difference" remains central to both images of the body. Indeed, Haraway finds that regardless of the oppositional political and biomedical accounts of the body, "the body remains a relatively unambiguous locus of identity, agency, labour, and hierarchicalized function" (211). Haraway disagrees with these dualistic accounts of the body, whether they are political or biomedical. Despite this she argues that any account of the body must start from its internal processes and systems, specifically from its "multiple molecular interfacings of genetic, nervous, endocrine, and immune systems" (211). In this, the body is "a semiotic system [. . .] for which the discourse of immunology, that is, the central biomedical discourse on recognition/misrecognition, has become a high-stakes practice in many senses" (211). The

concept of difference between self and other, and therefore the ability to recognize oneself, are central to Haraway's analysis, which requires a careful reading of the immune system.

In Haraway's view, the very notion of "difference," when applied to the immune system, is highly problematic because immune system accounts of difference are often dualistic and dualism is not congruent with an understanding of how immune system cells operate. The body's immune system is not localized, but dispersed throughout the body. In a sense it "is everywhere and nowhere." Furthermore, there is no exterior antigenic structure or "'invader,' that the immune system has not already 'seen' and mirrored internally. 'Self' and 'other' lose their rationalistic oppositional quality and become subtle plays of partially mirrored readings and responses" (218). In Haraway's understanding of the immune system, a dualistic self/other model becomes impossible, because the immune system does not function by recognizing an "other," or even a "self." Such a dualistic distinction does not occur. Rather the very functions of the immune system break down firm distinctions of oppositional or binary "difference." This goes to the heart of Haraway's issue with political and biomedical discourse on the body, which has been so overly focused on the notion of contagion and the hostile penetration of the healthy body that it has lost sight of how the immune system actually functions (223).

Haraway's approach to immune system discourse focuses on breaking down dualistic boundaries between self and other, divisions that play a central role in both political and biomedical discourses. Her reading of the immune system approaches it in more open and mobile terms. Haraway suggests that, because the immune system "mirrors" everything it encounters, the body has the ability to understand and learn from "the other." In this sense "immunity can also be conceived in terms of shared specificities; of the semi-permeable self

able to engage with others [. . .] but always with finite consequences; of situated possibilities and impossibilities of individuation and identification; and of partial fusions and dangers" (225). Rather than a map of opposition and separation, the immune system can support a thinking of communication, understanding, and permeability in a world where boundaries between self and other are blurred and unclear.

Autoimmune Disorders in Medical Research

Autoimmune disease, in immunological terms, can be broadly categorized as "a clinical syndrome caused by the activation of T cells or B cells, or both, in the absence of an ongoing infection or other discernible cause" (Davidson and Diamond 340). A more specific definition is: "Self-directed inflammation, whereby aberrant dendritic cell, B and T cell, responses in primary and secondary lymphoid organs lead to breaking of tolerance, with development of immune reactivity towards native antigens." Such a definition is not without problems, however, as it "fails to define when self-directed tissue inflammation is not autoimmune in origin" (McGonagle and McDermott 1242).[6]

Autoimmune diseases affect 3-5% of the population and are always antigen specific. This means that most autoimmune diseases target specific organs or tissues that produced the targeted antigen (such as joint antigens in the case of rheumatoid arthritis). However, the autoimmune response often extends, by a process called determinant spreading, to include

[6] Polly Matzinger's "Tolerance, Danger, and the Extended Family" (*Annual Review of Immunology* 12 [1994]: 991-1045) has been influential in a rejection in a self/other model of the immune system. She instead recommends an understanding in which autoimmune responses are understood as the result of a breakdown of tolerance to autoantigens by the immune system. This explanation is not without issues as McGonagle and McDermott note: "the danger model does not account adequately for the exquisite specificity of the adaptive immune responses in autoimmune diseases" (1242).

other antigens in the same tissue. In some cases (such as lupus) an antigen is so widespread in a host that no specific organ or tissue is targeted, but rather most of the host body (Marrack, Kappler, and Kotzin 899). Even collectively, autoimmune diseases are poorly understood. What is known is that a certain low level of autoreactivity is not only normal in a host body, but crucial to the development of mature immune cells. This autoreactivity is triggered by autoantigens created by the host body. There is no difference in the structure of autoantigens and foreign antigens. This is in keeping with more recent research in immunology that shows that the immune system cells "evolved not to distinguish self from foreign, as some have speculated, but to respond to antigen only in certain microenvironments, generally in the presence of inflammatory cytokines" (Davidson and Diamond 340).

For those affected by autoimmune diseases, environmental, genetic, and internal factors affect susceptibility to autoimmune reactions (Marrack, Kappler, and Kotzin 899; Davidson and Diamon 341-43). This susceptibility occurs across three levels: the overall reactivity of the immune system, the antigen and its presentation, and the tissue targeted by the immune system. Environmental factors are often found to aggravate or trigger a susceptibility to an autoimmune disease created by the genetic factors (Marrack, Kappler, and Kotzin 899). The result of severe autoreactions (the type caused by autoimmune diseases, rather than normal, low-level reactions) is often tissue damage, which occurs as a byproduct of reaction to autoantigens. Left untreated, such reactions can result in the death of the host body (Davidson and Diamond 343).

Derrida's own concept of autoimmunity is not entirely congruent with current medical understandings of autoimmune illness—a point of which he was well aware. However, what is

important in Derrida's theory is that it exists as an extension of the biological body, which can be applied to the functions of theoretical and political bodies as well. In what follows, I examine how Derrida's account of autoimmunity functions and what the implications of his account are for political bodies, democracy, and sovereignty.

Derrida's Autoimmunity

Derrida first mentions and describes his idea of autoimmunity in "Faith and Knowledge: Two Sources of Religion at the Limits of Reason Alone." According to Derrida, autoimmunity "consists for a living organism, as is well known and in short, of protecting itself against its self-protection by destroying its own immune system" ("Faith" 80n27). While it may initially seem that this understanding of autoimmunity is incompatible with the medical understanding of autoimmune illness—there are no known autoimmune illnesses that cause the immune system to attack itself[7]—Derrida's concept is more complex than it seems.

Within "Faith and Knowledge," Derrida's explanation of autoimmunity is tied to his use of the term "*indemnis*," or the "unscathed," which he explains in a footnote as "that which has not suffered damage or prejudice." This term is often used in a religious context to refer to that which is sacred or holy. It can be extended in the form of indemnification, which means, for Derrida, "both the process of compensation and the restitution, sometimes sacrificial, that reconstitutes purity intact, renders integrity safe and sound, restores cleanliness and property

[7] It could, however, be argued that an autoimmune response, by damaging the body and its functions, will eventually cause enough harm that the functions of the immune system itself will begin to weaken. The only illness that is known to directly attack the immune system is HIV; however this is a viral infection, not an autoimmune illness. See Alice Andrew ("Autoimmune Illness as a Death-drive: An Autobiography of Defence." *Mosaic; A Journal for the Interdisciplinary Study of Literature* 44.3 [2011]: 190n2).

unimpaired" (61n16). According to Michael Naas, "*Indemnification* is thus used to designate both the protection of what is assumed to be unspoiled or intact and the restoration of a supposedly original or uncompromised state." It is therefore a "process—or drive—of immunization that promises to protect what is thought to be sacred or holy by immunizing the self or the community against what is considered unclean, unhealthy, or unholy" (*Miracle* 66-67). Through the many pages of "Faith and Knowledge," Derrida chooses to associate indemnification regularly with the words "immune," "immunity," "immunization," and above all "auto-immunity" (61n16). In this initial understanding, immunity occurs as a protection of, or perhaps the restoration of, values, ideas, or beliefs on which a social, religious, or institutional body is founded. Autoimmunity, therefore, occurs as a reaction against this protection.

A more developed explanation of autoimmunity occurs in Derrida's *Rogues*, which deals primarily with the autoimmune nature of sovereignty and democracy. Derrida refers throughout this work to autoimmunity, providing a succinct explanation of the term in Chapter Four:

> For what I call the autoimmune consists not only in harming or ruining oneself, indeed in destroying one's own protections, and in doing so oneself, committing suicide or threatening to do so, but, more seriously still, and through this, in threatening the I [*moi*] or the self [*soi*], the ego or the autos, ipseity itself, compromising the immunity of the autos itself: it consists not only in compromising oneself [*s'auto-entamer*] but in compromising the self, the autos - and thus ipseity. [. . .] Autoimmunity is more or less suicidal, but, more seriously still, it threatens always to rob suicide itself of its meaning and supposed integrity. (45)

By the time of "Autoimmunity: Real and Symbolic Suicides," Derrida's explanation of autoimmunity is further refined: "an autoimmunitary process is that strange behaviour where a living being, in quasi-suicidal fashion, 'itself' works to destroy its own protection, to immunize itself against its 'own' immunity" (94). In this understanding autoimmunity is an inherently suicidal process that strips the body of its protection, thus opening it to potential destruction.

Autoimmunity can lead to the death of the body, but it also has the potential to free the body of its own immunity. This is dangerous as the body becomes vulnerable to foreign threat without its immunity. However, a lack of autoimmunity, in a body with an immune system, can also be dangerous, as Naas explains: "Without autoimmunity, without this breach in the immunitary and self-protective systems of the organism, there would be no possibility of a supplement that might destroy *or* save it, [. . .] Without autoimmunity, the organism would have, in short, no future before it" (*Miracle* 82). It is important to understand that the closing off of the body from that which is foreign is itself an autoimmune effect. Remaining closed off strips the body of its "future," and therefore presents dangers that are as potentially suicidal as an opening of the body to the other may be. This effect of stripping the body's immunity therefore produces a chance for positive change, as well as a chance of death, by opening the body up as it is forced to interact with the foreign. Autoimmunity presents both a threat and a chance ("One Nation" 25; see also *Miracle* 79 & 85).

Necessary to Derrida's concept is the understanding that autoimmunity is inevitable wherever there is immunity. As Naas explains, "there is no community, Derrida argues, that does not entertain or support its own auto-immunity, that is, its own openness to what it cannot indemnify" (*Miracle* 209). Because immunity "secretes" autoimmunity as its own

antidote, whenever there is immunity there is always autoimmunity. Immunity must protect against "its own power of rejection, [. . .] which is to say, against its own immunity" (*Miracle* 75-76). Autoimmunity therefore offers the body a threat and a chance that must inevitably occur. A political body that attacks the foreign or the other is actually attacking its own immunity, and so when an individual declares war on "the other" to protect a "pure" self, it is attacking itself.

Derrida is aware of the fact that this understanding of autoimmunity differs in some ways from a medical understanding. As he explains, "I have here granted to this autoimmune schema a range without limit, one that goes far beyond the circumscribed biological processes by which an organism tends to destroy, in a quasi-spontaneous and more than suicidal fashion, some organ or other, one or another of its own immunitary protections" (*Rogues* 124). Derrida's concept of autoimmunity is not designed to be identical to the biological process from which it is named, but rather to extend the biological concept so that it can be useful to understanding the nature of social bodies.

Autoimmunity within social bodies, democracy and in particular sovereignty, are major themes within Derrida's later work. These three locations of autoimmunity are inherently linked to one another. Naas's reading of Derrida makes clear that political bodies create immunity by attempting to separate themselves from foreign influences and infiltration. This results in what Naas refers to as phantasms[8] that are always haunted by the specter of the otherness that they themselves inevitably produce ("*Comme ci*" 4-5, 8).

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[8] According Naas, the term "phantasm" comes "from the same semantic 'family' as phenomenon, namely *phainesthai,* meaning to appear, become apparent, become phenomenal." In reference to Derrida's work "the phantasm suggests or leads us to believe in a non-alienation of the self from itself in language, it leads us to believe in a coincidence of the self that speaks and the self that hears itself speak in a *vouloir dire,* the immediate apprehension of a self by itself in a *vouloir dire"* ("*Comme ci"* 4-5).

Democracy, as it exists today, does not escape from autoimmune reactions, because it is characterized by an inherent drive to perfectibility. This is an autoimmune essence to democracy; as Naas states, "It is the essence without essence of democracy that makes it possible to claim that certain perfections of democracy are also perversions of it, that [. . .] every extension of political equality or equality according to number levels or renders insignificant equality according to worth, or that every perversion of democracy is done in the name of democracy's perfection or preservation" ("One Nation" 31). In Naas's opinion, it is democracy's drive to be perfect that causes its autoimmune responses. Democracy attacks elements of itself that are seen to be less than perfect. This autoimmune reaction can lead to issues of its "perversion."

This drive forces democracy to be read in a future-oriented way, which can be seen through its connection to concepts such as perfectibility. This is possible through democracy's autoimmune self-critique (32). Because the autoimmunity of democracy drives it towards an unattainable perfection, Derrida defines a concept of a "democracy to come," which Naas describes as "not some as yet unheard-of form of democracy but the autoimmunity of democracy itself, its openness to change and reinscription—though always, let me underscore, for good or ill" (32).[9] Rather than being a negative effect, the autoimmunity of democracy allows for changes in the nature of democracy. Because the immunity of democracy is weakened, democracy can be altered to fit contemporary needs, but can also be perverted or destroyed. This is the "threat and chance" that autoimmunity provides for democracy. It is thus neither a force of good nor of evil. Without this autoimmunity, there would be no means of

[9] Further discussion of democracy and autoimmunity can be found in Samir Haddad's "Derrida and Democracy at Risk" (*Contretemps* 4 [September 2004]: 29-44).

relating democracy to anything that is beyond itself ("One Nation" 33).

Within the political body, it is sovereignty that most prominently attempts to immunize itself, and thus most strongly generates autoimmunity. Here, sovereignty is a political body's power or justification to control the interior of the political body (See "One Nation" 21). As an act of control, sovereignty will always attempt to immunize itself against forms of the other—which can be seen as weakening its control—across time, space, and language. As such, sovereignty is always haunted by phantasms of autoimmunity. Naas notes that "every form of sovereignty thus appears to be a phantasm, and every phantasm a phantasm of sovereignty, the phantasm, for example, of a nation-state that has power, in possession of an origin that is self-grounding, and so on" ("*Comme ci*"8). The inherent immunizing nature of sovereignty means that it will always be subjected to autoimmune counter reactions, which are all the more damaging because of sovereignty's need for the strongest immunization.

According to Naas, the issue with the very concept of sovereignty is that it "is essentially *indivisible* and *unspeakable*. In its essence without essence, sovereignty must be unshareable, untransferrable, undeferrable, and silent, or it 'is' not at all" ("One Nation" 21). The idea of sovereignty is at issue because it has little actual basis in reality. A nation-state's control exists through arbitrary decrees of sovereignty. This baselessness is what necessitates such strong immune reactions, in order for sovereignty to protect itself. This in turn causes an autoimmune self-critique of sovereignty. As such, autoimmunity always exists at the heart of sovereignty. It can, in a sense, be read as the antidote to sovereignty secreted by the immunity that sovereignty always seeks. Derrida's goal with the concept of autoimmunity, according to Naas, is to attempt "to show that our traditional notion of sovereignty always harbors within it or

always in fact produces, secretes, so to speak, the very forces that would compromise or undermine it" ("One Nation" 18). Autoimmunity provides a cure for sovereignty, or "a weak force that undoes the force or power of sovereignty" (34).

In his reading of Plato's khòra,[10] Derrida reflects on sovereignty, and how it might be thought differently. Sovereignty is often thought in relation to an all-powerful (Christian) God, but Plato's khòra offers no such point of reference. According to Derrida, nothing is free from generating immunity and thus autoimmunity except khòra. Khòra does not generate immunity, as it does not have the capacity to act and has no sovereignty to protect. This concept is first established in relation to autoimmunity in Derrida's "Faith and Knowledge," and is explored by Naas through a comparison to God. Naas notes that, "khòra, unlike God, [. . .] is not subject to autoimmunity. Khòra, unlike God, does not immunize or indemnify itself or others because it has no capacity to act and no sovereignty to protect, because in its unconditionality without sovereignty, it undoes sovereignty rather than guarantees it, because in its infinite resistance to theological and anthropological appropriation, it neither unifies humankind or the nation-state nor is itself united like God" ("One Nation" 40; see also *Miracle* 183). According to Naas, "khôra is that which or the one who, while opening up the space for all phantasm, for the phenomena of the phantasm, constantly eludes and interrupts the phantasm of phenomena, including every anthropomorphic or theological phantasm" ("*Comme ci"* 14). For Derrida, khòra is a concept that is presented as an alternative to sovereignty. Important to this concept is not that

[10] Derrida takes this concept from Plato's *Timaes.* His reading of this word sees khòra as a reseptical or space that as no ownership, interests, or desires. This reading allows him to read it along side sovereignty with interesting results. Khòra has a variety of spellings across different translations and readers of Derrida. I choose here to match the spelling used in the source to which I am referring. See Derrida's "Khôra" in *On the Name,* for more on Derrida's reading of this concept.

it can be actively attained or controlled, but rather that the very idea of an immunity free concept can itself work to overcome sovereignty.

To better understand Derrida's concept of autoimmunity, and how it occurs in political bodies, democracy, and sovereignty, three examples of it in action, each suggested by Derrida, are explored below. These are: the autoimmune response demonstrated by the Roman Catholic Church in its dismissal of, and also reliance on, "teletechnology"; the suspension of democracy in Algeria in order to protect a future democracy; and Derrida's reading of 9/11 events, and the responses to "terror" which followed therefrom.

The Catholic Church and Technology

Organized religions are examples of the social, political, or institutional bodies that Derrida's theory seeks to explicate, and as such they are subject to autoimmune reactions. Derrida's earliest example of autoimmunity at work is drawn from such an organized religion: the Roman Catholic Church. This example occurs in "Faith and Knowledge," which is perhaps Derrida's "most direct and ambitious attempt to answer the question of the nature of religion in general and its relationship with science and the media" (Naas, *Miracle* 21). According to Derrida, autoimmunity is observable in the Church's reliance on and rejection of "teletechnology." Since the onset of modernity, the Roman Catholic Church has rejected technique in general, more recently such delocalizing technologies that are used throughout the media; at the same time, the Church relies on such technologies to spread its message ("Faith" 81). According to Naas, "religious discourse will react against this deracination by appropriating, through what Derrida will call an autoimmune process, the very technological resources it rebels against" (*Miracle*

52). Derrida illustrates that when the Roman Catholic Church is confronted with science, or vice versa, it is forced to create a movement to cope with "the machine" of science. Here, this religious body "indemnifies itself thus in a movement that is at once immunitary and auto-immune." According to Derrida, this movement "can alone account for what will be called the religious resurgence in its double and contradictory phenomenon" ("Faith" 81).

The Roman Catholic Church, which has always resented technology as central to modernity, attempts to immunize itself against the changes it sees occurring with modern communications technology. Yet it cannot resist simultaneously taking advantage of this very technology to spread its views, including the view that such technologies are to be rejected; such an action is inherently autoimmune because the church body, in using and relying on "tele-technology," acts against its own immunization of against such technology.

While the Catholic Church provides an example of this phenomenon, Derrida contends that other contemporary religions react in the same way. He explains that, "Religion today allies itself with tele-technoscience, to which it reacts with all its forces. It is, *on the one hand*, globalization. [. . .] But, *on the other hand*, it reacts immediately, *simultaneously*, declaring war against that which gives it this new power only at the cost of dislodging it from all its proper places*, in truth from place itself*, from the *taking place* of its truth" ("Faith" 82). Derrida sees here a necessity within religions to preserve a "pure" self, one that must be free of scientific invention and technology. However the competition created by globalization necessitates the use of tele-technoscience to spread religious messages, and this impinges upon the immunity of religious body's technologically free self-image.

Naas agrees with Derrida's point that this phenomenon is not limited to the Catholic

Church, but "while *all* religions react against technology in this way, some [. . .] do so more forcefully and more successfully, or more forcefully and so less successfully than others" (*Miracle* 53). However, Naas reminds us, autoimmunity for religion is both a threat and an opportunity: "a threat insofar as it compromises the immune system that protects the organism from external aggression, but as in the case of immuno-depressants, a chance for an organism to open itself up to and accept something that is not properly its own, to the transplanted organ, the graft, in a word, to the other" ("One" 25). The autoimmune reaction created by tele-technoscience can mean a slow death for religious bodies that too strongly resist the forces or globalization, or attempt to further reject technology; for other religions this autoimmune reaction can allow them to reshape themselves, to "graft" or "transplant" such technologies into the religious socio-political body.

Naas expands on this reaction that Derrida outlines in "Faith and Knowledge" through the figure of the phantasm. As has been noted, the phantasm is always a phantasm of autoimmunity. According to Naas, the phantasm "plays a role on a number of levels in Derrida's investigation of the relationship between religion and science" ("*Comme ci*" 12). This occurs through a number characteristics that are established in earlier texts by Derrida, and then illustrated by Naas: "First, the phantasm involves the coincidence or the assumed coincidence of the self with itself, a self that would be, then, indivisible and, ultimately, inviolable"; In the second place is the "phantasm of a self-same self that can act, that has power, in a word, that is sovereign"; Third is the phantasm of sovereignty that is presented as natural, and is thus free of machine or artifact, but is in fact ruled by an artifact; Fourth is a related point. Here, "the phantasm, though always historically conditioned, linguistically coded, appears as ahistorical

and non-linguistic, as having a non-conventional origin"; Fifth, the phantasm attempts to pass off a "historically conditioned performative fiction" as an object of observation (12). This final fiction of the phantasm is always at the heart of politics.

The sixth characteristic, derived from the previous five, which Naas describes is that "the phantasm as artifact cannot be confused with a fallen, inferior, or mimetic image of the truth; it is not to be understood simply in terms of truth and falsity, or image and reality, but in terms of power and affect." Rather it is the case that the power of sovereignty comes from the subjective understanding of it as an objective reality, or rather, as truth. The greatest problem that arises from this is, according to Naas, that "while the phantasm is not true, it is not enough to say that it is simply false, for it presents to us not the way things are or are not but, like a Freudian illusion, the way we would wish them to be and, thus, the way we then take them to be." In other words we cannot simply point out the truth since this status is already claimed by the phantasm ("*Comme ci*" 12).

According to Naas, "while this autoimmune appropriation of digital culture and cyberspace appears new and is most certainly taking place at an unprecedented rate today, religion has never done without it. [. . .] That is why religion appears always related to questions of health and salvation, to a restoration of health, a healing of the sick and a reconstitution of the healthy body—to what might be characterized as a *phantasmatic* immunity, a self or state that appears and wishes itself to be indemnified, safe and sound, but that is, in fact, always open to a *spectral* autoimmunity" ("*Comme ci"*13-14). This reading reinforces Derrida's notion that autoimmunity must always occur within a political body, because there is always a drive within the body to attain an immunized state that is "safe and sound," and this immunity is

always met with an autoimmune counter-reaction that seeks to open the body to the outside. When religion is confronted with science, (or vice versa), it reacts against it with all its strength. This reaction is at once immune and autoimmune, because "if religion reacts against science and technology in order to return to what is assumed to be a prescientific, nontechnological order, it does so only by appropriating the very technology and science it eschews" (Naas, *Miracle* 32). This inherent reaction accounts for the seemingly contradictory behavior exhibited by some religions when they are confronted with science.

Algeria and Democracy

In the third chapter of *Rogues*, titled "The Other of Democracy, the 'By Turns': Alternative and Alternation," Derrida details the complicated political situation of deferred democracy; this second example extends Derrida's analysis of autoimmunity in democracy, an example taken from his birth nation of Algeria. During 1991-92 in Algeria, events occurred in which the government and the national army felt that a proper democratic election would cause the current political party to be replaced by a new political party that would transform the country into a theocracy. Thus, the national army, on 11 January 1992, chose to suspend elections temporarily—and therefore the very idea of democracy itself—in order to protect the nation's future democracy from becoming suspended indefinitely.[11] Derrida calls this move an assault "on democracy in the name of democracy," a "suicide of democracy." Derrida writes:

[11] These events are more complex than Derrida's short description makes apparent, a fact that Derrida is well aware of. Multiple factors and events lead up to the suspension of government, and many events followed, culminating in the Algerian Civil War. These events are explored in Luis Martinez's *The Algerian Civil War, 1990-1998* (Trans. Jonathan Derrick. New York: Columbia UP, 2000). For the purposes of analyzing Derrida's understanding of autoimmunity in action, his own description of events should suffice.

"Democracy has always been suicidal, and if there is a to-come for it, it is only on the condition of thinking life otherwise, life and the force of life" (33). The events in Algeria are, for Derrida, an example of the autoimmune nature of democracy. In democracy's inherent drive to perfection, it attacks those aspects of itself that are flawed, such as through a suspension of elections, but this action can result in an end—or "suicide"—of democracy.

Derrida suggests that the events in Algeria are strongly related to the country's history of colonization and decolonization. He notes that "colonization and decolonization were both autoimmune experiences wherein the violent imposition of a culture and political language that were supposed to be in line with a Greco-European political ideal [. . .] ended up producing exactly the opposite of democracy," such as civil war (*Rogues* 34-35). In Derrida's view, the events in Algeria were a direct result of its history of French colonization. Indeed, this is a natural turn of events as Derrida explains it. In order to immunize itself against aggressors, democracy is forced to turn towards murder, but this murder is directed against itself and thus becomes suicide (35).

The events in Algeria are an example of the temporal and spatial dimensions that autoimmunity is able to cross. In Derrida's view, autoimmunity exists in both space, as a "sending off," and in time, as a "putting off." He explains these in more detail: "Operating in space, the autoimmune topology always dictates that democracy be sent off elsewhere, that it be excluded or rejected, expelled under the pretext of protecting it on the inside by expelling, rejecting, or sending off to the outside the domestic enemies of democracy." In terms of temporality, "autoimmunity also calls for putting off until later the elections and the advent of democracy. This double *renvoi* [. . .] is an autoimmune necessity inscribed right onto

democracy, right onto the concept of a democracy without concept" (*Rogues* 35-36). Both the "sending off" and "putting off" of democracy can be seen in the example of Algeria, through the suspension of elections, and the resulting civil unrest. For Derrida, any concept of a "democracy to come"—that is, an idealized form of democracy, or an unattainably "pure" democracy—must be free of this "sending off" and "putting off" of democracy (38). Despite this, it is not possible to ever achieve a perfected form of democracy; a "democracy to come" is not possible.

9/11 and the U.S. Response

The events of 11 September 2001, and their aftermath, are the basis of Derrida's most sustained and detailed example of autoimmunity at work in a political body. This autoimmunity is linked primarily to the terror created by the attacks on United States and the nation's ensuing response. According to Derrida, part of the terror created by these events, presumably, was the realization that the United Sates was targeted, or violated, on its own soil for the first time in close to two centuries (since 1814) ("Autoimmunity" 88). This is of course not entirely true, Derrida says; however the impression that is created by this image comes to resemble the very image that this impression produces (89). Indeed, Derrida recounts that such an attack on American soil, against a highly symbolic building or institution, was not impossible to foresee. Derrida notes, speaking not long after 9/11, that "there had already been a bombing attack against the Twin Towers a few years back, and the fallout from this attack remains very much a current affair since the presumed authors of this act of 'terrorism' are still being held and tried." This furthermore points to the failures of the CIA and FBI, "two antennae of the American organism" that were supposed to see such an attack coming, and advert it (91). It is

important to remember that the shockwaves produced by the attack are never "purely natural and spontaneous. They depend on a complex machinery involving history, politics, the media, and so on" (92). This is also the case in any military response or reaction.

According to W.J.T. Mitchell, the image of 9/11's autoimmunity seems initially out of place: "The image of autoimmunity would seem more strictly applicable to something like a military *coup d'état*, in which the armed defenders of the external borders and the internal order, the army and the police, turn against the legitimately constituted government, attacking the legislature, the judiciary, and deposing the executive" (281). According to Mitchell, we want to say that the attacks came from the outside; Derrida's assertion that these events have internal dimensions seems to stretch the metaphor of autoimmunity too far; however, Mitchell believes that this is exactly what Derrida intends: "on reflection, the stretching of the metaphor seems to be exactly the point. The limits, borders, boundaries of the body (politic), its relations of inside/outside, friend/enemy, native/alien, literal/figurative are exactly what is in question in the metaphor of the immune system and in the new phenomenon of international terrorism, which is quite distinct from the terrorism of local resistance movements [. . .] focused on a definite territory" (281). In applying autoimmunity to international terrorism, and the U.S. response, Derrida hopes to call into question the dualistic frameworks that are too easily assumed—that terrorism comes from the outside, that it is perpetrated by foreign others, and that it is an invasion of the nation's political body.

Mitchell's understanding of these events incorporates the image of the nervous system alongside that of the immune system, first through a comparison of the "memory" of both systems. The nervous system and the immune system are the only two systems capable of

"memory," in that they both learn from experience. According to Mitchell, "the nervous system can accelerate its learning process with self-conscious reflection, critique, the preservation of memory and history. Immunity is a form of cellular memory; the body learns by experience how to fight measles, and it doesn't forget. The most dangerous threat to the immune system, then, is amnesia, the forgetting of what it has learned" (284). In the context of 9/11 events, this would be reflected in "forgetting, for instance, that today's terrorists (al Qaeda, Osama bin Laden) were yesterday's allies, trained as antibodies against Soviet military power in Afghanistan; forgetting, even more dangerously, that yesterday's terrorists are almost invariably tomorrow's heroes of national liberation and that moral absolutes are not just useless but positively dangerous in any counterterrorist strategy" (284).

Derrida's own understanding of the autoimmune reaction on the part of the United States entails three "moments." The first moment of autoimmunity occurs because "the United States still retains the power of accrediting before the world a certain self-presentation: it represents the ultimate presumed unity of force and law, of the greatest force and the discourse of law" ("Autoimmunity" 95). It is within this that, according to Derrida, the first symptom of suicidal autoimmunity is to be found. The reason is that "the literal figure of the founding or foundation of this 'force of law,' *seen* to be *exposed* to aggression, but the aggression of which it is the *object* [. . .] comes, *as from the inside*, [. . .] through ruse and the implementation of *high-tech* knowledge" (95). What strikes Derrida as being even more to the point is that, as he says, "Immigrated, trained, prepared for their act in the United States by the United States, these *hijackers* incorporated, so to speak, two suicides in one: their own [. . .,] but also the suicide of those who welcomed, armed, and trained them" (95). Naas reinforces

Derrida's point that the 9/11 terrorists were not part of some foreign invasion of the body, but part of the body's own immune system. In Naas' view, this is a prime example of how the force of autoimmunity is secreted by the political body's own immune system ("One" 18). The U.S. trained and armed these terrorists, but in doing so it created the circumstances necessary to allow for attack on U.S. soil.

The second moment of autoimmunity is related to trauma.[12] The attack of 9/11 is terrifying and traumatic because, as Derrida contends, it comes "from the *future*." Speaking on the attack, he says, "A weapon wounds and leaves forever open an unconscious scar; but this weapon is terrifying because it comes from the to-come, from the future." This trauma is created by an expectation that a future trauma can and may occur, "by the threat of the worst *to come*, rather than by an aggression that is 'over and done with'" ("Autoimmunity" 97). The threat from the future of worse to come, of an illness that is not yet cured, or can never be cured, is what causes trauma and terror. Mitchell agrees with this analysis: "9/11. This image, the spectacle of destruction of the Twin Towers, has been cloned repeatedly in the collective global nervous system. The mediatizing of the event was, in fact, its whole point." This is what Derrida means by the trauma created by the 9/11 attacks, Mitchell contends, "In short, the attack was not immediately on the immune system but on the nervous system" (284-285). The result of this attack on the nervous system was an over-response by the immune system. This is

[12] Autoimmunity in relation to trauma is an important theme for many scholars of Derrida's autoimmunity. See, for example, Adeno Addis's "'Informal' Suspension of Normal Processes: The 'War on Terror' as an Autoimmune Crisis" (*Boston University Law Review* 87.2 [April 2007]: 323-46), which explores the long term consequences of autoimmune trauma in the case of America after the September 11th attacks, and Marguerite La Caze's "Terrorism and trauma: Negotiating Derridian 'autoimmunity'" (*Philosophy and Social Criticism* 37.5 [2011]: 605-19), which explores means of avoiding autoimmune trauma through Derrida's concept of hospitality.

not unknown to medical science as Mitchell explains: “It is the ‘nervousness’ of the nervous system that is producing the ‘autoimmunity’ of the immune system. [. . .] When the nervous system is in a state of panic, anxiety, depression, or, even worse, psychosis, generating hallucinations and paranoid fantasies, the immune system has a tendency to respond inappropriately as well” (285).

This threat is a result, for Derrida, of the consequences remaining from both the Cold War and the passage beyond it. The threat of a great loss of life to come, such as a nuclear threat, no longer comes from an identifiable threat, such as the USSR during the Cold War, but “from anonymous forces that are absolutely unforeseeable and incalculable” (“Autoimmunity” 98). More terrifying, says Derrida, is that attempts to neutralize the effect of the trauma created by the attack will ultimately fail. For him these are themselves just autoimmune movements, movements that will only feed and strengthen the problem that they attempt to overcome (99). When the United States strengthens its own immune system against trauma, in the form of military action in foreign nations, it only intensifies the trauma inflicted by an autoimmune reaction.

This relates to Derrida’s third identified moment of autoimmunity: attempts at a defense against a perceived evil work only to regenerate the causes of the evil they claim to eliminate (“Autoimmunity” 100). This occurs, according to Derrida, because major centers in the United States and Europe are “sanctuaries, places of training or formation and information for all the ‘terrorists’ of the world. No geography, no ‘territorial’ determination, is thus pertinent any longer for locating the seat of these new technologies of transmission or aggression” (101). What we must be constantly aware of, Derrida suggests, is that, “those

called ‘terrorists’ are not, in this context, ‘others,’ absolute others whom we, as ‘Westerners,’ can no longer understand” (115). We cannot forget that it was us “Westerners” who created and armed those we now label as “terrorists.” Mitchell is in agreement with this sentiment. In his view, “The idea that one can implant a democracy to come by invading and occupying a country, sacrificing uncounted thousands of its citizens as collateral damage and holding elections in which the identity of candidates needs to be kept secret for security reasons is precisely an act of mythical violence” (289). The U.S. response to terrorism can be understood as a further autoimmune reaction. The violence from this response further generates the resentment and hostility necessary to give rise to more terrorism; therefore, the U.S. response only serves to further damage the U.S. political body.

While Derrida is careful to submit the events of the United States’ response to events of 9/11 to an extended historical and theoretical analysis, he does not detail a direct and preferable response that the United States should have enacted. This is where Mitchell steps in. He states that, “The appropriate strategy for international terrorism is not war, but rational, open, public institutions of international justice. The war on terror is like pouring gasoline on a fire or [. . .] like massive, unfocused doses of radiation or surgical intervention, over reactive ‘treatments’ that fail to discriminate the body from its attackers or even that stimulate the proliferation of pathogens.” This is supported by the fact that the war on terror has been met with an increased number of terrorist attacks worldwide (283). In Mitchell’s opinion, “the best strategy is highly targeted and intelligent intelligence, coupled with judicious and judicial procedures, not the black-ops stormtroopers, private armies of independent contractors, and hooded torturers that have sprung from the Bush fantasyland of the war on terror, but

infiltrators who can simulate the enemy, who speak his language, understand, sympathize—who can clone themselves as 'friends' of the terrorists." This would mean a shift of responsibility from the United States to the Islamic world itself. This would be a shift to the Middle East's own police and justice systems. What it would not mean is a preemptive invasions and "democratization at gunpoint" (283-84). In Mitchell's conclusion: "The idols of our time, the monumentalization of 9/11, the fetishistic concept of terrorism, the mythic cultural icon of immunity as homeland security, cannot be destroyed either. But they can be sounded, made to divulge their hollowness. They can be melted down and drunk, deconstructed, and subjected to a secular divination. This will have to do for now" (290).[13]

Conclusion

Haraway's and Martin's analyses of immune system discourses suggest that such discourses tend to rely on dualistic frameworks. This is the case most often in the model of self/other understandings of how the immune system operates. As both suggest, this dualistic immune system discourse can have negative consequences when transposed to a political or biomedical setting. More recent data and research from biomedical settings are moving away from such a simple understanding of the immune system in regards to autoimmune diseases, but such illnesses are poorly understood at best. Derrida's own concept of autoimmunity is best seen as an extension of the biological understanding of autoimmune illness. Nevertheless, drawing from major features of autoimmunity, Derrida constructs a means of analyzing social, political,

[13] More information on responses to autoimmunity and the necessity of such a concept to understanding political futures of war and terrorism can be found in Goldie Osuri's "Imploding Singularities: For a Critique of Autoimmunity as Political Future" (*Social Semiotics* 16.3 [September 2006]: 499-510).

religious, and institutional bodies, democracy, and sovereignty in an effort to work towards non-dualistic theory and practice. Such an analysis emphasizes the relationship between the immunity that all bodies have, the inevitability of autoimmune reactions, and the threat and chance that such an attack on immunity can offer.

Chapter Three

Psychosomatics

In this chapter, I focus on mental health issues that both Sigmund Freud and one of his readers, Elizabeth Wilson, examine and speculate upon, asking how Freud and Wilson approach these issues without relying on negative mind-body dualistic thinking. Both Freud and Wilson's work provide a theory of the individual that differs from the common mind-body dualistic frameworks, frameworks that can be detrimental to the treatment and social view of mental health issues. Elizabeth Musselman notes that, "Western feminism has a history of ambivalence about how to handle its culture's entrenched commitment to mind-body dualism, a dualism that has typically imagined women and femininity (and the poor and racial 'others') as having more affinity with the somatic side of the divide" (347). As the works of Freud and Wilson have the possibility of circumventing such issues in the context of mental health, their work is of benefit to any critical theory that hopes to deal with such issues.

This chapter begins with an exploration of Freud's work on memory, so as to establish how his work posits memory as existing in a wholly-embodied, rather than mind/body, way. This section also explores how Freud's understanding of memory deals with PTSD in a non-dualistic way. Next, I explore two of Freud's selected case studies (Fräulein Elisabeth von R. and Frau Emmy von N.), particularly by following Wilson's analysis of these case studies, which lead her to further develop her own non-dualistic theories. Following this, I examine Wilson's work on depression, noting how it moves beyond, but also draws from Freud's work, in order to understand depression as extending beyond the "mind" and beyond a mind/body dualism.

Finally, before concluding this chapter, I consider resistances, primarily within feminist studies, to the engagement of Freud and other works on biology, asking how Wilson works to counter this resistance.

Freud's Work on Memory

Before proceeding to Wilson's readings of Freud's work, it is necessary to read Freud's writing on memory. Freud's embodied understanding of memory deviates from the more common, dualistic understanding of mind as the seat of memory and as separated from the physical body. Unlike understandings of mind, and therefore memory, as an ethereal and disembodied thing, Freud's neurological approach to memory creates an idea of "mind" that is written upon, scarred, and yet develops physical barriers to resist these effects. Here I explore this embodied understanding of memory to establish how Freud's work can be useful in countering mind/body dualistic frameworks.

In *Beyond the Pleasure Principle*[14] Freud develops a number of important points relating to the nature of memory. His discussion of what he calls the "amoeba vesicle," is particularly important for a theory of memory and the development of consciousness. In section IV of *Beyond the Pleasure Principle,* he notes that, "What consciousness yields consists essentially of perceptions of excitations coming from the external world and of feelings of pleasure and unpleasure which can only arise from within the mental apparatus" (26). However, consciousness is not the only process that is ascribed to this system: "all excitatory processes

[14] In this chapter I use the Norton Classics publication of *Beyond the Pleasure Principle*, which features an updated translation of that found in *The Standard Edition of the Complete Psychological Works of Sigmund Freud* by the same publisher, translator, and editor.

that occur in the *other* systems leave permanent traces behind in them which form the foundation of memory" (27). From this we are led to suspect "that becoming conscious and leaving behind a memory-trace are processes incompatible with each other within one and the same system" (28). Freud's concept of the mental apparatus is one that produces both our consciousness and our memories, but these cannot occur in the same mental systems. This is because, as Freud writes, "we should be able to say that the excitatory process becomes conscious in the system *Cs.* but leaves no permanent trace behind there; but that the excitation is transmitted to the systems lying next within and that it is in *them* that its traces are left"[15] (28). According to Freud, what is unique about the system *Cs* is that within it, "excitatory processes do not leave behind any permanent change in its elements but expire, as it were, in the phenomenon of becoming conscious" (28). Our senses give rise to our consciousness, but doing so causes these sensations to expire, yet memories are formed by the impression these "excitations" leave in an adjoining system.

From this conclusion, Freud develops an analogy of the *Cs* as a type of single celled organism, an "amoeba vesicle," which he asks us to picture as, "a living organism in its most simplified possible form as an undifferentiated vesicle of a substance that is susceptible to stimulation. Then the surface turned towards the external world will from its very situation be differentiated and will serve as an organ for receiving stimuli" (*Beyond* 28-29). Freud goes on to say that we could suppose, as a result of the constant stimulation from external excitation on

[15] Here the *Cs* refers to the mental system that receives both sensations from our sensory organs and feelings of pleasure and unpleasure from within our brain. The combination of these feelings and sensations gives rise to our consciousness. This is contrasted with an adjoining system in which memories are formed. Because of the relationship here between perception and consciousness, Freud later refers to this system as the *Pcpt.-Cs.*

the surface of this vesicle that "its substance to certain depth may have become permanently modified, so that excitatory processes run a different course in it from what they run in the deeper layers." This suggests a sort of resistance: "in passing from one element to another, an excitation has to overcome a resistance, and the diminution of resistance thus affected is what lays down a permanent trace of the excitation" (29). Freud's analogy suggests that as a result of constant stimulation, our mental apparatus has developed a natural resistance to further stimulation; yet a significantly powerful impression can overcome this resistance and create a permanent trace within the memory system.

Freud continues his analogy: "This little fragment of living substance is suspended in the middle of an external world charged with the most powerful energies; and it would be killed by the stimulation emanating from these if it were not provided with a protective shield against stimuli" (*Beyond* 30). This outer shield is created, according to Freud, because the outer layer of this organism ceases to function in the way living matter normally does. It becomes inorganic to a degree and as a result takes on the special function of an envelope or membrane that is resistant to stimuli. As a result "the energies of the external world are able to pass into the next underlying layers, which have remained living, with only a fragment of their original intensity; and these layers can devote themselves, behind the protective shield, to the reception of the amounts of stimulus which have been allowed through it" (30). Freud thus concludes that, "By its death, the outer layer has saved all the deeper ones from a similar fate—unless, that is to say, stimuli reach it which are so strong that they break through the protective shield." We can surmise from this that the protection against stimulation is an almost more important function than the reception of stimulation (30). Freud explains that this protective shield is supplied with

a store of energy and must endeavor above all to maintain the special modes of transformation of this energy that is operating within it against the effects of the energies of the outside world. As to the reception of stimuli, the main purpose of this is to "discover the direction and nature of external stimuli; and for that it is enough to take small specimens of the external world, to sample it in small quantities." These small portions of the deep layer of the vesicle that remain on the surface and have not withdrawn inside are the sensory organ receptors (31).

However it is not only from within that this vesicle or sensitive cortex receives excitations. It also receives excitations from within itself. These excitations are dealt with in a very different manner however, and it is the differing manner of how the system receives excitations that shapes the functioning of the entire system and the entire mental apparatus. Freud writes of this system that, "Towards the outside [. . .] the amount of excitation impinging on it has only a reduced effect. Towards the inside there can be no such shield; the excitations in the deeper layers extend into the system directly and in undiminished amount, in so far as certain of their characteristics give rise to feelings in the pleasure-unpleasure series" (*Beyond* 32). As such, feelings of internal pleasure or unpleasure are felt more strongly than external stimuli, and a method of dealing with internal stimuli must be adopted. Freud explains that this protective method has "a tendency to treat [internal stimuli] as though they were acting, [. . .] from the outside, so that it may be possible to bring the shield against stimuli into operation as a means of defense against them. This is the origin of *projection*" (33).[16]

The nature of this mental barrier is also linked to Freud's explanation of trauma: "We

[16] Further discussion of Freud's analogy of this single celled organism is provided in the fourth chapter of this thesis. There I explore David Wills's views on Freud's analogy as they pertain to biology/technology, and organic/inorganic relations.

describe as ‘traumatic’ any excitations from outside which are powerful enough to break through the protective shield. [. . .] Such an event as an external trauma is bound to provoke a disturbance on a large scale in the functioning of the organism's energy and to set in motion every possible defensive measure” (*Beyond* 33). Derrida believes that “this hypothesis is remarkable as soon as it is considered as a metaphorical model and not as a neurological description. Breaching, the tracing of a trail, opens up a conducting path. Which presupposes a certain violence and a certain resistance to effraction. [. . .] Now there would be two kinds of neurons: the permeable neurons, which offer no resistance and thus retain no trace of impression, would be the perceptual neurons; other neurons, which would oppose contact-barriers to the quantity of excitation, would thus retain the printed trace” (“Freud” 252). This idea that a certain mental violence is the root of both mental trauma and memory forms the foundation of Freud’s ideas on memory, traumatic experience, and consciousness as a whole. In Derrida’s reading, this suggests that memory “is not a psychical property among others; it is the very essence of the psyche” (252).

From this information and speculation, Freud concludes that common traumatic neurosis is likely the result of an extensive breach made in an organism’s protective shield against stimuli (*Beyond* 35). He explains in more detail that, “The fact that the cortical layer which receives stimuli is without any protective shield against excitations from within must have as its result that these latter transmissions of stimulus have a preponderance in economic disturbances comparable with traumatic neuroses” (40). Indeed, Freud believes that this may be the basis of “war neuroses” (what is now commonly called Post Traumatic Stress Disorder [PTSD], to which I will return shortly).

Freud's explanation of memory is one in which excitation upon memory neurons leaves a physical trace that alters the shape and function of that neuron. This neurological explanation is far removed from the nonphysical concept of memory found in mind/body dualism. Here, excitation is resisted, breaches scar the brain as memories, and extensive damage forms the basis of traumatic memory. In order to better explain and refine these theories on memory, developed in *Beyond the Pleasure Principle*, Freud creates an alternate analogy found in "A Note Upon the Mystic Writing-Pad." In this brief essay, Freud refers to two external memory devices that people frequently can use to supplement their own memory: paper and slate. With paper, notes written in ink form "'permanent memory-trace[s].'" However traces cannot be erased and once full, paper cannot be added to. It is therefore a permanent form of external memory, but not an unlimited form. With slate, notes remain until removed. Once the slate is full, the notes can be erased and new ones written. Such traces are therefore unlimited, but not permanent. Comparing these devises, Freud states that, "an unlimited receptive capacity and a retention of permanent traces seem mutually exclusive properties [. . .] either the receptive surface must be renewed or the note must be destroyed" ("Note" 227-28). Our own mental apparatus can accomplish what these substitutes cannot; our memory "has an unlimited receptive capacity for new perceptions and nevertheless lays down permanent—even though not unalterable—memory-traces" ("Note" 228). Freud posits that our mental apparatus has two systems related to memory. Our perceptive consciousness is able to receive perceptions, but does not keep any permanent traces of them, while our "mnemic systems," our memory systems, lie beneath and contains the permanent traces of perceived excitations. Freud furthermore posits, as already explored above, that our consciousness arises within the

perceptive systems, rather than from the permanent trace in the mnemic systems (228).

In “A Note Upon the Mystic Writing-Pad” Freud turns to a device, often referred to as a *Wunderblock* (translated as “Mystic Writing-Pad”), which provides a remarkable analogy for the memory system that he describes. This device consists of a wax or resin slab, above which, attached at one end, there are two thin layers. The top layer is celluloid, while the middle is wax paper. To write, one uses a thin stylus to scratch upon the top layer. This leaves an impression in the lower wax slab, and appears as darkened writing. When the top two layers are separated from the bottom slab, the darkened writing disappears, leaving a blank surface, while the impressions on the bottom wax slab remain permanently. The celluloid sheet is not necessary, in of itself, for impressions to appear, but writing directly upon the wax paper would likely cause it damage. The celluloid therefore provides a “‘protective shield against stimuli.’” This protective layer is an important point in Derrida’s view. He explains that, “Freud insists on the essentially protective nature of the celluloid sheet. [. . .] There is no writing which does not devise some means of protection, to protect against itself, against the writing by which the ‘subject’ is himself threatened as he lets himself be written” (“Freud” 281-82). In a sense then the pad corrects the problems that both paper and slate have: “it solves the problem of combining the two functions by dividing them between two separate but interrelated component parts or systems” (“Note” 228-30).

There are, however, some ways that the writing-pad does not serve as a good analogy. Traces in the wax slab cannot be easily read, nor can they be recalled as darkened impressions upon the top layers (“Note” 230-231). This is contrary to our own memory systems, in which memories can often be recalled (although often in a “translated” or altered form). Despite this,

Freud chooses to push the comparison further. He believes "that cathectic innervations are sent out and withdrawn in rapid periodic impulses from within into the completely pervious system *Pcpt.-Cs*. So long as that system is cathected in this manner, it receives perceptions [. . .] and passes the excitation on to the unconscious mnemic systems; but as soon as the cathexis is withdrawn, consciousness is extinguished and the functioning of the system comes to a standstill" (231). Freud's concept of the memory is therefore tied to his concept of consciousness. In this analogy, the permeable portion of the memory system, where perceptions arrive, is also the center of our mind's consciousness, but this is reliant on the ridged memory system that lies beneath it.

The analogy of the writing pad creates an image of memory divided topologically into two distinct systems, which are inherently reliant on one another. This image is similar in nature to the current and popular view of memory as divided into short- and long-term memory systems. In Freud's understanding, short-term memories with significant impact—usually as a result of associated pleasurable or unpleasurable excitations—are engraved as traces or scars upon the long-term memory system. This topologically divided, yet bodily located, view of memory further works to upset mind/body dualism. By locating and dividing memory Freud places it within the body, and so further embodies his concept. This has implications for an understanding of traumatic memory, which become akin to bodily wounds.

The "violence" involved in psychical scarring —or "breaching" as Derrida puts it—can lead to certain mental issues. Freud's explanation of "war neuroses," and its relation to repression and repetition, observed in patients following the end of World War I, takes traumatic memories outside of dualistic mind/body frameworks; this explanation, therefore,

has implications for the place of traumatic memories in cultural and medical understandings. According to Freud, a condition has long been known and described that can occur after severe mechanical concussions, which he names “traumatic neurosis.” According to Freud, World War I gave rise to a great number of illnesses of this kind. The fact that these neuroses occurred after the war, without injury necessarily being inflected, removes the temptation to assign the cause to lesions formed as a result of cranial injury (*Beyond* 10). To Freud, the fact that war neuroses bring about the same symptoms as observed in traumatic neuroses caused by a gross mechanical force is both enlightening and bewildering; “In the case of the ordinary traumatic neuroses two characteristics emerge prominently: first, that the chief weight in their causation seems to rest upon the factor of surprise, of fright; and secondly, that a wound or injury inflicted simultaneously works as a rule *against* the development of neurosis” (11). If this were true, it would suggest that the experience of “fright,” more so than any injury, is strongly related to the cause of traumatic neuroses.

To understand this, it is important to understand Freud’s distinction between fright, fear, and anxiety. To him, anxiety describes a particular state of expecting danger even though it may be an unknown danger; fear requires a definite object of which one is afraid, while fright is a state that occurs when one runs into unexpected danger; it emphasizes the factor of surprise. According to Freud, there is something about anxiety that helps to protect a subject against neurosis. Freud here sees a link between neurosis and a compulsion towards repetition. He comments on patients suffering from war neurosis: "Dreams occurring in traumatic neuroses have the characteristic of repeatedly bringing the patient back into the situation of his accident, a situation from which he wakes up in another fright” (*Beyond* 11). Furthermore, it is

observed that certain motor symptoms occur by fixation of movement at the time at which the trauma occurred (12). Freud claims that something similar can be observed in the case of children's play[17] where "we seemed to see that children repeat unpleasurable experiences for the additional reason that they can master a powerful impression far more thoroughly by being active [. . .] Each fresh repetition seems to strengthen the mastery they are in search of" (42). Freud concludes that the objective of such repetition must be a means of resisting the damage from such trauma. As a sort of post-active anxiety, the repetition seeks to "make themselves a master of the situation" (16).

Repression also factors into the cases of war neuroses, and is directly linked to repetition. According to Freud, patients cannot always remember the whole of what is repressed in them and what one cannot remember may be the essence of what is repressed (*Beyond* 18). Because of this repression a patient is obligated to repeat the repressed material as a contemporary experience instead of remembering it as something that belongs in the past (19). Freud comments that in order to understand repetition compulsions we must "get rid of the mistaken notion that what we are dealing with in our struggle against resistance is resistance on the part of the *unconscious*." This is because resistance during treatment arises from the exact same strata of the systems of the mind that originally created the repression (20). This resistance is the result of the pleasure principle in action: "[a subject] seeks to avoid the unpleasure which would be produced by the liberation of the repressed" (21). Freud suggests that the compulsion to repeat may be a universal attribute of organic life in general "to restore an earlier state of things which the living entity has been obliged to abandon under

[17] In the essay "Pulling Strings Wins no Wisdom" David Farrell Krell discusses the importance of the child's *fort:da* game in relation to trauma, fright, and memory (*Mosaic* 44.3 [2011]: 15-42).

the pressure of external disturbing forces; that is, it is a kind of organic elasticity, or, to put it another way, the expression of the inertia inherent in organic life" (43).[18]

Because Freud locates memory physically, he is able to form an explanation of traumatic neuroses, such as PTSD, that occur as bodily injury. Where in mind/body dualism PTSD is an illness of the mind, Freud's explanation places it as a wound on the body; one that is difficult to recover from due to the complications posed by repression. A reading of Freud's work on memory, therefore, forces a rethinking of the cultural, and all too often medical, approaches to traumatic memory, which can be influenced and staled by dualistic thinking.[19]

Wilson's Reading of Select Case Studies by Freud

Beyond Freud's work on memory, his early case studies are also indicative of an approach to mental illness that is embodied and that resists mind/body dualism by showing an awareness of biological matters beyond the scope of the central nervous system, or at least, by showing an awareness of the central nervous system, including the "brain," as extending throughout the body. This point is one on which Elizabeth Wilson chooses to focus sections of her book, *Psychosomatic*. After briefly outlining the state of Freud's work in feminist scholarship and some potential problems therein, I examine here Wilson's readings of two of Freud's case studies—Fräulein Elisabeth von R. and Frau Emmy von N., collected in Breuer and Freud's text,

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[18] Elizabeth Wilson also worked with Freud's memory trace, although such work is beyond the scope of this thesis. See "Locating Cognition: Force, Topography, and the Psychical Trace" in *Neural Geographies*. Here Wilson works to "locate" the psychic trace through a reading of Freud and Derrida. This reading actively works against common cognitive theory that locates the "psychical trace as a present and fixed entity within the mind-brain" (167).

[19] Derrida's "Freud and the Scene of Writing" (in *Writing and Difference*) provides an insightful analysis of the memory trace and psychic writing beyond the works of Freud discussed in this chapter.

Studies on Hysteria—and how she shows these case studies to be indicative of an embodied approach to mental health issues that is often ignored, or actively resisted, in feminist scholarship.

Some authors argue that, according to Musselman, "the mind has no sex." This argument for equal opportunity of the sexes has caused the body to be seen as "rather embarrassing and [as a] heavy piece of baggage" (374). As such, some feminists have tried to re-value embodiment. Wilson's work, as an example of this, cuts through this problem by turning to the conversation, "or lack thereof," that occurs between psychoanalysis and neuroscience. "Bridging the gap left by thus disciplinary specialization and uncritical acceptance of dualism, Wilson argues, provides surprisingly laboratory possibilities" (Musselman 347-48). In light of this, Wilson's thesis in the first two chapters of *Psychosomatic* is that, "those moments when Freud relies most heavily on biological or reductionist declarations are not necessarily the moments when his accounts become static, incoherent, or critically useless. In fact, these moments of biological reduction often produce Freud's most acute formulations about the nature of the body and the character of psyche" (3).

With this in view, the first of Freud's case studies that Wilson reads is Fräulein Elisabeth von R.'s, who suffered from leg pain and had difficulty walking, and who Freud took on in 1892. The woman's family had succumbed to recent misfortunes such as her father's death and her sister's heart problems. All the sick-nursing involved fell to Freud's patient (*Studies* 135). In regards to the leg pain, Freud notes that it "was of an indefinite character; I gathered that it was something in the nature of a painful fatigue. [. . .] the muscles were perhaps even more sensitive to pain than the skin; but there could be no question that the thighs were the parts

most sensitive to both kinds of pain" (135-36). Freud suspected that the condition was hysteria because of the indefinite nature of the pain and because the patient's response to pressure in her thighs did not match an expected pain reaction. However, as the symptoms differed from classic hysteria, Freud proceeded on the assumption that the disorder was a mixture of neurotic and organic nature (136-38). Freud discovered that the pain arrived alongside the deaths in her family (141-44). During her treatment, Elisabeth declared that her pain was most severe in her right thigh because this was the spot that her father had rested his leg when she was caring for him. After this revelation Freud noticed that her legs "began to 'join in the conversation' during" analysis;

> As a rule the patient was free from pain when we started work. If [. . .] I called up a memory, a sensation of pain would make its first appearance [. . .] The pain that was thus aroused would persist so long as she was under the influence of the memory; it would reach its climax when she was in the act of telling me the essential and decisive part of what she had to communicate, [then . . .] it would disappear. (148)

Freud, therefore used her pain as a guideline to determine when a reminiscence was complete in its telling, allowing him to hear each traumatic story in its complete form (149). Eventually it came to light that Elisabeth was in love with her brother-in-law and felt great guilt when her sister died. Freud determined that her symptoms were the result of her moral being resisting the feelings she had for her brother-in-law (156-57). This revelation allowed Elisabeth to make a full, if lengthy, recovery from her hysterical symptoms (158-60).

Wilson uses this case study by Freud as a starting point to explore the tendencies in regards to biology and neurology that she sees within critical theory, especially within the

feminist theory in which she is most active. In particular here, feminist-critical responses to Freud's studies on hysteria strike Wilson as odd. She notes that, "the way these contorted ideational structures are then converted into bodily symptoms has attracted less attention than one might expect. Oddly enough, it is the very mechanism of conversion (of psyche into soma) that has been the least explored aspect of conversion hysteria" (*Psychosomatic* 5). We may know why conversion takes place, but we are mute in response to how this occurs. In Wilson's opinion,

> the neurology, physiology, or biochemistry of hysterical symptomology can be disregarded only in a theoretical milieu that takes biology to be inert, a milieu that, despite its expressed interest in rethinking the body, still presumes that the microstructure of the body does not contribute to the play of condensation, displacement, and deferred action that is now so routinely attributed to culture, signification, or sociality. (5)

It would seem then that such disregard for biology within critical theory must be the result of dualistic frameworks that separate the bodies of individuals from the culture these individuals inhabit and shape. Furthermore, Wilson believes that even among the feminist theories that do tend to take biology into account, there is a tendency towards dualistic explanations in that these critics often focus explanation into two distinct categories of mind and body. Such dualistic models, even within criticism and theory, are part of the issue at hand regarding poor understandings of mental health. This forces Wilson to ask, "How can a neurosis not be acquainted with the nervous system?" (7). By passing over neurophysiology, major feminist thinkers miss important and compelling questions about conversion hysteria and, furthermore,

"imply that biological data lie beyond the confines of feminist analysis" (8). Wilson's point is that "the cultural, social, linguistic, literary, and historical analyses that now dominate the scene of feminist theory typically seek to seal themselves off from [. . .] the domain of the biological" (8). It is Wilson's strong belief that this sealing off of feminist theory causes it to not ask important questions of biology, which can be of benefit to feminist theory.

Freud's approach to Elisabeth's case provides Wilson with an example of the questions that biology can provoke from conversion hysteria. In order to analyze such questions, Wilson sets aside any discussion of the psychological mechanisms that may have triggered Fräulein Elisabeth's particular pains (*Psychosomatic* 9). Indeed, as she notes, Freud offers little direct help on the physiological mechanisms of Elizabeth's bodily conversion; he does not explain how her traumatic episodes and repressed feelings become pain in her legs. Yet Freud also does not "take refuge in the central nervous system"; he does not center his explanations of Elisabeth's issues only in the brain. Instead Freud suspects that her psychic conflicts are located in lower body parts, and that her psychic defenses are thus more muscular than they are cerebral (9-10). This is exactly the type of approach that Wilson wishes to see more of in critical theory, because it looks beyond the "mind" of the patient. Instead Wilson's reading is that, "the muscle fibers, nerves, blood vessels of the left leg, and the muscle fibers, nerves, blood vessels of the right leg have become functionally differentiated under the influence of a psychic defense that isn't necessarily centralized in the brain and certainly isn't contained within Fräulein Elisabeth herself." Rather it would seem that the physiology of Elisabeth's thigh muscles could not be separated from her illness and the death of her father (10).

What is most important to Wilson in this case study is that "the familiar retort that such

pains are all in her head seems to explain nothing." Such a retort only restates the issue, and yet, if viewed in a literal and reductive way, Wilson believes it may get us closer to the heart of the matter: "If the pains are indeed all in her head, then this entails a number of reciprocal ontological contortions: that her thigh is in her head, that her mind is muscular, and that Freud's words are in the nature of her nervous system" (*Psychosomatic* 11). What Wilson's reading hopes to show is that a close reading of Freud's case studies forces us to ask further questions of how psychological events and bodily pain are related. Such a reading does not allow for an "it's all in her head" approach, but instead shows the limits of our current knowledge on how the bodily systems interact with one another. This topic of interrelated bodily systems is made more clear in Wilson's sustained reading of Freud's case study on Frau Emmy von R.

On 1 May 1889 Freud took on the case of an about forty-years-old woman referred to as Frau Emmy von R., who was suffering from hysteria (*Studies* 48). Frau Emmy spoke with difficulty and occasionally stammered. She had outbursts of anger, although these were short, that seemed to go unnoticed after they ended (48-49). After her husband's death Frau Emmy had a number of symptoms including depression, insomnia, and tormenting pains, so Freud convinced her to move into a nursing home (50). While spending time with her family Frau Emmy developed gastric pains, although Freud managed to relieve this pain by stroking her abdomen and assured her they would not return (54). Freud asked her under hypnosis where her gastric pains had come from: "Her answer, which she gave rather grudgingly, was that she did not know." The next day she again had poor sleep due to gastric pain, but admitted, under hypnosis, that the gastric pains were due to poor appetite following her husband's death (63-

64). Later, Freud found Frau Emmy disposing of food that she was to eat in the home's garden. At this point Freud discovered that she rarely ate more than half of the food she was given. She explained that "she was not in the habit of eating more and that it would be bad for her if she did. [. . .] When I enquired what she drank she told me she could only tolerate thick fluids, such as milk, coffee or cocoa; if she drank water or minerals it ruined her digestion." Increasing her food left her in a depressed state suffering from severe abdominal pain (81). Under hypnosis, Freud discovered that she starved because of a childhood trauma; upon reliving it she quit starving herself and her condition improved (82-83).

Wilson's reading of this case study keeps in mind the questions brought up by the previous case study, and uses the case of Frau Emmy von N. as starting point to explore nervousness in the gut, "because it focuses on how a husband's death, a patient's resistances and fears, and an analyst's authority can be gastrically internal" (*Psychosomatic* 33). The case of Frau Emmy is important to Wilson because it "provides an initial schema for thinking about the nervous system beyond the head," especially in the way it shows "how distal parts of the body (such as the stomach) have the capacity for psychological action" (34). To understand how Wilson believes this to be the case, it is necessary to briefly look at similarities between the enteric and central nervous systems.

The enteric nervous system (ENS) surrounds our entire digestive tract. It is anatomically and biochemically similar to the central nervous system (CNS), more so than to any other part of the peripheral nervous system. Unlike other sections of the peripheral nervous system, the ENS is capable of functioning independently of direct innervation of the CNS. As such it is commonly referred to as "the brain in the gut," "the enteric minibrain," and "the second brain"

(*Psychosomatic* 34). Because the neurons of the ENS "are functionally and morphologically similar to the neurons of the brain" it is vulnerable to the same pathologies that can affect the CNS, such as Alzheimer's and Parkinson's disease (35). Furthermore the ENS contains every class of neurotransmitter that the CNS has. In particular, serotonin has been found to be important to the ENS, and pharmaceuticals that regulate serotonin levels have been found effective in managing some gastrointestinal disorders such as IBS. Furthermore, while some information is relayed from gut to brain, there is little control in the opposite direction. The two are largely independent (36).

It is interesting to note that many early cases of hysteria, anxiety neurosis, neurasthenia, and melancholia are connected to disruption of digestion, and Freud notes that appetite disturbance should be regarded as the very first of a patient's neurotic illnesses. As such, Wilson notes that "the ENS, then, is no less allied with psychological states than the CNS, and the gut is innervated by a number of events: neuroenteric, endocinological, cerebral, affective, dysthymic, and transferntial" (*Psychosomatic* 37-38). Unfortunately, in Wilson's opinion, biomedical literature recognizes the role psyche has in some disturbances of the gut, but struggles to grasp a map of the relationship between the two (39). Here again issues of dualism recur in that the separation of mind and body extends, in Wilson's opinion, to the biomedical understandings of the body. This understanding removes psychological influence on the gut and does not envisage that a neurology of the gut may well suggest the existence of a psychology of the gut (40).

According to Wilson, such understandings "give the impression of a nervous system in which higher-order (cognitive) centers are the origin and local of psychological events.

Psychological events affect the gut, but they seem to happen elsewhere (i.e., in the brain)" (*Psychosomatic* 40). Such notions of psychological action at a distance misunderstand the communicative nature of the body's nervous system. The fact that antidepressants relieve some IBS symptoms may not be solely evidence of CNS influence on the gut; it may also be evidence that the medications have an antidepressant effect on the gut itself. In other words, the ENS may have its own neuropsychological profile. It is known that many psychological events are "unconscious or innate or temperamental or affective; in fact, most psychological events are of this kind." This demands an understanding and theory of the psyche that is extensive and not attached to a primacy of "rationality, self-control, good judgment, and sound appraisal" (41). Wilson sees that the ongoing failure to bring about a "psychology at the enterological level speaks to the strangely disembodied way in which scientific accounts of cognition have been generated, and to how the CNS has come to embody this type of cognition" (41). Unlike many of her contemporaries, Wilson takes Freudianism to have a "vitalizing effect on contemporary understandings of the neurology of the gut. [. . .] In the case of Frau Emmy, her transferential relations to Freud aren't simply in her head (or in her brain), they are in her gut" (42). Such an implicit suggestion from Freud, that so-called "mental health" extends in cause and function beyond the central nervous system, could significantly change opinions and academic treatment of these issues were it to be accepted.

Because the ENS is in contact with a number of biological and nervous systems it is not possible to argue for it having any radical autonomy or independence (*Psychosomatic* 43). A noteworthy aspect of the gut is that it is a primary site through which the body connects to the outside world. Through ingestion the outside world literally passes through us, causing Wilson

to comment that, “For an internal organ the gut has a remarkably intimate connection to the outside.” Through ingestion, absorption, and excretion, relations to others are psychologically internalized. The gut is thus a vital organ in regards to our relation to others (44-45). Wilson ties this understanding to depression:

> “Depression is a breakdown in relations to others. The sustaining effects of others have been removed, [. . .] and the self is unable to hold itself together, disintegrating either into an affectless immobilization or agitation [. . .]. Speaking psychodynamically, depression is a chronic, inflexible, response to the loss of another. The self becomes depleted in the face of isolation and injury and is unable to access others [. . .]. The biochemical thesis of depression is concerned with a different kind of depletion: a drop in neurotransmitter levels in CNS synapses” (45).

Both of these understandings have some breakdown in the gut as central to the etiology of depression (45). As such, Wilson suggests that ingestion and digestion may not simply be metaphors for internalization, but may be “actual” mechanisms for relating to others. The serotonin in the gut, the similarity of gut neurons to brain neurons, and the psychological character of gut functions all suggest that depression does not simply disrupt ideation, but the gut itself, thereby explaining the eating disorders that often occur hand-in-hand with many cases of depression. Wilson is arguing that “the psychodynamic and neuroenterological data could be used to build a schema of depression in which failure to eat doesn’t represent a breakdown of connection to others, but is seen as a direct interruption to the process of

remaining connected to others" (45).[20]

Wilson's analysis of both the biological and psychoanalytic theories surrounding gastrointestinal disorders, according to Myra Hird, is such that "both eventually sever their relationship with the other. Each constructs theories of the gut that obviate all connection between soma and psyche in such a way as to demarcate each as distinct entities and foreclose explorations of the ways in which the gut might co-constitute both soma and psyche" (333). Wilson's readings of Freud's case studies have implications for any approach to mental health issues, particularly in how they directly upset dualistic understandings of mental health issues. Freud's approach, according to Wilson, is not exclusively focused on the central nervous system, nor does he take a purely psychological approach to his treatment. This focus beyond the brain, in Wilson's view, provides an approach to mental illness that is embodied and is in fitting with biological research and data. Wilson, with the help of some Freud's other works, also comments on the nature of the depression as a weakening of the nervous system.

Wilson's Theories of Depression

Beyond analyzing Freud's case studies for what they may suggest about an embodied approach to mental health, Wilson also considers our understanding of depression. Her exploration, which draws upon the work of Freud and other theorists, attempts to show how common mind/body dualistic readings of depression are in error. Wilson's analysis of depression not only shows it to extend beyond the brain, but also examines it in a corporeal and embodied manner.

In the first chapter of *Psychosomatic*, Wilson is interested in Peter Kramer's research

[20] For a further discussion by Wilson on the importance of the digestive system for critical theory see "Gut Feminism" (*differences* 15.3 [2004]: 66-94).

and in particular his question: “how does psychic trauma become translated into a functionally autonomous, biologically encoded personality trait?” (quoted in Wilson, *Psychosomatic* 15). Wilson reads Kramer’s interpretation of depression as a weakened neurological state along side Freud’s theories of neurasthenia (nervous weakness) (16). This reading takes depression outside of the common view as a problem of the “mind,” and reconsiders it as a physical weakening of the body; this embodies the illness and implies different cultural and medical outlooks on depression.

Neurasthenia is a disorder that was diagnosed in the late nineteenth century and was associated with civilized culture. It was understood clinically as debility of the nerves that caused “fatigue, headaches, indigestion, constipation, listlessness, and impoverishment of sexual activity.” Freud placed neurasthenia in the category of “actual neuroses,” what is now called psychosomatic illness. Because it is an actual neurosis, its symptoms are somatic in nature, and therefore “not amenable to psychoanalytic intervention” (*Psychosomatic* 16-18). Freud believed that such a disorder is caused by an absence or inadequacy of sexual satisfaction, rather than, as other physicians contended, being caused by excess effort and overwork. He saw it as a lack of release of sexual excitation that builds up to the point at which it “impinges on the psyche” (17-18). Therefore, while physicians located neurasthenic sensitivity in cultural conditions affecting the mind, Freud located the disorder in the flesh (19).

Wilson chooses to look more closely at this “penis-brain reflex arc” and what is entailed ontologically in such a hypothesis: “I wish to put to one side the alarm, mockery, or incredulity that the juxtaposition nerves-penis-cortex-psyche would normally elicit in certain critical and political circles, and listen for what kinds of useful critical and political tenets such a

juxtaposition may be laying before us." What this juxtaposition suggests is that biology and psyche cannot be adequately differentiated from one another, or that one prescribes and subdues the other (*Psychosomatic* 19). Interesting for Wilson in Freud's reflex arc model is that "not everything is cortical, cognitive, knowing," and that the nervous system is imagined to be corporeal; "Freud's neurons are functioning more like flesh and blood than like cerebral units" (21). Wilson explains the implications of Freud's understanding: "Weakness of the soma [. . .] instigates a melancholic weakening of the psyche not because the somatic governs the psychic, but because the soma and psyche are ontologically integrated. Weakness in one part of this psychosomatic system will be disseminated generally" (22). In this understanding, distinctions between psyche and soma seem to breakdown. Wilson reads Freud as saying that the two are functionally integrated to the point where a weakness in one is a weakness in the whole. What Freud ultimately maps out, therefore, is a psychosomatic structure that is neurologically grounded. In this structure it is the relation between elements, not the elements themselves that determines the character of the structure. This is not a structure in which the neurons determine the psychological realm, nor does the psyche command the neurology of neural excitations. As such, Wilson wants to highlight through Freud that purely cultural understandings of neurasthenia or depression could generate the "very biological austerity they wish to contest" (22-23). Wilson suggests that these purely cultural understandings of depression are actually expressions of the very dualistic and reductive frameworks that such understandings often hope to overcome.

Kramer's more recent work in neurology is also expressive of the same embodied approach to depression as seen in Freud's accounts. Wilson turns to Kramer's work to explore

how stress and “neurological kindling” can create a case of depression that takes on an independence from environmental events and becomes “functionally autonomous” (*Psychosomatic* 24). This explanation is based on the results of studies on epilepsy:

> epileptic seizures can be induced in normal animals through exposure to a series of small, initially nontraumatic electrical currents. [. . .] over time, without increasing the level of the shock, the animal begins to respond with seizures that are initially small and contained but that eventually become more severe and widespread. Once the brain has been so ‘kindled,’ smaller and smaller electrical shocks will induce seizure. [. . .] The application of electrical current changes the synaptic connections in the brain, and these changes in neural anatomy are evident before manifest seizures begin. (24)

Kramer extends this explanation to depression to hypothesize that perhaps traumatized people are stressed in such a way that they become vulnerable, not to seizures, but to attacks of depression. In this hypothesis, even small-scale trauma could eventually build up to the point that the brain becomes “kindled” for depression even through everyday life stress (25). In this model, similar to the neurasthenic patient, a depressive patient becomes the causality of nervous weakness, “and just like Freud’s model of neurasthenia, Kramer’s kindling model of depression locates psychopathology directly (or ‘actually’) in somatic encoding” (25). Kramer’s model of depression is therefore one in which the physical “body” of a patient is damaged by trauma, not one in which the mind or psyche is behaving abnormally. Such depressive symptoms, like neurasthenic symptoms, would therefore not be correctable through psychotherapeutic techniques.

Kramer’s research is often cited as being biologically deterministic. Wilson disagrees

with this; she believes that his research has the effect of "putting all manner of biological and cultural certainties back into analytical circulation" and opening up the nature of determinism itself to interrogation (*Psychosomatic* 26-27). Wilson believes that Kramer and Freud "both demonstrate how neurological determinism is most powerfully contested through neurological intimacy" (27). Wilson argues that Kramer's kindling model shows an important fact about neurology: "Not only is depression neurological, but neurology is also depressive. [. . .] Neurological matter itself may become weakened, neurasthenic, depressive: neurology doesn't stand to one side of the effects it facilitates" (29).[21]

In Musselman's opinion, Wilson provides a persuasive argument that the psyche is not ontologically distinct from the soma. She does this to the extent that her depiction of body "even in its seemingly most automatic functions, as so vital, so complex, that the additional metaphysics of a psyche seems to defeat the purpose" (348). By reading the works of Freud and Kramer, Wilson actively works to break down mind/body dualistic distinctions that surround depression. Given the reductive approach and stigmatization that is all too common surrounding this illness, a new understanding of depression as embodied physical weakness could offer more positive social outcomes for those who suffer from this illness. In this way, Wilson's work has beneficial societal possibilities, assuming her approach is not resisted.

Resistances to Biology in Critical Theory

Much of what is discussed in this chapter involves the potential value that theories of

[21] Wilson has dealt with the topic of depression in other works as well. Both "Ingesting Placebo" and "The Work of Antidepressants" deal with the effects and of antidepressants and problems associated with the views and research involved therein. Some of this is briefly discussed in the following section of this chapter.

embodiment, which are aware of neurological data and theories (both past and contemporary), can have in problematizing dualistic frameworks—and in particular here, mind-body frameworks. It is important to note, however, that the use of such scientific data—and in particular the use of biological or neuroscientific data—within works of critical theory is not uncontested. Within certain fields of critical theory the use of such biological data is fraught with negative implications. One of Wilson's major undertaking in her research and writing has been to confront this resistance and illuminate its negative implications. Furthermore, this counter-resistance shows that much of the resistance to biology, which often claims it to be reductive, is itself both reductive and exemplary of a dualistic divide between nature and culture.[22]

Resistance to biological data within critical theory has reached a point of what Elizabeth Wilson calls "anti-biologism" ("Work" 125), which she sees as being the case most so within feminist and queer critical theories. She goes so far as to say that biology has become the "underbelly" of feminist theory ("Underbelly" 195). The symptoms of this include disengagement with data and models that emerge from recent research in biology ("Work" 125), a narrowing of political materials away from biology ("Underbelly" 202), and an aversion to biological treatments of mental illnesses such as depression ("Ingesting" 32). This has become so common, according to Wilson, that even critical works that have little to do with biology have at their core a gesture to reject biology ("Underbelly" 196).

This trend is not without explanation, however. Wilson believes that this bias was

[22] Beyond the articles discussed below, Wilson also deals with this resistance in sections of each chapter of *Psychosomatic*, and within chapters of *Neural Geographies*, especially "The Natural Habits of Feminist Psychology."

initially “conceptually lucrative” (“Work” 125). In “Underbelly” Wilson charts the work of Gayle Rubin, who initiated a turn away from biological explanations in feminist and queer theories due to the patriarchal and damaging nature of research in biology at the time. Rubin’s target is sexual essentialisms, specifically, “the idea that sex and sexuality are natural forms (i.e., fixed biological or psychological types) that exist prior to social life.” This political gesture on Rubin’s part eventually became second nature to feminist and queer critique (“Underbelly” 195-96). In Wilson's view, this creates a core contradiction in such critical works: “biology is both a prerequisite and politically irrelevant. It is peripheral to our political concerns, yet it bears down on them dangerously” (197). Because of this, Wilson has a damning claim to make: “feminism has presumed a kind of biology—a biology that is fixed, static, and analytically useless—as one way of securing its critical sophistication” (200). In Wilson's view, feminism is not simply misreading biology, but is intentionally rejecting such data as a means of making feminism “smart”; however, these “intentional misreadings” have a constructive goal in mind: they aim to help build feminist theories and affirm feminist politics. Wilson does not say that Rubin and her contemporaries are wholly in error, however, “after all, the refutation of bigoted biological theories of gender and sexuality has been, and remains, vital” (200).

While resistance to biological data is perhaps understandable given the history of such research, it is not without negative implications. The rejection of biological data has, in Wilson’s opinion, generated a trend towards strong political partisanship in regards to biological issues. It is Wilson’s conviction that this partisanship will curb innovation in conceptual and clinical practice. It is her strong view that:

However well intended anti-biologism might have been as a feminist gesture, it will

> always effect a Cartesian division of the ontological field (nature/culture). It will demand that we choose culture over nature, and it will buttress the orthodox notion that biology is the most rigid and domineering of substances, leaving feminism very little room for an active engagement with the contemporary life sciences and the technologies they have generated. ("Ingesting" 32-33)

This will furthermore lead to an overall lack of understanding of biological processes, and as such, "feminists will remain perplexed by the character of psychopharmaceutical events" ("Work" 126). These negative consequences are, however, minor in comparison to the potential benefits from using biological data and models that may be missed as a result of such resistance.

There is much that could potentially be gained from the use of biological data and models in feminist, queer, and other critical theories. Wilson argues that opening up feminist theory to pharmacological data can, for example, open "new avenues for analysing the embodiment of melancholy" ("Work" 126). Using the example of antidepressants, Wilson sees potential benefits to feminist theory through a careful reading of the current data on SSRIs (selective serotonin re-uptake inhibitors or serotonin-specific re-uptake inhibitors; a class of antidepressants). Pharmacokinetic data supports a problematizing of simple lines of cause and effect that are in common use with antidepressants. This fact is valuable to feminist theory because it argues for a more dynamic, non-dualistic, and complete account of the body. According to Wilson, "close observation of these data finds not biological determinism but biological overdeterminism" (128). Indeed an over focus on the brain is something Wilson finds particularly counter-productive: "the biological disintegration of mood is a breakdown not of

the brain *per se*, or of the liver or the gut—it is a breakdown of the relations among organs. The pharmaceutical treatment of depression has to be the management—not of a place or a centre or even a neurological pathway—but of an organic capacity to connect" (130). Of course, a strong belief within feminist theory is that psychopharmaceuticals are not being effectively administered, and that a variety of political, cultural, and societal factors cloud the issues, which causes many to remain dubious about the efficacy of such treatments. While Wilson does not deny these statements, she holds a firm conviction that "effective political engagement with the contemporary life sciences requires ongoing intimacy with their data" (130).[23]

Wilson's point in providing, on numerous occasions, the potential benefits of biological data, in spite of the resistance to it, is that a current anti-biologism in theory has outlived its function. Lisa Weasel sums up this point: "In recent years, feminist forays into the natural sciences have yielded an expansive body of work, ranging from deep-seated critiques of fundamental concepts and practices in the sciences to epistemological reshaping of how scientific knowledge claims might be constructed and judged." However, what is missing is the understanding that "science needs to be viewed as far richer than merely a detached, objective reflection of a singular 'natural' reality" (27).

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[23] Engagement with the work of Charles Darwin is another route Wilson suggests as being of potential critical value. Her essay "Biologically Inspired Feminism" engages Darwin's work with barnacles to problematize ideas of "perversion against nature," showing that this work renders "cultural and social guises of queer less familiar and more captivated by natural and biological factors" (284). See also Chapter 4 of *Psychosomatic*, "Trembling, Blushing: Darwin's Nervous System," which examines how involuntary reactions suggest an interrelationship between psyche and soma, and Chapter 5, "Emotional Lizards: Evolution and the Reptilian Brain," which explores that idea of non-genetic inheritance and its implications on the model of the brain. Both of these chapters work with Darwin and evolutionary theory to further problematize mind/body dualistic frameworks. Other feminist authors also suggest that benefits for feminism can be found in evolutionary theory and the work of Darwin. See for example Elizabeth Grosz's *The Nick of Time* (Durham: Duke UP, 2004), which explores temporality and being, and concepts of life and evolution, in the works of Darwin, Nietzsche, and Henri Bergson.

Conclusion

Freud's work on memory creates an image of the human mind that is physically "written upon" by the experiences that affect us. This image stands in contrast to a more common view of memory as something without place or time that does not have the power to bear significant affect upon the biology of our bodies. In light of PTSD, or "war neurosis," Freud's image of memory suggests physical scarring upon the psyche as the result of the terror of war or other traumatic events. Such a view counters opinions that traumatic events can and should be easily overcome and can work to resist the stigmatization that can be associated with PTSD.

Freud's case studies suggest a treatment of mental health issues that is aware of the body of the patient. In Wilson's reading, these case studies prompt us to ask questions of biology, about how conversion can create bodily symptoms. They also compel us to consider the nature of depression outside the central nervous system. Beyond the case studies, Wilson's work on depression creates an image of depression in which the tolerance of our neurological matter is weakened by stress and traumatic events. Furthermore, as Wilson shows, critical theory has moved beyond a need to resist or ignore the data and theories of biology. This may not mean that such research is free of essentialism or patriarchy; however she tries to show that resistance to biology can create the very dualistic frameworks that critical theory often strives to avoid.

A close reading of Freud and Wilson's work creates a model on which to view mental health issues. These issues are often viewed from a dualistic framework that separates mind (or brain, or central nervous system) from body (or soma, or peripheral nervous system), and that

presupposes the dominance of the mind over the body. In the models suggested here, it is the interworking of various systems that is important; such models ask for solutions that look at an individual from an embodied point of view, and show the dangers of not doing so.

Chapter Four

Dorsality

David Wills, scholar, academic, and critical theorist, has proposed a new way of looking at biological life and its relationship with technology. His writing suggests an original technicity, or automaticity, at work at the origin of the human species and at the origin of biological life itself. Wills's work challenges common perceptions of our understanding of both biology and technology, and blurs any clear distinction between the two. His work is applicable to any discussion of animal life—human and otherwise—particularly in the case of ethics. In the work of René Descartes, animal life is seen as entirely mechanical; animals are only machines. Today, farm animals are increasingly subjected to biotechnologies and seen again as machines for the production of products and profits. Wills's work, however, problematizes a view of animal life as human controlled biotechnology. His views challenge the idea of animal life as technological, and go beyond this to challenge the idea that humans are masters of technology. This challenge occurs not through a concrete separation of the biological and the technological, but through a re-orientation of the two, such that there no longer remains any dualistic life/death, biology/technology, or organic/inorganic separation.

This chapter proceeds through an analysis of four major themes that occur in Wills's work in relation to life and technology, themes that he has elaborated in a number of texts, but particularly in *Dorsality.*: the first theme is *articulation*, the technological movement that begins in single-celled organisms; second is *prosthesis*, a technological "limb" on a biological body; third is *dorsality*, the "turning-back" or "turning-to-the-back" that exists as a movement found

at the origin of our species, a movement that relates to both *articulation* and *prosthesis* and that turns humanity into "something technological"; fourth is *technological* (or "machinic") *life*, a theme that, again, relates to *dorsality*, and that leads to a theorizing of all sexed animals as defined by an originary technicity.

Articulation

Wills's views on technology are intimately tied to his notion of articulation. It is through articulation that he is able to most create a concept of life as innately technological. For Wills, the act of articulating is in and of itself technological, a movement that is shared by all life from its simplest forms. Wills does not develop this concept to the same level of detail as the others explored in this chapter; despite this, articulation relates crucially to the themes that follow it.

In Wills's view, there is technology as soon as there are limbs, and thus movement of limbs. The movement of any limb is articulation, and this movement is an inherently technological act (*Dorsality* 3). Furthermore, anything animate becomes technological by entering into a prosthetic articulation with whatever it fashions outside of itself. This fashioning of tools, which can be seen most strongly in primates, is a notable technological feature that humans exhibit in a particularly visible manner (*Dorsality* 3). Because of this, Wills states that, "we would have to think any relation or articulation itself [. . .] as constituting an originary rupture that is itself technological or at least technologizing. Rupture, non-intactness, supplementation, prosthesis are the facts of life" ("Dorsal" 11).

The movement of an exterior limb functions as the most obvious example of articulation by living beings; however, Wills claims that it is important to recall that the mind too is part of

the body, and thus it too can articulate. With this understanding, the mind can be seen to be just as physical, mechanical, and technological as other any other part of the body (*Prosthesis* 27). According to Wills, this can be a beneficial way to look at the mind because, "the more mechanical the mind is thought to be, the less viable becomes the distinction between mind and body" (28). This non-dualistic approach promotes a view of the human that lacks any clear separation between mind and body.

The articulation of the human body constitutes a strong example of Wills's concept, but his concept relies on the notion that such an act is not specific to human animals alone. Rather, articulation occurs in all animate matter from the simplest to the most complex. Even the single-celled protozoa articulate through the use of their pseudopodia. As such, even the most basic of animate beings can be considered innately technological. To understand this, I return, through a reading of Wills, to Freud's analogy of the amoeba.

In "Order Catastrophically Unknown" Wills discusses Freud's "discovery" and "naming" of the unconscious. In particular, he is concerned with the order and classification of life-death and animate-inanimate relations. This is largely because, in psychoanalysis, Freud's unconscious is in "constant morphological and categorical flux" (22). It has been well established that in Freud's work on the unconscious there is a tension between Freud's earlier work in the medical sciences and his later work in psychoanalysis; "The presumption is that in developing, or redeveloping, a theory of the instincts, which, 'from a biological point of view' appear as 'a concept on the frontier between the mental and the somatic,' he will be required to hesitate on one side or the other of that frontier" (23). Wills believes that this "stress leads as far as a catastrophic unknown concerning not only the order of cause and effect, but more particularly

the order of life itself" (23). In *Beyond the Pleasure Principle* Freud resolves some of this tension with the discovery of forces that operate in living matter, but that are distinct from it.

Important in Wills's analysis of Freud at this stage is his discussion of Freud's analogy of the amoeba—which was explored in the previous chapter of this thesis—and how it provides an example of articulation in a simple form of life. In James Strachey's view, pseudopodia, a "protrusion" used by an amoeba, are a favorite analogy of Freud's ("Order" 27). Wills provides here an example of such an analogy from Freud's *Introductory Lectures:*

> Think of those simplest of living organisms [the amoebas] which consist of a little–differentiated globule of protoplasmic substance. They put out protrusions, known as pseudopodia, into which they cause the substance of their body to flow over. They are able, however, to withdraw the protrusions once more and form themselves again into a globule. (quoted in Wills, "Order" 28)

Wills sees the use of the pseudopodium as introducing psychic operations to the simplest of animal life. This would not occur as a fully functional consciousness, but rather as a basic response to stimuli, and "it is that basic response to stimuli, which Freud consistently believed to produce bio–psychic operations, that is being staged in the case of the pseudopodium. For science informs us that what motivates an amoeba to put out a pseudopodium, [. . .] is either a 'desire' to move, or capture food, or both" (29). Therefore, in Freud's terms, this occurs as flight from some external stimulus, or a response to an internal stimulus, such as hunger. This is a striking point for Wills because the pseudopodium cannot be distinguished as either internal or external. Wills, paraphrasing Derrida, explains that,

> it is something of a *chiastic exvagination of the edges*. It protrudes or projects from the

> cell and so reconfigures it, creating a new external surface and some form of independent appendage, which effectively, or operatively, divides the cell into main body and single limb. Then the amoeba reforms, cannibalizing or incorporating, perhaps introjecting itself, in any case reintegrating its previously externalized part—the pseudopodium—back into its whole (29).

In scientific terms, the pseudopodium is temporary, and is thus not a structural metamorphosis. However, its occurrence has certain similarities to cellular division and replication, although these serve different functions. This does imply that the instincts in which Freud was interested may have existed from "the very first pseudopodial impulse." Wills notes that the "*pseudo–podium* is literally a false or fake foot [. . .] I might, however, be forgiven for calling it a *technopodium* and recognizing in it a form of the originary techno–prostheticity of the organism, *the fact of its always already articulating itself within itself in order to reach beyond itself*" ("Order" 30). His point here is that some form of articulation is always necessary for an entity to interact with the outside world, or whatever is foreign to it.

Every living thing, "must harbour within it what might be called its *articulationality*," which Wills explains as a capacity to alter its form through some manner of movement to prepare it for, or react to, contact with another body. Here the "formal alteration is understood not to take place on the body's exterior surface without also reconfiguring, bending, or articulating its interior. [. . .] The artificiality of articulationality, then, would be understood as co–extensive with the naturality of the living organism" ("Order" 32). With the articulating movement, a cell becomes both cell and pseudopodium; this allows it to form a relationship, based on articulation, between it and its environment, and even after the pseudopodium is

reconstituted into the cell, the cell retains its "articulational relation" ("Order" 32). Wills is suggesting that the model of the pseudopodium emerges to explain psychic operations and their relationship to instincts and the articulations between interior and exterior and between animate and inanimate that result from these instincts. This forms the basis for a concept of life that Freud contends with frequently following the writing of "On Narcissism" and *Beyond the Pleasure Principle* ("Order" 32).

Wills extends his concept of articulation beyond animate matter. Much of Wills's work occurs through readings of his thematic concepts within social and political settings. A notable example, in the case of articulation, is the idea that language itself becomes technological through its articulations. In this setting Wills's claim is that, "Language in general is giving itself over to its own type of mirror-play, to the repeated alliterative and assonant effects that are readily recognized as its poetic resource but which can as easily be understood as effects of mechanicity and automatism" (*Dorsality* 31). In Wills's view, "the movement proper to thinking, that which would allow us to understand the essence of technology, [. . .] is 'no mere shift of attitude' but a change from 'one thinking to the other' that takes place by means of a 'step back.'" In a certain sense, modern technology is able to hold sway by commandeering formalized language (32).[24] Viewing language through articulation makes it into a form of technology through which we are able to interact with what is exterior, interact with others.

What is seen in this theme of articulation is a natural, and indeed necessary, technological ability that exists in animate life. At the heart of this theme is the idea that

[24] See also Chapter 4 of *Dorsality*, "A Line Drawn in the Ocean: Exodus, Freud, Rimbaud," wherein Wills's outlines are readings of articulation in national identity. Herein, this identity is seen as largely overwrought by "rhetorical machinery" which inscribes and erase. In this sense, national identity is technological (106).

technology is not some unnatural creation by humans, but rather a biologically inscribed function. This concept reorients our relationship with what is exterior to us, as a necessary technological component to our interaction with the exterior world. This can be seen, for example, in our use of language. Articulation forms the foundation of Wills's thinking on technology, and its importance can be seen in each of the themes that follow.

Prosthesis

Wills's next theme, prosthesis, most prominently explored in his book *Prosthesis*, is largely dependent upon the former theme of articulation. This concept begins with the image of a mechanical device attached to the biological human body (such as the wooden leg that Wills's father used), but expands into a concept of a technological bridge attached to biology that closes the gap between life and technology and further works to problematize any clear distinction between the two. A prosthetic, in Wills's view, is thus a supplement that is both biological and technological, and it is difficult at times to tell from which it has its origin.

Wills's theory has a wide variety of implications; as he explains, prostheses are about "placement, displacement, replacement, standing, dislodging, substituting, setting, amputating, [and] supplementing" (*Prosthesis* 9). In essence, Wills hopes to establish this concept as being concerned primarily with the relation between two distinct others. Prosthesis can take many forms and functions beyond the technological device used by humans as a substitute for a biological limb. Prosthesis occurs as a form of transfer, such as that found in translation and quotation (12). It also functions as an otherness that the body must carry with it (13). In a sense then, prosthesis is a joint articulation between one and an other; it is an articulation between

two separate concepts or things that forces them into a technological coupling (15). Because of this, the concept of prosthesis allows for a rewriting of relations (18). Perhaps most useful in the concept of prosthesis for Wills "is the discovery of an artificiality there where the natural found its priority" (16). The concept of prosthesis breaks down the priority that is usually assigned to things termed "natural," by blurring the lines between the natural and the artificial.

Prosthesis is explained and explored by Wills through a number of societal and political readings of the concept. These readings explore the concept as a both a physical object and as a function of the human and of human society. A noteworthy example of this is Wills's connection of language with prosthesis.[25] Already explored above is the articulating nature of language; however Wills works through Derrida's writing to further show the prosthetic nature of language. He explains that a primary connection to language can be found in quotations. Prosthesis begins in quotations, "with a piece of text accompanying the discomfort of an amputee father, and with the difficulty of rigorously separating one from the other" (*Prosthesis* 9). A quotation occurs as an excision "in its etymological sense of quota or part belonging to each of many" (9). Looking to Derrida, Wills suggests that prosthesis is about inhabiting two

[25] Wills explores prosthesis in human culture and society in a variety of other examples. Most of the book *Prosthesis* is taken up with such explorations or readings of this theme. In Chapter 2, Wills reads prosthesis into artwork. Here prosthesis becomes a means of measuring the distance between self and otherness, as a way of dividing difference. In Chapter 3, Wills reads William Gibson's *Neuromancer* to explore the idea of biology as software, and an increasingly prosthetic future. Chapter 4 looks to Freud and the natural origins of prosthetics. In Chapter 6, Wills reads medieval rhetoric and medicine and how both torture and medical devises both functioned through prosthetic means. In this reading, medicine was feared because of its prosthetic balance between life and death. Beyond *Prosthesis*, Wills returns to this theme in human society in Chapter 3 of *Dorsality,* "No One Home: Homer, Joyce, Broch," where he explores the prosthetic nature of the home as a form of artificial womb. In light of the home as womb, Wills explains that any road back to the "natural origin or womb" must lead via "various prosthetic constructions or artificial contrivances." Furthermore the child in the womb is already a prosthesis on the mother and vice versa: "The child, or humankind in general, would thus be born into exile with respect to its own naturality, always already a prosthesis, always already biotechnology" (68).

opposites simultaneously (133), for example: amputation and addition or artificial and natural (135). Translation exists too as a form of prosthesis in that writing occurs in two languages at once. In language prosthesis can also occur through both a mention and use of an object word (289, 309). When this is extended at length, a text could be conceived as prosthesis.[26]

The idea of prosthesis makes dualistic thinking difficult. Prosthesis creates a heuristic bridge that spans the gap between opposites. Because this bridge is simultaniously both one and the other of a given set of opposites, it exists outside of simple classification. Prosthesis, as a means of thinking relations, promotes a more embodied framework. As such, simple distinctions such as biological and technological or animate and inanimate become difficult to uphold. The benefits of this theme to any theory of embodiment can easily be established, as the concept forces us to rethink simple dualistic classification as they apply to individuals, culture, and beyond.[27]

Dorsality

One of Wills's most thought provoking concepts is dorsality. This concept, initially seeming to be a new way to view humanity's relationship with technology, is more complex than it may at first appear. Benefiting conceptually from both prosthesis and articulation, dorsality is both a new way to view all life in relation to technology, and a means of resisting the view that

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[26] Exploring the prosthetic nature of language is a large point of concern to Wills within *Prosthesis*. Three of the book's nine chapters cover this topic. See chapters 1, 5, and 9.

[27] While an exploration of prosthesis in disability studies is beyond the scope of this thesis, it is important to note that Wills's work has been influential and beneficial to this area of research. See, for example, "The Prosthetic Imagination: Enabling and Disabling the Prosthesis Trope" by Sarah S. Jain (*Science, Technology, and Human Values* 24.1 [1999]: 31-54. Web. 3 Mar 2014) and *Prosthetic Culture: Photography, Memory and Identity* by Celia Lury (New York: Routledge, 1998. Web. 3 Mar 2014).

mankind is master of all technology it would seem to create. Based on the function of the spinal column as technological, dorsality creates an image of technology that precedes life and yet is hidden from it.

According to Wills, the upright stance inaugurated a new relationship between humans and technology; it caused a “turn” in the human species into something technological in a new way. As per articulation, the very turn itself implies something technological, a “technologization” of humanity. This technological movement appears to Wills almost as if the anthropoid, choosing tools, turns its back on what is behind it. As such, the upright stance inaugurates a radically new relation of the human to technology (*Dorsality* 3). With the Earth as exterior, this turn constitutes a deviation or departure into the technological (4). In Wills's view, every turn is a turn around, a turn of the back. It is from this act that the human adopts “dorsality,” which Wills says “will be the name for that which, from behind, from or in the back of the human, turns (it) into something technological, some technological thing” (5).

This concept allows Wills to explore in detail the relationship that humanity has to technology. He explains that “a technology that defines and so produces the human, cannot be part of the human self-image; it comes at the human from behind, is already at its back [. . .] *in* its back.” This dorsal technology must therefore refer to the vertebral column. Wills believes we as humans forget that technology is literally in the back, the spine (*Dorsality* 9). This linking of dorsality to the human spinal column allows him to conceive of technology as a natural biological development present in the evolution of the human species. Here, technology becomes as natural and innate as any other human biological feature.

According to Wills, dorsality becomes a useful way to work through relationships with

new, “post-machinic,” technologies. In an interview on the topic, Wills explains that his inspiration behind the development of this concept was "to develop a different sense of, or ‘figure’ for, the body’s prosthetic articulations with whatever is presumed to be exterior to it (different from something like an artificial limb, for example)” (“Dorsal” 5). The problematizing effects of this concept occur through an idea of “dorsal space” as an unseeable area to, or in, the back: “[dorsality] would open a space that is more difficult to negotiate, for the body and for the human, because it is out of reach. Or, more precisely out of sight, in every sense unforeseeable.” Because this technological space escapes the human grasp, and indeed human knowledge in general, dorsality becomes useful for Wills “to try to work through our relation to new, [. . .] post-machinic technologies” (*Dorsality* 5).

In light of the unknowable and ungraspable nature of the dorsal turn, it can be viewed as a resistance to any technology that defines itself as straightforward. The idea of the dorsal questions humanity’s technocratic faith and its control. It questions the notion that humanity wishes to control all it produces, by putting into question what is a production of the human. Because of this, it becomes important to understand that not every technology should be seen as advancement (*Dorsality* 5-7). In his interview, “The Dorsal Turn,” Wills explains that “new technologies [. . .] are less visible; we don’t see them move; we can’t perceive or often understand their joints or conjunctions. [. . .] Things move more radically out of sight.” This has a strong effect on the predictability of technological inventions:

> technology has always functioned as a paradoxical combination of what is programmable [. . .] and what constitutes invention, the advent, production or creation of something unexpected. [. . .] Again, the chance or chances of dorsality operate most

> obviously with respect to the particular form of scientific and technological determinism that we recognize today, in order to emphasize the possibilities of unpredictability, of invention, of surprise. ("Dorsal" 5)

In a certain sense then, the back of the human, as something unseeable, acts as a form of resistance to the forward momentum of technological advances. This is because, as Wills explains, it is not possible to resist the forward march of technology by presuming to control any intervention of chance. As such, dorsality would refer to strategies that function "from behind" ("Dorsal" 6-7). These difficulties that arise from the intervention of chance force us to admit that technology can never be "programmed," or made to function in a way that foresees eventualities. With this in mind, the idea of surprise and unpredictability become important facets of dorsality.

Wills reads this unpredictability of technology through the work of Heidegger, by pointing out that humanity does not guide technology before it; rather technology is revealed. This revealing (*altheia*) always involves an element of surprise, and therefore technology as revealing leads to a necessary turn to the unexpected (*Dorsality* 25). According to Heidegger, in Wills's reading, all productive manufacturing is made possible by revealing; as such, "the human who 'challenges' to deliver for technology is himself already challenged in the same movement. This means he is motivated and mobilized, as if from behind, and so *technologized* himself, becoming but a signifier within the technological chain" (25). Any interaction humanity has with technology causes it to become technological to some extent.

Wills makes another important observation from his reading of Heidegger: the hand that is dedicated to labor and property acquisition can be distinguished from the automatic

movement of a machine. This is thanks to a softening wherein grasping is always a form of groping that fails to eliminate uncertainty. This means that any form of technology as invention retains the property of accident, "it arrives through a type of blindness or groping in the dark" (61). There is always a sense of the unseeable or unforeseeable to technology, and as such, "perhaps thinking a type of *inanimation* [. . .] before or behind the human is the ultimate ethical challenge, forcing us to realize that we are not completely human and can never become so." This allows for a rethinking of the relationship between humans and technology, animate and inanimate, and "of everything we understand as experience of the inhuman" (61-62). Technology is inherently unpredictable in any sense of its future relationship to the human; this is the lesson that dorsality seeks to teach.[28]

Based in the concepts of articulation and prosthesis, dorsality explains the unique relationship that humans have with technology. Wills differs from common views that humans are masters and creators of technology; dorsality establishes a relationship between humans and technology that is largely hidden, unseeable, and thus uncontrollable by human hands. Dorsality problematizes any not only simplistic views of technology, but also any dualistic separation of technology and biology. This becomes the basis of Wills's final theme of technological life.

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[28] As with the previous themes, Wills sees political and ethical applications for dorsality. See, for example, Chapter 6 of *Dorsality*, "Revolutions in the Darkroom: Balázs, Benjamin, Sade," wherein Wills explores dorsality as a form of resistance to political injustices, particularly in relation to propaganda and sexuality. Other recent ethical possibilities of this theme are in Queer Studies, as suggested by Fintan Walsh in "A View from Behind: Matrixiality, Masculinity, and Queer Theory" (*Studies in The Maternal* 1.2 [2009]: 1-6. Web. 11 Feb. 2013).

Technological Life

Through the past three themes, Wills constructs a final theme. This is the theme of life as inherently technological; this is a form for all life that is, by its biological nature, technological. The basis of this concept should already be evident in the previous three themes, as each one works to blur any firm separation between technology and biology. It is this concept that also provides the strongest resistance to any view of humanity as controllers and producers of technology, including the biotechnology that occupies much of our relationship to other animals.

Wills contends that there is a growing anxiety over what is seen by many to be an increasingly bioengineered future. People fear the incursions of machine into human.[29] Taking account of technology that exceeds the conditions of its production, which mutates like viral life, serves as a contradiction to the idea of technology as production and creation by human hands. As this becomes clear, it becomes no longer possible to presume that every technology is an advancement, and we are forced to question the human desire to control everything that we seem to produce (*Dorsality* 6-7). In this way Wills proposes an idea of technology that constantly redefines the human, but at a point downstream from the technology's time of production, contrary to the common view that discovery and invention are thought of as being ahead, or forward progress (*Dorsality* 9). With this in mind it becomes possible to understand Wills's assertion that technology relates as much to the past as it does to the future. Its relation

[29] Wills is by no means the first to theorize on such cyborization on humanity. An early an insightful work on this topic, with a biological basis, was provided by Donna Haraway in her influential essay "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," collected in *Simians, Cyborgs, and Women*. For more resent work on this topic see, for example, Scott Lash's "Technological forms of Life" (*Theory, Culture & Society* 18 [2001]: 105-120. Web. 11 Feb. 2013).

to past occurs as a function of memory. Technological artifacts function as archives and memory banks. Whatever is produced remains, as a non-biological remainder, as a memory trace. In the present, we have technologies of information that allow for an industrialization of memory. Therefore, it is Wills's opinion that, "If technology is a matter of exteriorization [. . .] then it is also a matter of archivation: what is created outside the human remains as [. . .] the very record or archive" (10). According to Wills, "It is the necessary structural possibility for memory [. . .] 'to be triggered,' and to disrupt the forward momentum of time" (11). This connection between technology and memory becomes important to Wills's point, because in looking back we see the origin left behind and motor that propels us towards the future (16).

In this present moment, Wills suggests that we are becoming less mechanical and more biotechnological. We are beginning to exist beyond the confines of a traditional concept of any human-mechanical relation (*Dorsality* 4). He believes that this forces us to question the relationship between biology and technology. Indeed, in response to the notion of a relation between *bios* and *tekhne*, Wills believes that to presume one over the other cannot be done, except with a metaphysics of creation. Such metaphysics would presume a creation devoid of contrivance. It would require one to resolve the paradox of a divine and natural technology that would precede *bios*. However the other side of the presumption would be troublesome too; non-creationist descriptions of human evolution fail if they privilege the organic to the extent that they fail to acknowledge the "becoming-technological" or "biological self-organization or self-programation" at work, when ignoring the originary mechanics at work in the evolution of the species. The necessary conclusion is to not privilege organic over mechanical, or vice versa, but to argue against any purity of either (4-6).

As Wills notes, reading Derrida, “The machine is death” (“Blushing” 37). Here, the understanding of the mechanical is that it must be wholly inanimate, and therefore lifeless, dead. The implication here is that animals, as dead machines, are not deserving of the treatment accorded to human life. However, Wills notes that there is no way to separate human life from animal life because this would mean a disturbance of the limits between life and so-called technological non-life (38). According to Wills, "Derrida will later emphasize techniques of domestication and domination, agricultural industrialization, genetic and other experimentation, which finally risks adding up to something comparable to a genocidal technology of death to the animal" (40). Derrida also argues, according to Wills, that shame and technology, concepts often used to separate humans from other animals, are no more pure dividing lines to distinguish humans from animals, than are any of the other criteria philosophy has imposed. Wills believes that not only the human animal, but also many other animals, maybe even every sexed animal whose “automaticity includes mating,” could be defined as originarily technological (40). In this sense, through reproduction, “mating becomes a technology, however natural we still might consider it to be. [. . .] And no doubt the same could be said for any ruse whatsoever by which an animal does other essential functions” (40).

Wills attempts to further connect technology, life, and death in “Order Catastrophically Unknown” through an exploration of Freud’s death-drive. This drive is developed by Freud in *Beyond the Pleasure Principle* as a means of solving the problems with Freud’s previous drive theories. Wills explains that

> once the instincts are understood to function in competition one with the other, once they are defined as those of life and death, and once death is conceived of as a return to

> a prior, pre–animated state, then the distinction between living substance and instinctual force within it will become a problem whose resolution will necessarily involve something of a search for a source or origin of life (23).

Despite this revelation, by the end of *Beyond the Pleasure Principle*, Freud still seems to hope for an explanation of this force from a chemical or biological perspective. Biology would therefore be "capable of replacing the prosthesis of metapsychological suppositions with scientific fact." This "catastrophe of the unknown concerning the order of life" is derived directly from Freud's understanding of the death-drive (24). The understanding of life as something that occurs from inorganic matter takes on a new view with Freud's understanding of the "intentionality" of inanimate matter (24-25).

Prior to *Beyond the Pleasure Principle,* Freud's work in *Project for a Scientific Psychology* had the goal to create a "natural science" out of psychology; "To that end," Wills contends, Freud developed the principle of "neuronal inertia," which stated that neurons tend to a state of rest. The resulting hypothesis is that an organism will withdraw from external stimuli by means of motor functions, but will be forced to deal with internal stimuli such as hunger, respiration, and sexuality, in a different manner, "flight not being an option in such cases." Over the course of Freud's work towards this goal many ambiguities were introduced, but these were largely removed with the introduction of the death-drive ("Order" 26). Eventually the contradictions that Freud is forced to deal with lead to a "logic of a return to the inanimate state via the death–drive" (32). Wills believes that these contradictions forced Freud to accept contradiction as an article of faith:

> it means abandoning the presumed homogeneity of the organism [. . .]; it means

> conceiving of life in the form of an articulation with its outside, with some other life but also with some other than life, with *pseudolife* or nonlife, [. . .] and it means conceiving of life as an intractable inextricability of animate and inanimate that one can try to theorize as coexisting life and death instincts, or simply lifedeath, whose origin is a nonorigin in the sense of the failure of logical reasoning to ascribe a simple originating priority of one over the other (32-33).

By reading into the analogy left by Freud as Wills does, we are forced to question dualistic thinking relating to life. Freud's lifedeath-drive, in Wills's view, breaks down clear separations between life and death, organic and artificial, and animate and inanimate.

Because life begins as an interruption of the inanimate by the animate, it is not possible to conceive of something animate without first identifying the inanimate. Even in scientific terms it is difficult to define where the animate begins. This relation between the two leads to Freud's "contradictorily conceived lifedeath–drive" ("Order" 33). Returning to the analogy of the amoeba, Wills wishes to focus on its interesting property as a "a sac that forms both an ectodermal crust that becomes or allows for consciousness and a protective shield to save it from an overdose of stimuli, a dead shield that has ceased 'to have the structure proper to living matter [and] becomes to some degree inorganic'" (34). This initial analogy, according to Wills, "serves only as a prelude to a discussion of how physical traumas and traumatic neuroses represent breaches in the protective shield, which is in turn a prelude to positing something independent of, and more primitive than, the pleasure principle, namely the repetition compulsion" (34). Since, in Freud's opinion, consciousness owes its development to an inorganic external shield, "indeed to a sacrifice of life" as the outer layers of the shell, by their

deaths, have saved the lower layers from destruction by stimuli. According to Wills's reading, consciousness is understood to come about as the result of an alternation between highly animate and inanimate matter. As the brain is susceptible to stimulation, it must seek a means to manage the volume of stimuli, which occurs in two ways: "by differentiating itself as an organ for receiving those stimuli, and so producing the central nervous system; and by forming a protective crust, whose 'elements could undergo no further permanent modification from the passage of excitation,' giving rise to consciousness" (34).

This "prosthetic helmet," as Wills calls it, is suggested by Freud as comparable to the initial force that produces life out of inanimate matter. In Wills's reading, "life that is total exposure to stimulus retreats into itself and preserves itself thanks to a partial, *inanimating* sacrifice of itself." In the case of the death–drive, "an originary inanimate becomes animated and thereafter seeks to return to its prior state, whereas in the case of the formation of consciousness the animate produces an inanimate protective crust in order to remain more controllably animate" ("Order" 35-36). As such the death-drive is no more than a "pseudopodial" principle: "in order for there to be life, in order for the self to be, it must be, or begin to be, to project in however rudimentary a form, some other; it must begin to come back round to touch, face, or caress itself from an outside itself within itself" (37). Wills concludes that "the infolded death–drive, a pseudopodial hypothesis or hypothetical pseudopodium, projects from every living organism from the first; from the prokaryote as much as from the amoeba. It divides it in its very constitution and deforms it irrevocably" (40). This understanding then, further questions separations of organic and inorganic.

Drawing on the previous themes of articulation, prosthesis, and dorsality, Wills's

concept of technological life works to upset dualistic frameworks relating to technology, machines, death, and the inanimate/inorganic. This concept breaks down separations that see humans as biological/animate and animals as machinic/inanimate. Under Wills's concept, all life is technological by its very nature.

Conclusion

Wills's major themes function together, pointing to a conclusion that a new way of looking at the relationship between technology and biology needs to be considered. This new view needs to be one in which the two are inseparable. In the case of articulation, movement that is common in all life becomes a technological feat. In this view, technology becomes a biological process in of itself. Through prosthesis, dualistic categorization is problematized in favor of a prosthetic bridge that spans any gap between two opposites, most notably technology and biology. This provokes a rethinking of any firm separation of opposites. With the theme of dorsality, technology is thought of as hidden within "the back" of the human subject. This technology from the back resists any idea of technology as a controlled forward movement, and any concept of life, human or otherwise, as purely animate. With this in mind, it becomes no longer possible to view humans are masters of the machine. Finally the overarching theme of technological life further resists any dualistic separation of technology and biology by positing a technological nature to animal subjects, and the human psyche itself.

Such a view can provide novel ways of looking at the workings of human society and can suggest a different means of our relationship with other animals. In *Critical Animal Studies: An Introduction*, Dawne McCance suggests that Wills's dorsal turn can be traced to a point before

the human species turned its back on its animal nature, and that doing so may provide an ethically resourceful way of looking at animal life (145). This possibility, and the others that Wills suggests, could have great potential for dealing with animal life and a future of increasingly biotechnological realities. Some of the ideas Wills presents could be used as a form of resistance to changes that are already underway.

Conclusion

Critical theories of embodiment provide a means of rethinking dualistic frameworks that can be linked to issues within social, religious, political, and academic settings. These theories, as in the cases explored throughout this thesis, can be strengthened through a connection to the concepts, theories, and data found within biology. Derrida's work draws on the concept of autoimmune illness to develop his own concept of autoimmunity, which breaks down self/other, us/them, and inside/outside dualistic structures. Freud's work finds memory to be corporeal and embodied, while Wilson's reading of Freud embodies depression. Their work breaks down mind/body dualism, problematizes separation of the body's organs, and, through Wilson's work, attacks dualistic separations of nature/culture and biology/theory that have come to inhabit some academic circles. Wills's theories and themes break down separations of technology and biology. His work calls into question ideas of human dominance over technology as well as life/death, organic/inorganic, and animate/inanimate separations, which seem to come all too easily to us. These three instances of embodiment and the dualisms they work against are far from a complete exploration of the problems dualism can create or the current and possible means of using biology to strengthen theories of embodiment, yet such an exploration should suggest that interdisciplinary connections between critical theory and biology can generate fruitful discussion when carefully navigated.

In the introduction to this thesis I explored the damage that dualistic human/animal frameworks can have upon non-human animal life. Critical animal studies is now a significant area within critical theory that hopes to tackle this "animal question" and generate meaningful

solutions to this issue. However, as I explored the major approaches that can be found within critical animal studies, Peter Singer's utilitarian approach and Tom Regan's rights based approach do not escape the dualistic frameworks that seek to separate humans from animals. Derrida's own work regarding the animal question provides an example, among a variety of others, of an alternate approach. Not only does Derrida suggest that the dualistic human/animal framework exists as the basis of our current treatment of animals, but his work seeks to shift our connection to animals in a non-dualistic way. Before some final concluding remarks, I briefly explore Derrida's response to the animal question.

Derrida's Response to the Animal Question

Derrida's goal in "The Animal that Therefore I Am"[30] is to speak about the human relationship with other animals. He does this initially through reference to nudity and nakedness. This theme is tied to the human realization of its nakedness in Genesis, which becomes part of what is said to separate humans from animals; however, this theme also relates to the choice of language Derrida uses here, his use of "words that are, to begin with, naked, quite simply, words from the heart" (1). This address is thus Derrida's honest attempt to speak on "'the crossing of borders between man and animal. Passing across the borders or the ends of man I come or surrender to the animal, to the animal in itself, to the animal in me and the animal at

[30] Derrida's work on the animal question stretches across a number of works, and so this brief exploration is unable to touch on all works on the subject. The essay here, collected in *The Animal That Therefore I Am*, is Derrida's best-known work on the subject. See also Derrida's other essays within the same book, and other work such as Derrida's and Elizabeth Roudinesco's "Violence Against Animals" in *For What Tomorrow?* (Trans. Jeff Fort. Stanford: Stanford UP, 2004. 62-76. Print). Dawne McCance, in *Introduction to Critical Animal Studies*, provides an introduction to this topic that stretches across a number of works, while Matthew Calarco, in *Zoographies*, provides a detailed history of the philosophy of the animal question in the works of Heidegger, Levinas, Agamben, and Derrida.

unease with itself" (3). Derrida's hope is that by breaking down the barriers humans have erected between themselves and other animals, a "crossing of borders" will become possible, and we will be able to understand and feel compassion for other animals. At its core then, Derrida's goal here is a breaking down of the dualistic framework that separates humans and animals.

To begin, it is important to briefly understand Derrida's view of the human relationship with animals. He contends that for the last two centuries we have been involved in a transformation in our relation to animals, which has recently occurred at an alarming rate: "Far from appearing, simply, within what we continue to call the world, history, life, etc., this unheard-of relation to the animal or to animals is so new that it should oblige us to worry all those concepts, more than problematize them" (24). This transformation, according to Derrida, has occurred across all of our treatments of animals in that our traditional forms of interaction with animals have been rewritten in the past two centuries "by the joint developments of zoological, ethological, biological, and genetic forms of *knowledge*, which remain inseparable from the *techniques* of intervention *into* their object, from the transformation of the actual object, and from the milieu and the world of their object, namely, the living animal" (25). Our developing interaction with, and knowledge of, animals has allowed us to transform them into objects in a way that has previously been unheard of. This occurs to such an extent, Derrida maintains, "that men do all they can in order to dissimulate this cruelty or to hide it from themselves; in order to organize on a global scale the forgetting or misunderstanding of this violence, which would compare to the worst cases of genocide" (26).

Derrida's response is to prompt us to reconsider "the animal," so as to make it no longer possible for us to hide ourselves from the cruelty being enacted. Realizing that "the animal" is itself the very idea of "the other," Derrida asks whether "the animal has been looking at us?"(3). He recalls a common scene for him in which he finds himself caught naked before his cat, "in front of the insistent gaze of the animal." This causes a strange feeling for Derrida: "It is as if I were ashamed, therefore, naked in front of this cat, but also ashamed for being ashamed. [. . .] Ashamed of being as naked as a beast" (4). It is generally thought that there is a property unique to animals, that distinguishes them from humans, which is their being naked without knowing it: "Not being naked therefore, not having knowledge of their nudity, in short, without consciousness of good or evil. From that point on, naked without knowing it, animals would not be, in truth, naked" (4-5). Yet if this were true, then the idea of feeling ashamed before his cat would be strange indeed. A cat that does not know itself to be naked could not truly know Derrida to be naked either. And yet, as he explains, for man, "knowing *himself* would mean knowing himself to be ashamed" (5).

This idea that the animal sees us, contemplates us, and can even make us feel ashamed, will be a central point of concern for Derrida who, when he sees himself "naked under the gaze of a cat" is given to see "the abyssal limit of the human: the inhuman or the ahuman, the ends of man, that is to say, the bordercrossing from which vantage man dares to announce himself to himself, thereby calling himself by the name that he believes he gives himself" (12). Or, to be more direct, Derrida explains that "The Animal" is only "a word, it is an appellation that men have instituted, a name they have given themselves the right and authority to give to the living other" (23). Furthermore, he contends, men have given themselves the word "animal" in order

to “corral a large number of living beings within a single concept.” They are able to do so because the animal is deprived of language, or so they believe, and therefore cannot name itself (32). And yet, in recognizing the gaze of the animal, Derrida comes to understand that, at its core, what separates humans from other animals is little more than the human decision to call itself different. Only in claiming themselves separate from animals are humans made separate, and as they contend, superior.

In Derrida’s opinion philosophers such as Descartes, who sought to separate man from animal, did not consider humanity from the “*point of view of animals*”:

> They neither wanted nor had the capacity to draw any systematic consequence from the fact that an animal could, facing them, look at them, clothed or naked, and in a word, without a word, *address them*. They had taken no account of the fact that what they called ‘animal’ could *look* at them, and *address* them from down there, from a wholly other origin. (13)

Derrida argues then that it is not necessary for animals to have language, another property often use to separate animals from human, as Descartes does. Animals are capable of addressing us and responding to us through their very gaze, as by other means. In the same way that the human gaze is able to communicate thoughts and emotions to other humans, so too can the gaze of an animal.

At bottom, Derrid’s concern is with the human treatment of animals. He turns to Bentham, from whom he notes, “the question is not to know whether the animal can think, reason, or speak, etc., something we still pretend to be asking ourselves [. . .]. The *first* and *decisive* question would rather be to know whether animals *can suffer*” (27). For Derrida, there

is no room to doubt the answer to this question. Because animals lack verbal language, however, humans have denied them the right the respond to us, to address us with the issue of their suffering. Humans have denied animal suffering because animals are said to lack human language, and therefore, the rational capacity that inheres in the human mind. In other words, at the root of the horrific treatment of animals today is a mind/body dualism.

Concluding Remarks

Through the works of Derrida, Freud and Wilson, and Wills I have tried to show that dualistic frameworks still prevail today. These frameworks extend beyond popular opinion and everyday thought to infect public policy, scientific and medical research, agribusiness, technological developments, academic scholarship, and beyond. In each chapter of this thesis I have tried to show that these frameworks can have significant negative effects, ranging from stagnation of research and interdisciplinary conversation to the more extreme cruelty currently inflicted on animals. Despite this, strategies of thought have emerged that counteract dualism. These involve concepts of embodiment, such as I have explored, are often best suited to the daunting task of overcoming dualism when they draw research, data, and inspiration from the biological sciences.

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