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Quantum Rhetoric
The Entanglement of Matter and Meaning

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

English

by

Ryan David Leack

September 2018

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Committee Chairperson

University of California, Riverside

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these many influences are my high school English and physics teachers Aimee Ricken, Kurt Olson, and Michael Gross. My English courses have finally coupled with my physics interests, a risky and difficult course of study. Thank you, then, to my high school psychology teacher Mr. Campbell, who impressed upon me the value of risk-taking. I hope I have made clear the intersection of English, physics, and psychology in my approach to rhetoric, thus evincing the impact of my education on my thinking.

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To Xiaoke & Rheya

ABSTRACT OF THE DISSERTATION

Quantum Rhetoric
The Entanglement of Matter and Meaning

by

Ryan David Leack

Doctor of Philosophy, Graduate Program in English
University of California, Riverside, September 2018
Dr. Vorris Nunley, Chairperson

This dissertation develops a *quantum rhetoric*: the entanglement of matter and

meaning, language and materiality, being and doing. Rather than exploring intersections

between rhetoric, philosophy, literature, physics, and the like, I claim that rhetorical

being and practice cut across such disciplines in decisive, generative ways. I stress that

rhetoric—an affective, communicative way of being, doing, and relating in the world, of

acting despite contingency and relativity—underlies much disciplinary (re)volution in the

20th century and beyond. In this way, quantum rhetoric is the marriage of the humanities

and sciences, of language and materiality. Quantum rhetoric overturns the classical

epistemology of language as controllable, deployed, and reflective of reality. On the

contrary, quantum rhetoric is *diffractive*, approaching language through difference and

unpredictability. Here, physics complements rhetoric for three central reasons: *first*, for

its focus on materiality, which materializes rhetoric into bodies and minds in motion,

composed of human and non-human beings, compounds and artifacts; *second*, for its

grounding in uncertainty, rooted in rhetoric's Sophistic origin; and *third*, for its emphasis

on action, doing, and work, mirroring rhetoric's concerns. Rhetoric, in turn, complements physics in three main ways: *first*, rhetoric's focus on affect, effect, and resonance attend to the consequentiality of physics—of entangled bodies in motion—thus humanizing physics and giving meaning to material facts; *second*, rhetoric foregrounds the effects of our symbolic instruments on our relation to the world; and *third*, rhetoric fronts the centrality of language, instrumentation, and symbolic subjectivity, distancing us from our assumptions. Together, rhetoric and quantum physics—*quantum rhetoric*—make central the materiality, uncertainty, and difference in our symbolic endeavors, unearthing a rhizomatic reality: contingent *at root*. We are all, Einstein writes, "non-rigid bodies of reference," and our symbolic systems and ethical practices must be just as fluid, perceptive, and receptive to flux. Applying theory, I envision the university—and first-year writing and critical thinking classrooms in particular—quantum rhetorically, shaping assignments that cultivate *rhetorical being*: a way of life, grounded in quantum rhetoric, which responds responsibly to chance, change, and the unknown, and which *ungrounds* assumptions in pursuit of a more viable democracy.

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INTRODUCTION

RETHINKING THE RANGE OF RHETORIC

This project unites rhetoric and quantum physics as *quantum rhetoric*, insofar as it is only a rhetoric oriented in materiality that can offer the fullest account of, and responsivity to, the entanglement of mind and matter, meaning and materiality. Quantum rhetoric illuminates the construction of self, others, and the future in the irreducible space-time mesh of history, highlighting at the same time the exigency of openness and responsivity to the chaotic, kairotic spaces in which individuals emerge from others, and in which we find ourselves perpetually becoming, contingent on factors beyond our control. Rhetoric is *the physics of language*, of being and becoming, and this project's success hinges on making these linkages inseparable.

Chapter 1 explores the rise of rhetoric in the 20th and 21st centuries as not simply a constellation of models, formulas, and methods toward persuasion, but as a fundamental grounding in contingency, openness to alternative ways of thinking and being, and, as Diane Davis (2010, 19) notes, as a response-*ability* toward one another, a responsibility to respond, providing the ground for an ethical relationality between subjects. Rhetoric emerges across disciplines—in continental philosophy, critical theory, and the physical sciences, in particular—as first philosophy, as that which is the theoretical minimum for critical inquiry toward the "new" and the other, such that responsivity and openness to otherness precedes all else. For before there is a call to respond ethically to one another as subjects, for instance, there is a call to respond (2010, 14). And before we can discover

difference and alternative ways of being, we must be persuadable, following where inquiry leads. "Rhetoric," Davis submits, as I do, "is first philosophy" (2010, 15).

Quantum rhetoric cuts against the grain of classical rhetoric, moving towards *rhetoricity*: the prior, necessary ungroundedness which enables responsible response to difference, to that which challenges our sensemaking structures. Jennifer Richards (2008) outlines this central move in *Rhetoric: The New Critical Idiom* by claiming, as I do, that contemporary rhetoric differentiates itself from classical rhetoric largely by transcending questions of genre, persuasion, and audience, and by moving into the realms of affects and effects beyond the rhetor's control. In other words, the rhetor is constructed by language as much as the rhetor constructs language him or herself. Davis' project extends this reconstruction of rhetoric by adding that the rhetorical subject must then, upon being reconstructed by language, be responsive to where language leads—to the unexpected, the controversial, the heretical. Here, I coopt the work that Nikolas Kompridis does for critical theory more properly for rhetoric, claiming that rhetoricity precedes and underlies critical theory as a "self-decentering learning that makes a cooperative new beginning possible" (Kompridis 2011, 255). In this way, rhetoric precedes and exceeds the rhetor, rooted in affectivity, persuadability, and response-ability. Rhetoric, encompassing the spaces and subjects of responsivity, is thus uniquely suited to larger philosophical projects like those of Levinas, Lecercle, and Butler, which engage remainders and exceptions, others and otherness, all frequently excluded from the domain of the sensible to prevent the scrutiny of interpretive frameworks. Engaging rhetoricity, however, approaches rather than eschews epistemological crisis, initiates rather evades breakdowns

in interpretive frameworks, thereby exposing their contingency (Kompridis 2011, 64). The embrace of breakdown lies at the core of the rhetoricity I explore, a rhetoricity which is only sufficiently developed through the relativity and contingency of quantum physics.

Rhetoric not only emerges as first philosophy—as an ontologically contingent, self-decentering openness to alterity—in philosophy itself toward the end of the 20th century, but in the physical sciences, as well, uniting in many ways the humanities and sciences as joint projects whose methodologies depend on a responsibility to respond and follow where inquiry leads. In addition to the imperative of responsivity, the 20th century humanities and sciences increasingly recognize the contingency of truth, knowledge, and being in ways that the sciences, in particular, had not been open to with classical epistemology. With the emergence of quantum physics especially comes the necessity to ground inquiry in contingency and responsivity itself. We all (physical scientists, rhetoricians, critical theorists, and continental philosophers), in other words, become Sophists, as chapter 2 makes clear through the work of Susan Jarratt, John Poulakos, and others. And so we all, in at least one fundamental way, become rhetoricians, establishing rhetoric as a cornerstone of contemporary epistemology and ontology. My investigation into quantum physics here, and physics in general, serve as an additional bridge between the humanities and sciences in showing that rhetoricity is not simply the rise of a rhetoric for rhetoricians, but a rhetoric for all who pursue alterity through inquiry.

Chapter 3 argues that rhetoric and quantum physics are symbiotic, complementary fields for several reasons. First, physics' emphasis on materiality, on the entanglement of matter and meaning, sharpens the rhetorical possibilities of addressing the materiality of

affect, responsivity, and the construction of self and others. In other words, as Jane

Bennett's (2010, xvii) work shows, humans are constructed not just of immaterial values

and ideologies, but of objects, artifacts, and environments, giving rise to a self which is a

human and non-human assemblage. Second, physics' focus on and openness to

uncertainty and unpredictability strengthens my claim that contingency is at the heart of

being human, and of being entangled in matter. In this sense, physics corroborates the

rhetorical epistemology I develop with its material affirmation of the unpredictability at

the center of all creation. Furthermore, physicists, and especially quantum physicists—

open as they are to contingency and uncertainty—provide a practical model for what a

response to the breakdown of symbolic systems should look like. Finally, physics

confirms rhetoric's focus not on *being* and on the question of *what is?* (though

philosophy is also central to my project), but rather on the question of *what does it do?* In

this respect, physics studies things as they emerge before us through *action*, holding that

it is not essence which we should seek, but the very appearance, relationships, and

assemblages of things and of people which shape reality, as opposed to underlying forces

or frameworks. Given that even the etymology of "physics"—*physis*—means to "bring

forth," "produce," or to "grow," physics provides a ripe epistemological and practical

ground for a theory of doing and responding.

Chapter 4 examines the rise of rhetoricity in 20th century avant-garde American

literature—with Gertrude Stein, in particular—to demonstrate an openness to language as

Other. Stein is demonstrative of a shift in ontological and epistemological sensibilities

which opens up new possibilities of being in and through language, all due to a

responsivity to language itself. Sharon Kirsch's (2014) work in *Gertrude Stein and the Reinvention of Rhetoric* is a central connection between literary studies and rhetorical theory. Kirsch makes unique connections between what Stein pursues and accomplishes in her writing and what kinds of critical inquiry rhetoric seeks to make possible. Invention and arrangement, for instance, are not methods of styling knowledge for an audience, though they can be; for Stein, words arrange us as much as we arrange them. In this sense, Stein engages language as a method of unsettling the connections between words and objects, signifiers and signifieds, encouraging the writer and thinker to work through the resulting chaos, contingency, and challenges to interpretive frameworks. Grammar, too, in the simplest sense, "is something that is made as we talk about it" (Kirsch 2014, 33). Language itself is an act of creation, not wholly under the author's control, connecting the (post)modern literary aesthetics of Stein and much avant-garde work to Richards and Davis' contention that rhetoric both precedes and exceeds the rhetor. Beyond Stein, quantum rhetoric incorporates such Euro-American voices as Djuna Barnes, Elsa von Freytag-Loringhoven, Kathy Acker, and Amelia Jones—Jones' *Irrational Modernism* especially—all similarly regarded as paradigm shifters in the direction of rhetoricity. This juncture between literary and rhetorical studies allows me to further rhetorical theory by insisting that rhetoric is a philosophy of language, of how language works through us and on us, reifying rhetoric as the ground upon which language is constructed and transformed.

Finally, chapter 5 reifies quantum rhetoric in the context of rhetoric, composition, and critical thinking classrooms in contemporary universities, wrenching theory, as

Aristotle advises, down from the clouds. Here, I insist that rhetoric, composition, and critical thinking classrooms are precisely the places that rhetoricity ought to be engaged, as a "self-decentering receptivity," in order to permanently unsettle both existing and future interpretive frameworks. To establish this connection between the university and rhetoricity is to affirm the place of these classrooms as unique spaces with which to develop students' critical capacities, attitudes, and practices. Quantum rhetoric, therefore, does not stop at deconstructing interpretive frameworks, but reinvents them cooperatively with students. Here, rhetoricity coalesces with the larger projects of critical theory and continental philosophy by exploring new ways of becoming—personally, politically, or otherwise—insofar as the pursuit of alterity necessitates the scrutiny of operating ideologies, whereupon futurity can be rethought and cognitively mapped.

In order to accomplish this scrutiny and (re)mapping, I explore the politics and power structures of the university through critical theory and critical democratic pedagogy, looking at, in particular, the assault of neoliberalism on the remaining critical spaces of the university which threatens to instantiate an unreflective, uncritical, unaccommodating, commodifying capitalism, gradually transforming, if we are not careful, academia into a job-training, ideologically imbued system for the reproduction of capitalism, which Althusser among other theorists help to make clear. With critical theory I contest and combat this negative becoming, both deterritorializing and reterritorializing more critical apparatuses of mind.

To achieve this move, I also engage with the recent postcomposition theory of Sidney Dobrin and Nedra Reynolds especially, who contend that writing itself is a key

site of resistance and critical thought. Writing functions, Dobrin (2011) states in *Postcomposition*, as a technology with which we disrupt and rethink ideology. Writing, in other words, is "pause," a moment to reorient our sensemaking structures upon critical reflection (2011, 38). Yet pause, in a different sense, is also counterproductive; Dobrin claims that composition studies has become too safe in its place as an established discipline, which prevents some compositionists from engaging with otherness and from allowing students, for instance, to disrupt our tenets and traditions with their own writing. In response to Dobrin's call to produce counter-hegemonies capable of unsettling our field, as well as ideology at large, I utilize the contingency of quantum rhetoric to disrupt composition studies by evolving rhetoric, composition, and critical thinking classrooms into sites which embrace chaos, contingency, and ungroundedness. This space provides students with opportunities through writing and thinking to build toward spaces of participation and critical inquiry. Here, I utilize assignments I have developed, such as the "cultural artifact" and "autoethnography," which have students deconstruct the ideologies and practices of specific lifeworlds that have shaped them. Quantum rhetoric orients these two assignments in the materiality and contingency of quantum physics, yet humanizes the assignments through rhetoric, imparting value to objects and material-discursive practices. Quantum rhetoric thus promotes a citizenry capable of responsivity to alterity, thereby unifying my theoretical trajectories with my pedagogical priorities.

Quantum rhetoric affirms these material, classroom sites as spaces of resistance and critical thought. My emphasis on rhetoric as first philosophy is timely considering the rise of STEM and its growing displacement of humanities-based writing and critical

thinking instruction with its own versions of technical writing, or writing in the disciplines. However, rather than act as an apologist for existing curricula, I evolve classrooms around quantum rhetoric, emphasizing that rhetoric, literary studies, and the physical sciences share a fundamental ground in methodological contingency that ought to be cultivated in classrooms that transcend technical or discipline-specific writing. These classrooms should prepare students to do more than one kind of writing, do more than treat writing as a series of genres and forms, and should, instead, engage writing as a practice of critical distance and reflection. Quantum rhetoric collapses disciplinary divisions, showing that critical classroom spaces should be preserved and evolved for the benefit of both the humanities and sciences.

Ultimately, a project entitled "quantum rhetoric" must do everything in its power not to simply show the interconnectedness of our disciplinary practices, but more importantly *how* these connections are absolutely central to the work of the disciplines themselves. As Kenneth Burke (1969b, 44) states in "The Range of Rhetoric," it's not that we as rhetoricians are asking other disciplines to replace their terminologies with our own, but rather to acknowledge the rhetorical *functions* of their disciplines and their language—the rhetoricity which underlies the success of their practices. Taking on such a goal, quantum rhetoric seeks to do no less than transform the ways in which we approach the humanities, the sciences, and the university.

CHAPTER 1

QUANTUM RHETORIC
REINVENTING RHETORICAL ONTOLOGY

> What Levinas proposes is that there may be no way to get from being with to
> being-for, from neutral exposedness to responsibility (from being to responding),
> unless a preoriginary "after you"—an underivable obligation to respond—
> (un)grounds them both. Rhetoric, I submit, is first philosophy.
>
> —Diane Davis, *Inessential Solidarity*

> We can only write of solids. Why? Because of their order and their relations.
> Coherence, rigour and rigidity, the local crystalline molecule is more or less the
> same here as there. It prolongs identity, its monotony, under strong constraint.
> Thus we write history in which the local goes back to the global under the
> repetition of a homogenous law. The discourse is no different than the hard matter
> upon which it is written. A mechanics of solid systems. . . . Invent liquid history
> and the ages of water.
>
> —Michel Serres, *The Birth of Physics*

> Ideas emerge in the complexity of interaction beyond our individual control, since
> the ambient situation worlds us. We contribute, of course, but as catalyst and site
> of disclosure, not as sole producer and controller. This is why [Brian] Eno says
> that when he is working on something, the work makes claims on him, directing
> him. This is neither demand nor command; the statement traces the emergence of
> an originary rhetoricity inherent in the ambient situation.
>
> —Thomas Rickert, *Ambient Rhetoric*

If we say that rhetoric is rising, what is rhetoric rising from? From oppression,

violence, ignorance, purposeful disregard? The short answer is *yes*. For rhetoricians at

least, to state that rhetoric is rising is to intimate a history of dialectics—between rhetoric

and philosophy, rhetoric and "truth," rhetoric and transcendence, rhetoric and certainty,

to name a mere few—with which rhetoric, much like Sisyphus, has fatefully wrestled.

And yet this submergence of rhetoric, this eclipse of rhetorical thought by the canonical

writers of Western philosophy who vitalized and paralyzed rhetoric in the same breath, nevertheless make rhetoric's rise possible, and perhaps more affective in its worldly disclosure. In other words, frontiers require boundaries, and if there is one thing that rhetoricians can agree on, it's that rhetoric has a rich history of boundaries. This project—from its title, to its theory, to its practice—will bend, push, and break as many boundaries as (in)humanly possible. But this project would fail as a rhetorical project if it did not first discuss what rhetoric is rising, why it is rising, from what conditions it is rising, and who and what it is rising for. Each question requires volumes of historical, archaeological, and other discursive inquiries. Here is one chapter.

First, what rhetoric is rising? I have tried to define rhetoric in my introduction via Diane Davis as *responsible response*, as a communicative way of being-in-the-world which is first and foremost not rooted in the individual as a separate ontological being from others, but which in fact is a response to others. As Davis (2010, 14) puts it, "it's not so much that the subject responds to alterity, then, but that 'the subject' *is* the response to alterity." Davis (2010, 2) continues with a goal that is central to my own project: "I hope, that is, to nudge rhetorical studies beyond the epistemological concerns that have for so long circumscribed our theories of persuasion toward the examination of a more fundamental affectability, persuadability, responsivity." That is to say, while classical and modern rhetoric have maintained an intent focus on the individual rhetor, with the assumption of an individual being prior to togetherness, my project seeks to attend to the togetherness and affectability from which individuals arise. Rather than subsist in persuasion, quantum rhetoric turns the rhetorical gaze to what makes

persuasion possible: persuadability. As I already addressed, however, the ideological

baggage the term *persuasion* carries makes *responsivity* a more productive term for a

project which attends to listening, hearing, and responding. Persuasion carries with it

overtones of mastery, control, and deployment, along with "*shameless emotionalism and

attempts at psychological manipulation,*" at least as far as the public response to

persuasion is concerned (Aristotle 1991, 139). Moreover, it often relegates rhetoric to the

study of the "gentle force" of persuasive arguments (Greene 2004, 188). Responsivity, on

the other, better attends to the value the rhetorical tradition places on "the capacity to

change one's mind, to go back and unravel positions or viewpoints that seem natural and

unremarkable" (Richards 2008, 13). To be responsive is not to, out of a "feminine and

effeminizing" weakness of will, relinquish one's resolve, one's "decision and firmness,"

one's "unpersuadable and unyielding mind"—stereotypes Jennifer Richards overturns in

her *Rhetoric: The New Critical Idiom* (2008, 16-18). Rather, to be responsive is to be

human, to be open to new conditions, new circumstances, and to effects and affects

beyond our grasp.

Jane S. Sutton and Mari Lee Mifsud help fashion the conditions of responsible

response through a commitment to difference and contingency. In responding to the

question, "*how can rhetoric make contact with difference?*" they configure a rhetoric

around the trope *alloiōsis*, a turning toward the other, the different, and the accidental or

unpredictable (though their analysis is much more nuanced), thereby escaping the

antistrophic rhetoric which "creates a way of turning down the other in an effort to

achieve a single resting place settled upon 'by all, or the majority, or the wise,' among

us" (Sutton and Mifsud 2015, xiii). Turning *toward* difference and embracing

contingency, in other words, ensures that one's response does not merely reproduce

sameness. Their analysis works to "move contingency toward the accident, otherness,

alienation, generation, wonder, estrangement, natality" (Sutton and Mifsud 2015, xiii).

Thus, insofar as "Aristotle expunges random contingencies from rhetoric," their project

re-injects these contingencies, accidents, and random events back into rhetoric not simply

as further *topoi*, but as rhetoric's very lifeblood (xvii). Being that "tropes turn away from

the normal," *alloiōsis,* especially in chapter 3, will be a useful resource, in conjunction

with Davis, with which to make rhetoric more responsive to difference. For as I.A.

Richards (1979, 29) writes, "we are things peculiarly responsive to other things," and we

should not turn away from this responsivity. Neither should we relegate responsivity to

that which only replicates the same, to that which reproduces the conditions of our

comfort, security, and sense of stability.

  While Davis', Sutton's, and Mifsud's focus on community, togetherness, and

difference helps me develop a rhetoric more public than private, and while Richards

enables me to think a rhetoric beyond persuasion, Thomas Rickert's attention to the

materiality and nonhuman agents or actants in rhetorical lifeworlds supplements

rhetoric's too-often human focus. In addition, Rickert accentuates the material conditions

and factors of Davis' responsivity and responsibility. When we come to chapter 3, the

principal chapter on physics and rhetoric, other (new) materialists like the Sophists, and

contemporary theorists like Jane Bennett, Karen Barad, and Laurie Gries will be

instrumental in animating rhetoric with the inhuman things that are humanly impactful.

This chapter, then, sets the ground and ungroundedness of quantum rhetoric in play, defines its contexts, capacities, and trajectories. Chapter 2 continues by examining the conditions from which quantum rhetoric rises. From the Sophists to the poststructuralists, quantum rhetoric roots itself in histories which amplify the importance of the unknown, the uncomfortable, and that which challenges the status quo.

Rhetoric, Science, and the Quantum

It is hopefully clear at this point that this project will approach various subjects, including science and philosophy, with a perspective of rhetoric that publics outside the field would find radically atypical. When one speaks of a "rhetoric of science," or a "science of rhetoric," for instance, two approaches are normally given. For a rhetoric of science, one would offer "an account of how scientists decide what to say (invention); how scientific audiences differ from other audiences; why scientists communicate; what scientists argue about and how; how scientists present and articulate knowledge; and what genres, forms, and media scientists use to communicate that knowledge" (Ornatowski 2007, 3). This shows that rhetorics of science are usually classically conceived, working within the rhetorical canons of invention, arrangement, style, memory, and delivery. Furthermore, the boundaries between the canons are often rigidly policed.[1] The rhetorician of science applies these categories and others to see how scientific discourse operates through symbols, affects, and effects. Alan Gross' famous book *The Rhetoric of Science* operates

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[1] Chapter 4 discusses the ways in which Gertrude Stein, as Sharon Kirsch (2014) explores in *Gertrude Stein and the Reinvention of Rhetoric*, blurs and crosses these boundaries, such that style and arrangement, for instance, function as forms of invention, and not mere rhetorical devices imposed on preexisting and completed texts.

in much the same way, offering an account of scientific persuasion through Copernicus, Darwin, etc. For all such projects, one can substitute the word "persuasion" for "rhetoric" without consequence.

Conversely, a science of rhetoric attempts to establish rhetorical methodology in scientific fashion, not unlike Aristotle's *Rhetoric*. The object is to classify, typify, and stratify rhetorical strategies, tropes, and the like to the greatest and most precise sense possible. Here one easily locates David J. Hill's seminal work *The Science of Rhetoric: An Introduction to the Laws of Effective Discourse*, wherein persuasion works "pretty much like gravity" (Harris 2013, 1). Only that it doesn't. And neither do the ideas that science explores "exist in some neutral space in Platonic forms" (Ornatowski 2007, 3). Rather, ideas "emerge in response to and under the pressure of concrete circumstances, through action and exchange, and are so adjudicated" (Ornatowski 2007, 3). Scientists, like anyone, do not write from nowhere, but from within the situatedness of space-time: "Scientific discourse is situated in the rhetorical sense: scientists work, speak, and write in a variety of settings that constitute rhetorical situations, with attached expectations, constraints, and opportunities" (Ornatowski 2007, 5). Given the applicability of classical rhetoric to science—linked in the previous quote quite richly through *kairos*—it is no wonder that such associations have dominated the space-time grid, associations this project appreciates but ultimately breaks with.

Nor is quantum rhetoric a superficial appropriation of the term "quantum" due to its posh status in pop culture. The term has been employed in everything from "quantum spirituality," to "quantum healing," to "quantum consciousness" (the latter being far more

reputable than the former two), indicating the term's virality. Many such movements

(including "quantum spirituality" and "quantum healing") have little or nothing to do

with quantum physics at all, but rather seem to capitalize on the term's trendiness (public

reviews of such books are not shy in pointing this out). As such, the quantum becomes

the enigmatic selling point for a variety of pseudo-scientific subjects which are largely

unrelated to even the most basic principles, theorems, and paradigms of quantum theory.

It's difficult to judge why exactly the term "quantum" has proliferated in

mainstream media, but perhaps quantum mechanics "scientizes" the often unconscious,

atavistic desire for mystery and the unknown in age professedly loyal to science,

technology, and reason.[2] In such a context, the term "scientifically" enchants the

unexplained. Revised from the "God-of-the-gaps" in the scientific zeitgeist, "quantum-of-

the-gaps" acts as a placeholder for absent variables or poorly understood phenomena.[3] In

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[2] This, at least, is Jung's position in much of his work, including *Dreams* (2010a) and *Synchronicity* (2010b). In the former, Jung (2010a, 203) analyzes a dream where an ape is to be reconstructed in the sacred precincts. A series of dreams with similar motifs leads Jung to conclude that the unconscious often has a drive to reunite with its "instinctive makeup" (2010a, 211). Beyond rigid intellectualism, the unconscious desires the reconstruction of the realm of "emotions and affects," and "divine intoxication" (2010a, 217). The spirit, he claims, has "no suitable religious outlets" (2010a, 217). In *Synchronicity*, Jung (2010b, 25) goes further: "Primitive superstition lies just below the surface of even the most toughminded individuals, and it is precisely those who fight against it who are the first to succumb to its suggestive effects." Jung is careful not to correlate affect and emotion with superstition. Rather, what the *Synchronicity* quote attends to is the human desire to transcend Cartesian rationalism, and the related Enlightenment intellectualism, of which superstition is one effect (2010b, 99-110). Jung might have welcomed quantum rhetoric for its capacity to in some sense unite mind and matter, reason and resonance, thinking and feeling.

[3] "God-of-the-gaps" refers to instances where God is postulated as an explanation where there is no current empirical explanation. Similarly, "quantum-of-the-gaps" refers to instances where for poorly understood phenomena some mysterious "quantum" effect—and here the term is used fuzzily and imprecisely—must hold the answer. Neither explanation is scientific, in that neither makes calculations, offers predictions, or explicitly explains data.

sync with science's status as a prevailing public pedagogy, quantum theory pervades the public sphere in ways that seem to generate more questions than answers, and not in the productive sense. Quantum rhetoric takes no such approach. Instead of a placeholder, quantum rhetoric makes explicit, essential, and explanatory connections between quantum physics, rhetoric, and a variety of connected disciplines in order to ameliorate disciplinary deficiencies and complement each field's angle of vision. Piecing some angles together, as well as questioning and reconstructing others, quantum rhetoric puts to work quantum physics in our approaches to broad-based questions of being, becoming, and communicating, and to specific questions of reading, writing, and thinking in first-year English classrooms.

It should be clear then that quantum rhetoric is neither a traditional rhetoric of science, nor a rhetoric of anything else in the aforementioned senses. Neither is it an attempt to "scientize" rhetoric by incorporating terminology from quantum mechanics for classically rhetorical purposes. On the contrary, quantum rhetoric asserts that any such project falls hopelessly short of the productive relationships that rhetoric and science, as well as rhetoric and many other fields, can have. While connections between rhetoric and science have and continue to produce consequential relationships between scientific discourse and symbol use, for instance, quantum rhetoric goes further in investigating the *pre*-symbolic affectability of the human condition, insofar as it is the condition for responsible response. Classically, rhetoric is quite human and subject to willpower. It is a *tekhnē* in every sense: crafted, controlled, deployed. Science, via much Enlightenment thought, is objective, mind-independent, unified, and progressive. Quantum rhetoric

challenges both assumptions. It undermines the preconceived notions of rhetoric, science, and the relationships that rhetoric and science are expected to take. Rhetoric is not *only* human. Science is not *only* inhuman. Constellated into quantum rhetoric, physics and rhetoric, with the aid of numerous related disciplines, formulates a more holistic and productive response to the entanglement of matter and meaning.

Already then, the kind of rhetoric that a quantum rhetoric develops is both a human and an inhuman rhetoric, which produces effects both within and beyond our control, and which responds to difference. This rhetoric, as we will see in due course, is not just a rhetoric for rhetoricians, but, as I have stated, a rhetoric for all those who pursue alterity through inquiry, a rhetoric founded on responsivity to the new, whether one is a physicist working with a particle collider or an avant-garde poet exploring the reaches of language. Both work from a prior rhetoricity, a condition of openness which pushes beyond what Levinas (2013, 195) termed the "sphere of the same," such that the new and undisclosed become possible. This new includes what exists but is undisclosed: an object or experience hidden from view. But it is also "the anarchy of what has never been present," what has and perhaps never will be accessed by our knowing, by our powers of comprehension (Levinas 2008, 97). No amount of philosophical preparation and equipment (*paraskeuē*) can prepare us for "a future of unforeseen events whose general nature may be familiar to us, but which we cannot know whether and when they will occur" (Foucault 2005, 321).[4] A rhetoric focused on the power of knowing and

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[4] In Foucault's (2005, 322-3) analysis in *The Hermeneutics of the Subject*, the Stoics acquired equipment (*paraskeuē*) consisting of discourses (*logoi*) which functioned as "schemas of action" for responding effectively to unforeseeable events. Although somewhat

apprehending is thus inferior to a rhetoric which anticipates and accepts the "Black

Swans" of life, "large-scale unpredictable and irregular events of massive consequence"

which make legible the "sovereignty of the accidental" (Taleb 2012, 6; Blanchot 1995,

3). It should come as no surprise that, in this sense, the *quantum*—with its attention to

unpredictability, contingency, and the like—is a necessary part of any rhetorical theory

and practice that seeks to make visible that which falls beyond the bounds of human

determination. Appropriating Levinas (2013, 204), what falls beyond is not a veiled

object to be uncovered, but "the infinity of the Other"—whether it be a person, place,

scene, moment, etc.—which, despite our best efforts, "no consciousness can contain." All

the more reason to focus on our responses to the events as they unpredictably unfold. For

unfold they will.

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complementary to a notion of rhetorical responsivity, the main problem comes when this
equipment is largely composed preexisting phrases, teachings, and exercises which may not
in fact be adaptable to new situations. Especially problematic is some of the terminology (at
least through Foucault's analysis), and hence the framing of the response, involved with the
Stoic *paraskeuē*: "repelling the event," "[the *logos* as] a fortress or citadel perched on high to
which he retreats," "nullification of evil," etc., which suggest a response which closes the
subject, at least in some sense, to the transformative power of the event (2005, 325, 443).
Still, the Stoic *paraskeuē* does invoke something of a beginning to responsivity: "the *logos*
must be able to respond when someone calls on it" (2005, 324). It is simply that this *logos*—a
teaching, practice, exercise, etc.—must be not only responsive to the need for action, but also
to the need for change in the face of contingency. The Stoic *paraskeuē* does, however,
present a positive beginning to antifragility: the *paraskeuē* "does not nullify the suffering; it
attaches itself to it, rather, and makes use of it" (2005, 443); "Epictetus says: 'We can benefit
from every difficulty and trouble.—From every difficulty?—Yes, all of them." Epictetus
gives the example of a man who insults another man. The insulted man can benefit insofar as
he can learn to exercise his patience, calmness, mildness, etc. (2005, 441). Quantum rhetoric
supports this conception of antifragility. It emphasizes, however, that our responses must not
only come from preexisting structures, practices, and so forth. In fact, quantum rhetoric
stresses that we ought to be extremely careful about applying preexisting strategies to
emergent situations, for their applicability cannot be assumed, but only cautiously employed
with the fullest consideration of the event, situation, and lifeworld. For inapplicable they very
well may be.

We are brought, then, to the quantum. What is the quantum with respect to rhetoric? And why *quantum* rhetoric? To my surprise, the term *quantum rhetoric* has a brief history, consisting of one locatable, meaningful reference to the term, though there is likely other work beyond my reach. Mitchell R. James (2015, iv) in his dissertation *Aristotle, the Sublime, and Quantum Rhetoric: New Approaches to Understanding the Fiction Writing Process*, explains the term as follows: "[Quantum rhetoric is] the application of quantum mechanics to the uses of language, which in this case is the process of writing fiction." While this notion of quantum rhetoric overlaps with my investigation of Gertrude Stein's literary practice, the practice of the avant-garde poets in general, and a rhetorical philosophy of language which emphasizes the use of quantum theory in analyzing the production and reception of language, James' use of the term is more incidental and less essential than it is to my project. James (2015, 9) admits that he has "confined Quantum Rhetoric to the process of writing fiction," and has not yet explored the term's capacity to transform rhetorical studies.

Let me be clear: quantum rhetoric is no simple addition to rhetorical studies. It is not another route through which rhetoric speaks; rather, it is a reformation, and an upheaval, of its trajectories, its methodologies, and its attunements. It is my hope that this project will further a discussion between the sciences, rhetoric, philosophy, literature, and other fields which has sparked this coalescence of perspectives into a more unified and diverse whole, leaving as few blind spots and fissures as possible. Quantum rhetoric, however, acknowledges and accepts that blind spots and fissures will persist, but it is our

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job as rhetoricians to, where possible, make them productive and transformative. My quantum rhetoric, forever incomplete, begins this larger task.

A Turn toward Rhetoricity

We are brought to the terms and concepts a quantum rhetoric employs but never fully exhausts. These are the aspects, the qualities and the attunements, which make the quantum necessary and essential to rhetoric's continuous unfolding. In my introduction I gave several provisionary definitions of quantum rhetoric, each of which emphasized a different but related aspect of the term. Quantum rhetoric thus refers to the physics of language, the entanglement of matter and meaning, and the pre-symbolic affectability— the realm of feeling and resonance—which construct the human experience. Quantum rhetoric begins with the claim that "the chief metaphysical prejudice of modernity that all real physical properties are strictly monadic, properly attributable only to single entities" is just as false with respect to human relations as it is to quantum relations (Belousek 2003, 810). Going beyond the individual subject—content in its distinguishability from its environment and relationships—quantum rhetoric blurs the boundaries of ourselves, our agency, and our separability from one another. Aristotle (Waterfield 2008, 38: 194^{b}9) writes, "Questions remain—in what sense is anything separable? What is it that is separable?—but it is the job of first philosophy to answer them." Quantum rhetoric, taking rhetoric rather than metaphysics as first philosophy (discussed in chapters 2 and 3), investigates these questions and applies provisionary responses as the project evolves. Each response pushes the boundaries of rhetoric's materiality and responsivity to more expansive frontiers, as each chapter explores with respect to a different field of view.

Ultimately, this project hopes to carry rhetoric forward in a deeper conversation with its materiality and affectability, rooted in but exceeding its Sophistic roots.

Quantum rhetoric encompasses a number of terms which are part and parcel of the rhetorical being a quantum rhetoric attends to and makes visible. For a theory of quantum rhetoric is only as good as its capacity to enable us to live rhetorically—that is, to respond responsibly. First and foremost, and briefly discussed in the introduction, is *rhetoricity*. Rhetoricity is the prior and necessary ungroundedness—"an affect*ability* or persuad*ability*"—which enables symbolic action (Davis 2010, 2). It is the very condition of responsible response. Davis is a notable theorist of rhetoricity who has stressed its essentialness to living rhetorically. Understanding rhetoricity to include "the 'individual's' irremissible openness to affection/alteration," Davis (2010, 4) illuminates rhetorical being against a backdrop of receptivity. Taking cues from Davis, Rickert (2013, 119) widens rhetoricity's orbit in this chapter's epigraph:

> Ideas emerge in the complexity of interaction beyond our individual control, since the ambient situation worlds us. We contribute, of course, but as catalyst and site of disclosure, not as sole producer and controller. This is why [Brian] Eno says that when he is working on something, the work makes claims on him, directing him. This is neither demand nor command; the statement traces the emergence of an originary rhetoricity inherent in the ambient situation.

When Brian Eno, perhaps the greatest pioneer of ambient music, writes his music he does not simply exert his influence, knowledge, skill, and intent over the instruments and effects in order to produce a song. In fact, as Eno states, "the work starts to define you rather than you define it. It starts to tell you what you are doing" (qtd. in Rickert 2013, 111). Rickert suggests that through this ambient situation, through an openness to the diverse variables comprising one's environment and state of mind, "the locus of creation

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is dispersed," and the more one is open and affectable, the more responsive one is to these various factors, and the more rhetorically one lives. Agency and actancy—as we will explore in chapter 3 especially through Jane Bennett, Laurie Gries, and Karen Barad—becomes distributed, and so it matters greatly to what extent we are receptive.

Rhetoricity bespeaks a lack of mastery, a lack of control. It demarcates the threshold of our self-assertion on the world, of our "will to will," and the subjective power to manifest action (Heidegger 1971, 114). There comes a time, Heidegger writes, where "the I does not need to be in view, it flows with the situation" (qtd. in Rickert 2013, 111). This shift of control from human to inhuman accounts for Rickert's shift, via Jenny Edauer's work, from the rhetorical situation to a rhetorical *ecology*, "allowing us a better understanding of the affective and viral rhetoricity of events" which, in the case of a quantum rhetoric, make visible the many factors which precede and exceed human agency. That is, rhetoricity, in the spirit of much new materialist rhetoric, tunes us in "to rhetoric's enduring materiality, distributed activity, and unforeseeable consequentiality— an attunement necessary for disclosing how things become rhetorical with time and space as they enter into divergent associations and spark a wide range of often unforeseeable consequences" (Gries 2015, 288). In other words, "rhetoric is a distributed process whose beginning and end cannot be easily identified," and not merely "a strategic model of political communication" (Gries 2015, 291; Greene 2004, 203). And because "rhetoric is all around and within us," we can no longer afford to conceive of rhetoric as a deployed *tekhnē* toward some certain effect (Gries 2015, 291). Suffused in a world of human and nonhuman actors, rhetoric is much more.

Rhetoricity, in this sense, allows us to think "beyond the life-matter binary," and to realize that "the power of a body to affect other bodies includes a 'corresponding and inseparable' capacity to be affected" (Bennett 2009, 21). Drawing on Gilles Deleuze's and Felix Guattari's notion of the *assemblage*, Bennett circumscribes the self as a human and non-human assemblage which has no distinct boundary between itself and the inorganic world. It is interesting to note, though this will be explored further in chapter 3, that Niels Bohr discovers that this boundary is more than metaphorical. Bohr (1961, 10) states that "in fact, we cannot even tell which particular atoms really belong to a living organism, since any vital function is accompanied by an exchange of material through which atoms are constantly taken up into and expelled from the organisation which constitutes the living being." Each of these points brings into focus the fact that the subject/object binary which has so long prevailed in Western thought especially, and which still persists, is increasingly artificial. If we wish to live rhetorically, then, we as humans must relinquish our "fantasies of mastery"—mastery over nature, over what affects us and doesn't affect us, and even over language, a vision of control that, despite its uses, has plagued the history of rhetoric (qtd in Rickert 2013, 211). Attending to what is beyond our reach "lays out an infinite conditionality by opening up unfathomable depths, suggesting that mastery and control will never be achievable. . . . We are not in a rhetorical situation so much as in a rhetorical lifeworld. We are jointed through the world's latticework; we are not just the builders rearranging its stage" (213). The stage is mediated by human agency, of course, but is no mere effect of our will to power. Therefore, just as Barthes and Foucault showed that the idea of an isolated, intentional

author is a "discursive fiction," so rhetoricians are increasingly acknowledging that action, change, and affect are not simply matters of human doing (qtd. in Rickert 2013, 98). Quantum rhetoric stresses the exigency of this move.

Relating to mastery and control, Paul de Man exhibits a much earlier reference to rhetoricity. In "The Rhetoric of Blindness" chapter of *Blindness and Insight*, de Man (1971, 136, 284) defines rhetoricity as the "rhetorical character of literary language," and as a "property of language" itself. Answering Henryk Markiewicz's question of whether mimesis, metaphor, and paranomasis share a common denominator, de Man (1971, 284) concludes that "rhetoric considered as a property of language, or 'rhetoricity,' constitutes this common denominator." Going further than these three rhetorical figures, de Man (1971, 285) states, "By merely following up on Markiewicz's own categories, we reach the conclusion that the determining characteristic of literary language is indeed figurality, in the somewhat wider sense of rhetoricity." De Man (1971, 285) thus situates rhetoricity as a property of language that, because of its figurality, its tropes and metaphors, "implies the persistent threat of misreading." That is to say, rhetoric necessitates the openness of reading, receiving, and responding otherwise than an author might have intended. For de Man, as for Derrida and the deconstructionists (explored in chapter 2), the reception of an author's perceived intention slips away. Consequently, an author does not control, but rather mediates, what he or she writes. Rhetoricity underscores the inevitability and the acceptance of this lack of control.

Analyzing Derrida's reading of Rousseau's *Essay on the Origin of Languages*, de Man (1971, 136) writes that Rousseau's text "accounts for its own mode of writing" and,

in "accounting for the 'rhetoricity' of its own mode, the text also postulates the necessity of its own misreading. It knows and asserts that it will be misunderstood. . . . due to the necessarily ambivalent nature of literary language." That is to say, Rousseau understands that the reception of his language is beyond his control, contrary to the classical picture of persuasion where effect and affect are delivered from writer to reader. In reflecting on Rousseau's awareness of this fact, de Man (1971, 136) characterizes Rousseau's writing as displaying the "consistency of a rhetoric that can assert itself only in a manner that leaves open the possibility of misunderstanding." Though the picture of rhetoric here perhaps portrays an authorial intentionality superior to reader response, and though the notion of control is specific to literary receptivity, we can see the beginnings of rhetoricity. For what is intrinsic to rhetoricity is a lack of control, and, returning to Davis, the necessity of this lack in cultivating responsivity. As this and the final chapter in particular urge, we should rest our notion of rhetorical being "within rhetoricity itself" (Rickert 2013, 280).

Jennifer Richards expands on de Man's work, moving to *rhetoricality* from *rhetoricity*, which helps to distinguish the rhetorical character of language (rhetoricality) from the rhetorical condition of openness and contingency (rhetoricity). Though the two are intertwined and interdependent, it is useful to distinguish between them for their different applications. First, she recognizes "the post-structuralist emphasis on the rhetoricality of all language," which de Man develops (2008, 156). The fact is that "we cannot control meaning," whether in text, speech, or gesture: "Tropes and figures are not within our control. Rather, they are constitutive of language, and they interrupt our

attempts to communicate clearly" (2008, 156, 131). Referring to Steven Bender and

David E. Wellbery, Richards (2008, 131) recalls their description of rhetoricality:

> [Rhetoricality] is bound to no specific set of institutions. It manifests the
> groundless, infinitely ramifying character of discourse in the modern world. For
> this reason, it allows for no explanatory metadiscourse that is not already itself
> rhetorical. Rhetoric is no longer the title of a doctrine and a practice, nor a form of
> cultural memory; it becomes instead something like the condition of our
> existence.

Such is the notion of rhetoric a quantum rhetoric embraces and evolves—a rhetoric which

is nothing other than a way of life, and the condition of life. When Althusser (2014, 254,

255) writes, "*ideology has no history*," or "*ideology is eternal*," the same could be said of

rhetoric. Not that specific ideologies and rhetorics have no histories, as Althusser

clarifies, but that for as long as humans have been humans, we have been rhetorical. The

difference is that while ideology "represents the imaginary relationship of individuals to

their real conditions of existence," rhetoric is the reason that such a relationship can even

exist (Althusser 2014, 256). Rhetoric, attending to the givenness of our affectability and

responsivity, is the ground upon which all relations take root. In other words, because we

have the capacity to be affected, we have the capacity to form relations. It is largely due

to rhetoricity, then—as the condition of openness, responsivity, and affectability—that

rhetoric is first philosophy. Hence the importance of this term.

Rhetoricality and rhetoricity are fairly distinct in their use. To my knowledge, de

Man is the only major figure whose use of rhetoricity mirrors the present day use of

rhetoricality. It seems that Bender's and Wellbery's (1990, 25, 39) work on rhetoricality

has somewhat cemented this term as the "thoroughgoing impropriety of language and

action," and as the "groundless, infinitely ramifying character of discourse." Gries (2015,

291), too, cites this notion of rhetoricality for new materialist and visual rhetorics, showing that rhetoricality applies as equally to images as it does to words. Rhetoricality and rhetoricity, then, serve different but related projects and ends. However distinct the terms are already, quantum rhetoric pushes the distinction further. Whereas Davis and Rickert jointly refer to rhetoricity as the prior affectability which enables symbolic exchange, quantum rhetoric insists that rhetoricity is not simply an inevitable condition, but an *actively pursued state of mind*—a willful attunement toward openness which is the condition of responsible response.

Quantum rhetoric shifts rhetoricity in two directions: *first*, toward an actively pursued orientation in openness and responsivity; and *second*, toward rhetoricity as the ground of *responsible response*, and not merely symbolic exchange. In other words, rhetoricity is the resonant, symbolic ground that is an inevitable condition of being human. It is just as much the ground of symbolic exchange. But it is not enough to simply recognize these facts. Rather, their implications must be pursued and cultivated in relation to being, to be discussed further on in this chapter. Knowledge of rhetoricity must entail a "profound modification in the subject's being" (Foucault 2005, 27).[5]

Rhetoricity, in this way, becomes the locus of rhetorical being, insofar as it is not only a factor realized in the conscious mind, but also—and more importantly—in our everyday actions. In our approach to life, and in our responses to others, rhetoricity must be an actively pursued ontology toward responsible response. The relationship between

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[5] Foucault's context here is ancient Greek philosophy, particularly the Socratics and Stoics, for whom knowledge entailed a way of being. I submit that knowledge must, when possible—and especially concerning rhetoricity—have concomitant effects on action.

ontology and rhetoricity is discussed in this chapter, and further realized in chapter 5, which discusses rhetoricity in relation to critical democratic pedagogy. It is here where the true opportunities and consequences of our openness to difference, and to that which unsettles our ideological and discursive ground, come to light. But because both rhetoricity and rhetoricality point to a lack of mastery and control—over our affectability and language, respectively—each term is essential to quantum rhetoric. Whereas rhetoricality plays a larger role in discussions of language and artifacts, rhetoricity is more consequential for discussions of attunement, response, and responsibility.

We have distinguished rhetoricality (the rhetorical character of language, and, as chapter 5 suggests, of everyday things and artifacts) from rhetoricity (the prior and actively pursued condition of openness and responsivity which enables responsible response). It is also necessary to reveal the implications of rhetoricity, upon which so much of quantum rhetoric rests. Rhetoric, via the condition of rhetoricity, "insists on the reversibility of all positions. Rhetoric is useful not only because it makes us 'persuasive' but also because it makes us self-reflexive. In this aspect, it represents the beginning of critical thinking" (Richards 2008, 176-7). Because grounding ourselves in rhetoric ungrounds us, rhetoric "generates rather than resolves questions," opening up that infinite conditionality which does not settle as much as it unsettles. It is for this reason that though Aristotle, as chapter 2 explores, develops a rhetoric over and against contingency, quantum rhetoric reenergizes rhetoric as a way of being which derails the quest for certainty, and destabilizes the comfortable and the secure—not in search for mere

deconstruction, but contingent reconstruction, as the whole of this project hopes to make clear. It is as Steven Mailloux (1989, 180-1) writes:

> [H]istorical contingency does not disable interpretive argument, because it is truly the only ground it can have. We are always arguing at particular moments in specific places to certain audiences. Our beliefs and commitments are no less real because they are historical, and the same holds for our interpretations. If no foundationalist theory will resolve disagreements over poems or treaties, we must always argue our cases. In fact, that is all we can ever do.

Mailloux's challenge to foundationalist theories of interpretation, echoing de Man's chapter on Rousseau's rhetoricity, outlines the spirit of rhetoric this project embraces. In this way, it is not that our positions and commitments are the mere byproducts of social construction, and thus inconsequential. On the contrary, our positions and commitments are consequential precisely *because* they emerge from historical moments, each unique in their own way, which demand response. And a responsible response is possible only insofar as that response is grounded in rhetoricity, in the openness to an affectability which presents the possibility of being otherwise. But with certainty unattainable, Mailloux stresses that our positions and commitments must be always arguable, always open to change.

Nikolas Kompridis (2006, 64), reading *Being and Time*, resonates with Mailloux's position: "Anxiety unsettles us, not just because it makes the familiar unfamiliarly unresponsive to our sense-making needs but also because it reveals the contingency of our sense-making structures." In this sense, as Adasdair MacIntyre adds, "we are never in a position to claim that now we possess the truth or now we are fully rational" (qtd. in Kompridis 2006, 65). Via critical theory, Kompridis discloses the contingency of not only our past and current sense-making structures—the ideologies,

practices, and relationships which make sense of the world—but the contingency of *all future sense-making structures*, suggesting that there will never come a time when all is settled, when all is beyond protest. The only difference on this point between critical theory and rhetoric is that while critical theory has given increasing attention to this fact in recent decades, to rhetoric this point has always been self-evident. To be frank, this fact *is* rhetoric, the very crux of rhetoric that philosophy, on the whole, has denigrated for 2,500 years. Due to conditions explored in chapters 2 and 3, rhetoric has risen, and continues to rise, from this denigration, with its attunements toward uncertainty and relativity vindicated in the face of, and also despite, contemporary thought. Hence my claim in the introduction that critical theory draws on a practice which is undergirded by rhetoric via rhetoricity, and most properly suited to rhetorical being and doing, as we shall see in due course.

A turn to rhetoricity, ungroundedness, and the contingency of sensemaking structures is not, however, a wholesale endorsement of relativism, the kind which Plato's Socrates so often accuses Heraclitus and wrongly accuses Protagoras of peddling, as well as the Sophists at large.[6] While some of Protagoras' statements ostensibly lean towards a groundless relativism (e.g., "Man is the measure of all things")—such that anything that appears to me is true for me—the ungroundedness that quantum rhetoric cultivates is not the Heideggerean abyss (*Abgrund*), wherein the roots dig down, but "the ground fails to come" (1971, 92); rather, this ungroundedness refers to the subject's distancing from his

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[6] For a concise contrast of ancient Greek ideas on relativism and constancy, see Carol Poster, "Being and Becoming: Rhetorical Ontology in Early Greek Thought," *Philosophy & Rhetoric*, vol. 29, no. 1, 1996, pp. 1–14., especially page 10.

or her own assumptions and practices. This distance ungrounds inherited discourses and ideologies for the purpose of reexamining their effectiveness, appropriateness, and relative value in any given situation. Rhetoric being rhetoric, there *is* a situation. There is an ecology to which any action must attend. This situation—the presence of some injustice, the reality of one's conditions of existence—constitutes as close to an objective situation as possible. And it is this situation—real but contingent, true but historical—to which quantum rhetoric attends.

So one cannot level quantum rhetoric with the critique, often leveled against Protagoras himself, that "[a] radically relativistic universe even subverts its very own assertion of relativism, for such assertions are as ungrounded and subject to change as all other assertions" (Poster 1996, 10). Quantum rhetoric, as the entanglement of matter and meaning, is not groundless. It does not take an absolute ungroundedness as its ground. It simply insists that each action corresponds not to some eternal constant, but to a specific time and place, in which and from which entangled subjects must act responsibly. Who is to say what constitutes the responsible act? Who is to say which appearance is correct? Only communities—responding to the unique conditions which confront them, to the Black Swans and atypical events which no subject can predict—can decide the best course of action. This decision, Mailloux states, must be argued for, must be defensible in light of objective circumstances. In this sense, the ground from which the rhetorical being acts is not certain, not stable, not clear, not comforting. Yet it is by no means *groundless*. It is for this reason that in between the crystallized binary of ground and groundlessness—provocatively complete—one will find the kairotic ground of quantum

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rhetoric: uncertain but responsive, critical but constructive. This is not mere

deconstruction, but contingent reconstruction. If there is a disjunction, it is not between

ground and groundlessness, but *grounded* and *ungrounded*: the former signifying

confidence, certainty even; the latter uncertainty and circumspect action.

To close these thoughts on rhetoricity and ungroundedness from a different

perspective, Carl Jung (2010b, 100, 99) writes that at the center of creation is an

"irreducible contingency which is 'Just-so,'" a "chance substrate upon which law is

based." This contingency is formless, he continues, but reveals itself to the psyche

through images (2010b, 99). He recognizes "the contingent partly as a universal factor

existing from all eternity, and partly as the sum of countless individual acts of creation

occurring in time," cumulative and with historical patterns and continuities, but

nevertheless obscure and unpredictable (2010b, 103). Part of this contingency is rhetoric

itself: the contingent as the locus of being rhetorical. In another sense, this contingency—

in nature, history, and spacetime altogether—is what rhetoric attends to, with quantum

rhetoric in particular stressing the importance of material networks, practices, and effects.

We might even define rhetoricity in psychological terms as an "affective factor [which]

has the significance simply of a *condition* which makes it possible for the phenomenon to

occur, though it need not" (Jung 2010b, 108). The phenomenon here is not part of a

controlled psychological experiment, but part of our openness, our responsivity, to that

which challenges our interpretive structures. Rhetoricity—as *condition*, as *affective*

factor—makes this response possible, though not inevitable. For as agents it is our task to

respond responsibly. In other words, as an agent it is my "obligation to respond," and "if

it were not for this irremissible inclination, this preoriginary obligation to respond, then

in the face of the other I would nonchalantly file my nails" (Davis 2010, 14). But perhaps

Jung's most appropriate point is this: "in principle new points of view are not as a rule

discovered in territory that is already known, but in out-of-the-way places that may even

be avoided because of their bad name" (2010b, 97). If we are looking, then, for a greater,

more expansive ground for responsible responsivity, and for greater consideration of our

immersion in the material world and its relations, perhaps there is no place more out-of-

the-way because of its bad name than rhetoric.

Differential Rhetoric

With rhetoricity, perhaps the most impactful term in quantum rhetoric, defined and

described, and with its implications clear, I would like to introduce a further term:

differential rhetoric. Encompassed by quantum rhetoric, this term allows a more

capacious description of how rhetoricity is approached, and therefore of how quantum

rhetoric is embodied in our daily practices. Differential rhetoric describes a rhetoric

attuned to difference, a rhetoric in which and by which individuals venture out of the

sphere of the same. *The same* here represents our interpretive frameworks, our sense-

making structures, our ideologies and practices—in short, our lifeworlds. Differential

rhetoric and rhetoricity, in this sense, complement one another. For it is only by

cultivating and responding to an innate condition of openness and vulnerability—a

"structure of exposure"—that we approach difference (Davis 2010, 3). Returning to

Davis, it is through a rhetoric toward difference that we respond responsibly to others as

opposed to nonchalantly filing our nails. In the face of this obligation you might "whip

out your Blackberry or plug into your iPod or feign sleep or complete absorption in your magazine, iPad, or Nintendo DS, but the active refusal to be responsive is a response and no longer simple indifference" (Davis 2010, 11). The technologies may change, but the obligation stands, and how do we approach the appropriate but through a rhetoric which engages and makes conscious advances toward the difference and otherness which confront our perhaps too-comfortable ways of being-in-the-world.

Chapter 5 cultivates differential rhetoric in the university and in the writing and critical thinking classrooms in particular, and chapter 3 develops differential rhetoric through physics, so here I would simply like to offer a few grounding references to be explored later. On the problem of justice, Karen Barad (2007, x), echoing Davis, writes, "There are no solutions; there is only the ongoing practice of being open and alive to each meeting, each intra-action, so that we might use our ability to respond, our responsibility, to help awaken, to breathe life into ever new possibilities for living justly. The world and its possibilities for becoming are remade in each meeting." Stressing response and responsibility, Barad (2007, xi) goes on to say that this emphasis on "being open and alive to each meeting," which clears the way for justice, which awakens the possibility for transformative becoming, in fact "is as much a question about the nature of response and responsibility as it is about the nature of matter." That is to say, "the point is to understand that 'humans' are themselves natural phenomena" (Barad, 2007, 336). It therefore matters how we understand ourselves in the world—as disjointed and independent subjects, or as intertwined and irreducibly complex organisms which are entangled with one another in obvious and not so obvious ways.

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Barad employs her formal training in theoretical physics—hence her importance to quantum rhetoric—to understand and approach some of these entanglements, and to draw connections between these entanglements and ethics. One such connection is to *diffraction*, the key term grounding differential rhetoric. In chapter 2 of Barad's book, "Diffractions: Differences, Contingencies, and Entanglements that Matter," Barad (2007, 71) states, "The phenomenon of diffraction is an apt overarching trope for this book." Already we are in rhetoric. Diffraction as trope, Barad (2007, 71) continues, allows her to respond to the "relations of difference and how they matter." Diffraction, as a natural phenomena, attends to patterns of difference rather than sameness. Classically, diffraction describes how waves bend and spread when encountering obstruction, such was water, sound, and light waves. Take a shadow, for instance. Barad describes how even in the shadow of a razor blade, the light and dark regions are not separated, strictly speaking, the way we imagine shadows to be. In fact, looking closely "reveals an indeterminate outline around each of the edges: along both the inside and outside edges there are alternating lines of dark and light that make the determination of a 'real' boundary quite tricky" (2007, 75). This lack of a distinct boundary should remind us of what Bohr writes concerning biological organisms: at an atomic level the boundary between organic and inorganic becomes fuzzy and indistinct. The significance of Barad's illustration, however, is that even observations which seem clearly black and white are in fact interlaced with difference. What is black contains the white, and vice versa. At a quantum view, the boundaries which define our observations and practices dissolve. And it is at this point of dissolution where differential rhetoric unfolds.

Differential rhetoric attends to the fact that the other is in the self, and the

difference is in the same, such that rhetoricity is cultivated and reproduced where the lack

of any true boundary is observed. In other words, the recognition of clear, overt

boundaries between myself and others, between my practices and others' practices,

prevents and sometimes precludes an engagement with difference. Realizing,

acknowledging, and embracing difference, however, prevents the sphere of the same

from closing in on itself, from crippling my actions to the few which are permitted in my

black and white way of seeing, and by my black and white ways of being. It is for this

reason that we must understand diffraction, and thus differential rhetoric, "as a material-

discursive practice and as a critical practice" (Barad 2007, 94). That is, it is a way of

being which attends to the human and non-human aspects of lifeworlds, and a way of

critiquing those lifeworlds and practices. For now, suffice it to say that differential

rhetoric is a material-discursive rhetoric which attends to difference not as the difference

distinguished from the same, and pursued as such, but as the difference within what is

seemingly the same. This "internal otherness" is not an interruption or an obstacle to

being, but in fact comprises the "differential character" of being (Armstrong 2005, 135;

Nancy 1991, xii). The difference of being is being itself as an "opening to alterity," an

"internal alterity" already present (Nancy 1991, xii; Nancy 2015, 12). Such a recognition,

I believe, is critical to fostering the condition of rhetoricity, and our living rhetorically.

Rhetorical Being

Quantum rhetoric, this project's overarching theory, also develops *seven terms* which

inform and construct the characteristics of rhetorical being, this project's overarching

practice. *Rhetorical being*, the third and final crucial term for quantum rhetoric, is in some sense the culmination of both rhetoricity and differential rhetoric. Rhetorical being, hopefully, is the end result—or better yet the process—of a life grounded in rhetoricity, aided by a rhetoric toward difference. The seven primary factors comprising rhetorical being are as follows: uncertainty, relativity, contingency, materiality, being/becoming, responsivity, and attunement. Each term will unfold in due course, but let me say a brief word about each.

Many of these terms specifically constitute a *quantum* rhetoric: uncertainty, relativity, contingency, and materiality. These terms are most inherent to the quantum portion of this project. Being/becoming, responsivity, and attunement are the most inherent to contemporary discussions in rhetoric, though once again there are no distinct boundaries. In some way we might argue that, as we will see with the Sophists, each of the terms assigned to the quantum are just as rhetorical as physical. For in many ways the physical has always been rhetorical.[7] For the sake of a concise introduce to these terms, however, we will group them as stated.

To the terms, then. *Uncertainty* is the aspect of rhetorical being which understands and accepts the uncertainty of our lifeworlds: the material, discursive, and other factors which, though mediated, exceed our control. This acceptance, moreover, informs the rhetorical life practice. Uncertainty is thus not merely a feeling of unease, or

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[7] Jane Sutton and Mari Lee Mifsud (2015, 27), in *A Revolution in Tropes*, ask, "To what extent is the beginning of rhetoric a result of physics?" They wonder to what extent Aristotle, "by swallowing the earth, was able to bring forth rhetoric." They conclude that "it is time to think about a science *in* rhetoric, rather than a rhetoric *of* science." This is precisely what quantum rhetoric seeks to do.

a fact of the future to be reckoned with. Uncertainty is a condition of existence. We approach uncertainty in this project through Heisenberg's uncertainty principle: "In classical mechanics, momenta and coordinates of an *N*-particle system are all simultaneously specifiable. By contrast, due to Heisenberg's uncertainty principle, this no longer holds in quantum mechanics" (Wachter and Hoeber 2006, 449).[8] In other words, the principle specifies that the position and momentum of an electron, for instance, cannot be known simultaneously, but that their measurement shares a "reciprocal uncertainty," resulting in an inability for complete, simultaneous measurement of both variables (Krips 1990, 25). As such, the uncertainty principle describes cases where one reaches for precision in situations where precision is "inappropriate in quantum theory" (Penrose 2011, 4877).

As chapter 4 discusses, this indeterminacy was later extended beyond Heisenberg's first formulation: "the uncertainty principle doesn't apply only to position and momentum (or velocity); it applies to many pairs of measurable quantities" (Susskind and Friedman 2014, 20). Belgian physical chemist Ilya Prigogine (1997, 2003) summarizes the uncertainty principle's implications: "Complete accuracy of either the position or the momentum implies complete indeterminacy of the other one." The more earnest our attempts to be precise, in other words, the more precision withdraws. This will become significant to quantum rhetoric's development in chapter 3. For now, it is

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[8] In quantum mechanics, *N*-particles are particles in dynamical systems—variable-dependent systems whose states change over time—which are under the influence of various forces, including gravity. Prediction of future measurements would necessitate knowledge of forces and changes that are often impossible to anticipate. For this reason, Heisenberg's uncertainty principle entails a heavy reliance on probabilistic reasoning.

sufficient to think of the uncertainty principle partly as a metaphor for our will to know, and our will to bring conditions and events under our power. Just as in quantum mechanics, our endeavors will fail. However, the uncertainty principle is no simple metaphor. It is a real principle which extends beyond quantum mechanics and into our everyday lives. Overall, the principle "shows us the limits of applicability of mechanical causality," such that the cosmos unfolds as more than a series of causes and effects, of predictable actions and reactions which we can measure and appropriate (Joos and Freeman 2014, 691).

Relativity, contingency, and materiality (dealt with more carefully in chapter 3) describe the dependence of our perceptions and experiences on certain factors, such as space, time, history, artifacts, bodies, and movement. Quantum rhetoric's notions of these three terms draws as much from the physicists, especially Einstein, as it does from the Sophists. Einstein (2015, 61) writes that bodies in motion, such as planets, are "non-rigid bodies of reference" which affect an observer's perception of movement and events. In other words, "space and time are not absolute but, contrary to Newton's formulation, depend on the reference frame" (Wachter and Hoeber 2006, 2). Quantum rhetoric includes humans in this description, stressing that we ourselves are non-rigid bodies of reference whose perceptions are relative to the numerous variables—observed and unobservable—which compose our realities. Our perceptions are relative to these variables—culture, race, gender, class, geography, etc.—and they are also contingent on how, when, and where these variables emerge. Variables and contingencies may correspond to known probabilities, to which Aristotle's rhetoric gravitated, or may be

"untethered to probability" (*sumbebēkos*), denoting accidental and random contingencies (Sutton and Mifsud 2015, xvii). When Protagoras (Sprague 1990, 4, A1) writes "Of all things the measure is man," or when Rudolf Carnap (Krips 2014, 43) describes the relative terms "hot" and "cold" as more true than the quantitative temperatures which attempt to "eliminate the 'unscientific' notion of hotness," what each author draws attention to is the bedrock reality of the human reference point as the only sure, but limited, touchstone of human experience. In other words, "there is no single stance or 'view from nowhere' from which to perceive" an object, an experience, a person (Crease and Goldhaber 2014, 183). Returning to Jung (2010b, 100, 99), it is that "irreducible contingency which is 'Just-so'"—that happenstance arrangement of materials, conditions, and assemblages—which exerts so much influence, and often pressure, on our observations, measurements, and conclusions. It is all the more imperative, then, that we account for these variables in our everyday actions, thoughts, and judgments. Some contingencies, however, "are simply not computable" (Taleb 2012, 7). To the variables and contingencies within our sphere of knowing or influence, quantum rhetoric enables a more capacious consideration of their effects, uses, and impositions. To those beyond computation, quantum rhetoric insists that they be recognized as such.

Uncertainty, relativity, contingency, and materiality all correspond to the fact that humans are embodied beings whose perceptions and experiences are rooted in the material, and fixed to elements—historical, cultural, and otherwise—which exceed our control. Likewise, being/becoming, responsivity, and attunement respond to this recognition. If being is more static, and becoming is dynamic, humans are both

simultaneously. It is as William Durant (1991, 76), abbreviating Aristotle's *Ethics*,

writes, "we are what we repeatedly do." Or, as Jung (2010a, 278) confirms, "Whatever a

man does in reality he himself becomes." Aristotle (1991, 38: 1109b.30) adds that virtue,

a characteristic of being, "is concerned with passions and actions," with moving and

being-moved. Being is dependent upon action continually unfolding. Being consists of

constant movement; it does not rest in any particular moment. Put in different terms, we

build *and* we dwell, as Heidegger writes. In fact, "we build and have built because we

dwell" (Heidegger 1971, 148). Consequently, neither being nor becoming are sufficient

by themselves, but must communicate consistently with each other, hence the

inseparability of the terms:

> [O]verly focusing on or otherwise elevating what is present and taking that for all
> there is, or finding our sole bearings for ethics and action in whatever is present,
> is just as unsustainable as overemphasizing future possibility or the promise of
> transformative becoming. We should seek neither static being nor endless
> becoming but the resting of both trajectories within rhetoricity itself. (Rickert
> 2013, 280)

There are present contexts, ways of being, conditions, and artifacts which have value for

what they are and what they have been. Some of these artifacts are explored chapter 5,

where quantum rhetoric is manifested in the first-year writing and critical thinking

classrooms. Here, students address cultural and other symbolic artifacts, real things from

their lives—toys, books, environments—and look at how their effects, material and

otherwise, shape their being. But there is also what these things will become, and what

they could but might never be. It is not enough to attend to either or. Both have

significance. Ultimately, grounding both being and becoming in rhetoricity—in

ungroundedness and *openness*—ensures that we settle on neither, but consistently and critically turn to both.

James Crosswhite's notion of *deep rhetoric* is equally instrumental in shaping a quantum rhetoric attuned to both being and becoming. Deep rhetoric "is the idea of a rhetoric that takes historically specific shapes, and which divides itself into forms of discourse, but which also has generative power that is in the process of exceeding those shapes and forms" (Crosswhite 2013, 27). Rhetoric is something, but it is also becoming something that is continuously entangled with our own movements: "From a deep rhetorical point of view, we come to be and we continue to be rhetorically, communicatively, in our transcendence: our moving beyond ourselves, and yet toward the selves we are becoming" (Crosswhite 2013, 173). Here Crosswhite invokes the notion of *transcendence* not as a metaphysical movement, but as representative of the fact that we are nearing the selves we are becoming, and in this nearing we nevertheless are something which affects this nearing, this going beyond. Chapter 3 draws attention to the spatial and material factors which affect this being/becoming. Chapter 5 locates the university as a space in which to explore such spaces and places, a space in which to attend to the factors that shape who we are, all with the hope that we might more consciously compose who we are becoming. "In our transcendence," Crosswhite (2013, 173) continues, "we have always taken a direction, toward some things and not others, and in some ways and not others. We are ethical from start to finish." The reality is that we make choices, and these choices have effects across time and space, across our histories. In attending to being and becoming, quantum rhetoric hopes to balance the

scales of past, present, and future—to critically examine history, and to critically create

histories worth examining. If the unexamined life is not worth living, then the

unexamined history is not worth having, and the unexamined future is not worth making.

But being and becoming are not put into productive tension so easily. Most people

know Jim Carrey for his comedy, but seldom for his art. In one of his paintings, he

includes an ostensibly self-written caption: ". . . and in the moment he was freed from the

prison of becoming" (Bushell). Stumbling across this while writing this portion of the

chapter, I found that it juxtaposed the peace of being against the prison of becoming—the

comfort of the moment against the turmoil of movement. It became clearer to me why

Plato won the history writing contest, and why so much of the ancient through modern

world has gravitated towards Plato's promise of comfort and security through

transcendence, compared to the flux of Heraclitus, or the contingency of the Sophists. It

is Bachelard (1994, 8) who most eloquently recognizes this fact: "At times we think we

know ourselves in time, when all we know is a sequence of fixations in the spaces of the

being's stability—a being who does not want to melt away, and who, even in the past,

when he sets out in search of things past, wants time to 'suspend' its flight." Because a

being is always moving, there is no such thing as permanently pausing being in any

particular moment. What the being can do, however, is to situate (*situare*, to place) being

in a "sequence of fixations in the spaces of the being's stability." The being cannot be

fixed. But perhaps the spaces of stability can be. To save these spaces, whether in the

physical world or within—and often both—is, to the best of one's ability, to free being

from constant movement, and thus from flux, from the contingencies of new spaces and times that demand unique responses. This is the anxiety, the prison, of becoming.

There is great comfort and security in the stability of a moment. Heidegger (1971, 120) reminds us that "[s]ecure, *securus, sine cura* means: without care." To set oneself free from the burden of caring. Or, in the face of quantum rhetoric, to free oneself from the obligation to respond to different and perhaps challenging, uncomfortable circumstances. Through nostalgia and withdrawal, one retreats from the new. Crafting stability not so much in the moment itself as after the moment passes, the being idealizes, crafts, and stabilizes the moment. It comes to symbolize something about the being's being, as with childhood. Childhood being, on which Bachelard (1971, 112) so often reflects, is constructed through return, through "reveries toward childhood." Politically, we find this today with Trump and his supporters, and with nostalgia altogether, hence the slogan, "Make America great again," or rather "Make America white again." Being as return to something that was there, but also idealized and crafted as a fortress— psychological, social, and otherwise. A return to the spaces of stability, to a moment frozen in the one-dimensionality of time. To save space is to save time, and the being located in that space-time. For, as we know through Bachelard (1994, 8), "space contains compressed time. That is what space is for."

Bachelard (1994, 137) goes further, citing Noel Arnaud: "I am the space where I am." Being is implicated, or imbricated, in spaces—especially spaces of stability. To save space—as a first home ("After that first home," Rilke (1989, 195) writes, "the second seems ambiguous and drafty"), or a childhood space of refuge, a space which had so

often provided comfort and reassurance—is to safeguard a particular corner of identity, wherein being is fossilized. To leave a space, then, or to witness a space's evolution or destruction, is to disrupt being without choice, without having been ready to adapt. For it becomes inevitable as spaces change that being changes. Consequently, becoming becomes a prison, and nostalgia becomes a mental temple: immutable moments against change. And if the inertia of being consists in the tendency to remain unchanged unless acted upon by an external force, it will take a tremendously effective force to nudge being toward becoming. This nudge is the turn toward rhetoricity, not through brute force or overt persuasion, but through gentle turns and shifts, the gradual gaze into a wider orbit— beyond self and other, inside and outside, life and matter, and the abundant binaries which conceal the productively true entanglement of so many rigidly defined terms.

Quantum rhetoric acknowledges the turn towards spaces of stability as rational, but nevertheless not responsible. Rational because it makes sense to want to pause a moment in a space of stability. Not responsible because the world *does* change, and moments are paused only at the expense of necessary change. Necessary because conditions and circumstances evolve, and so must our being and our responses. Frameworks must adapt to new circumstances, and a single frozen moment's circumstances never change. Neither do human responses to idealized moments. Satisfaction with the moment may produce contentment, and with it a lack of care. And who wouldn't like to be carefree? Except that it is precisely in a constantly and consistently shifting world that care must be continually exercised, and with exceptional caution, circumspection, and attention.

The task of quantum rhetoric is at least *twofold* when it comes to the tension between being and becoming. First, in the most effective way possible, quantum rhetoric must *unsettle being's stability* in its sequence of fixations. Though this project is not theorized on a specifically political level, chapter 5 will give insights through two assignments on guiding students toward this goal through narration, discussion, reading, and writing, rather than through direct confrontation. For quantum rhetoric, direct confrontation of one's values, beliefs, and sites of stability is neither effective nor necessary, and often regressive. There is a more subtle way to engage one's own assumptions and ideological situatedness. Chapter 5 makes this affective, visceral, and discursive approach clear. While this project applies quantum rhetoric largely to the university, it welcomes larger applications to political life, and to the broader government of self and others. Projects on these levels would do well to consider the applicability of the approach in chapter 5 for lifeworlds beyond the university.

Second, it is to assure being that the locus of its being is *not from these fixations*, no matter how stable and properly basic they may appear. In the case of nostalgia, quantum rhetoric would first and foremost point out that at one point that memory and space, which one has come to be so nostalgic for, was something *new*—something unfolding in the movement of a new moment, something perhaps unexpected, maybe initially uncomfortable, but which nevertheless came to have such momentous value. Such an example would show the necessity of becoming, even if the very idea of becoming can bring unease, anxiety, and discomfort. Like Aristotle (2008, 46) writes in *Physics*, chance "is a kind of doing." Taking a "chance," like a leap of faith, is

representative of the becoming that gives being value. It is *becoming*, then, that makes possible the moment that one returns to as a space of stability. This is not to prioritize the space of stability, but rather becoming as the locus of being, which hopefully will unsettle this propensity toward return as primary to being. In the same way that art is often said to "comfort the disturbed and disturb the comfortable," so quantum rhetoric should neither make comfort nor disturbance its primary goal, but rather a productive tension of the two when it comes to the question of one's own being.[9]

Our last two terms, responsivity and attunement, bear upon each other. *Responsivity* has been sufficiently discussed through Davis, Richards, Sutton and Mifsud, and Kompridis as an open turning toward the other, the different, and the unexpected. Responsivity, contingent upon rhetoricity, is also caught up in *receptivity* and *responsibility*, discussed through Davis, as well. It is our responsibility to be receptive and to respond to the variables, contingencies, and others which exceed our grasp and understanding, and which confront the comfort of familiarity. Insofar as "there is no way to disentangle ourselves from others or from the world," quantum rhetoric moves to "grant their profound conditioning in all that we do and all that is" (Rickert 2013, 285-6). Lest these broad theoretical references to responsivity, otherness, and difference seem

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[9] "To comfort the disturbed and disturb the comfortable" is a popular variation, applied to art and many other fields and persons, of American writer and humorist Finley Peter Dunne's (1902) saying, originally applied to newspapers: "*Th newspaper does ivrything f'r us. It runs th' polis foorce an' th' banks, commands th' milishy, controls th' ligislachure, baptizes th' young, marries th' foolish, comforts th' afflicted, afflicts th' comfortable, buries th' dead an' roasts thim aftherward.*" I would argue that what newspapers, art, and various popular figures have in common is the rhetoric of flux, responsivity, relativity, and so forth, common to the rhetoric which rises as first philosophy in the 20th century and beyond.

vague and without concrete application, rest assured that chapter 5 builds on the theoretical work established in this and the following chapters by examining specific sites of the university and their functions in engaging difference. The first year composition and critical thinking classrooms, in particular, will be explored as spaces in which to grant the power of materiality, gender, race, class, institutions, and so forth, in structuring but not determining our histories. The assignments discussed therein open ways for students to engage the difference within themselves, thereby reshaping their responses to the difference beyond.

The classroom thus becomes the locus point, in this project at least, of the responsibility to respond, of the responsibility to be receptive to the "cascade of variables" which form the togetherness to which our subjectivity is a response (Rickert 2013, 282). In putting themselves under the microscope of the quantum, students deconstruct and contingently reconstruct this subjectivity in light of the fact that they are never isolated subjects of their own, but emerge from a *(pre)originary togetherness*—an original and "chaotic multiplicity"—which makes any notion of a pure subject both impossible and undesirable (Serres 2000, xii, 31). As Nancy (1991, 25) puts it, "singular beings are themselves constituted by sharing." Or, as Davis (2010, 6) echoes, "singularity is by definition shared." Being itself springs from plurality: "Humanity does not begin with an original couple, but with a group, and as a group" (Nancy 2015, 30). In other words, "'I' die before being born" (Blanchot 1995, 101). From a quantum mechanical perspective, "a system consisting of many particles can, given certain constraints, be regarded effectively as one particle" (Wachter and Hoeber 2006, 7). It is the larger

system, in other words, which makes up one's subjectivity. Chapter 5 exposes the productive tensions between plurality, individuality, and *singularity*—which synthesizes both. In fact, the chapter makes this exposition central to the university's calling.

Our *attunements*—our investments, commitments, and engagements—bear upon, and at times precondition, our responses. To attune and reattune ourselves is to transform how we inhabit the world (Rickert 2013, 162). Attunement corresponds to an attention to ambience, to the material and environmental factors which world our very selves:

> Attunement reflects ambience in that both terms bring the world into rhetorical performance. . . . As Diane Davis has intimated, moving rhetoric out of an exclusively human domain forces us to understand persuasiveness as prior to symbolicity. Attunement further includes the material environments we inhabit and thus describes a fundamental rhetoricity invoked by our originary weddedness to the world, as well as the ongoing pursuits that transpire within it. Attunement is not an I fitting into the world in order to do, say, and make, but an I-world hybrid already replete with an a priori affectedness. Rhetoric emerges in being there in the world, ambiently. (Rickert 2013, xviii)

Configuring attunement as a responsivity toward materiality, whether overt or ambient, Rickert (2013, 285) makes "the world essential to rhetoricity," reattuning our attention to the variables and contingencies which in some sense rhetoric has always acknowledged, as chapter 2 makes clear.

Ambient rhetoric, then, like quantum rhetoric (differences between the two will be discussed shortly), approaches questions of materiality "not as the new, not as a marker distinguishing us from what has come before, but as an attunement disclosing what has been sent forward and continues in its sending" (Rickert 2013, 285). Reattunement in this sense will draw us to the Sophists in chapter 2, and to the physicists in chapters 3 and 4, where we will find a rich network of lifeworlds and ecologies with

which to reshape our ways of being in the world, our commitments and our responses.

For, especially in recent centuries,

> [a]n obscene amount of political, ethical, and scholarly energy has been invested in 'the individual,' that indivisible atom, absolutely detached and for-itself, which is situated at the origin of the origin. And yet, 'one cannot make the world with simple atoms,' Jean-Luc Nancy reminds us. 'There has to be a *clinamen*. There has to be an inclination or an inclining from one toward the other, of one by another, or from one to the other. Community is at least the rhetoricity of the affect as such, the 'individual's' irremissible openness to affection/alteration. (Davis 2010, 4)

Despite the obsession of and overwhelming attunement to the individual subject, "the absolutely detached and for-itself," each body, thing, and person "is of a particular tissue and presents its own original network and web. . . . a singular web of ways in which flows circulate" (Serres 2000, 98). You cannot make the world with simple atoms, and you cannot make community with single subjects, but only through an affectability, a prior rhetoricity, where subjects emerge in and through contact. In *The Birth of Physics*, David Webb (2000, xiii) shows the implications of Michel Serres' thought, uniting with Davis, Rickert, and Nancy: "There is, therefore, no universal history, no unilinear development and thereby no single frame of reference within which all events may be encompassed." With single subjects and frames of reference disclosed in their complexity, their borders unbound, quantum rhetoric moves to reattune our attention away from the narrow confines of subjectivity and totality, and toward an infinity of possibilities—some of which we can approach, and some of which will forever evade us.

Rhetorical being—consisting of uncertainty, relativity, contingency, materiality, being/becoming, responsivity, and attunement—is by no means bound to seven terms. In fact, a world of other terms has already taken shape: affect, ambience, disclosure,

ecologies, lifeworlds, and so forth. The extent of terms could easily turn this project into a rhetorical dictionary.[10] For the terms that are not as distinctly defined, I hope their intimations are clear. Of course, you are encouraged to take them up differently and more explicitly.[11] Whatever the terms and arrangements, rhetorical being (living rhetorically) must ultimately be a "*responsive way of revealing the world for others, responding to and put forth through affective, symbolic, and material means, so as to (at least potentially) reattune or otherwise transform how others inhabit the world to an extent that calls for some action*" (Rickert 2013, 162). A rhetoric of this kind, in other words, is not satisfied with private perfection, but is resolved to the public in making rhetorical being contagious and transformative, thereby provoking "one's sense of obligation to other human beings" (Rorty 1999, 68). Our responsivity should reveal the world responsibly. Our actions as scholars, teachers, activists, citizens, and communities should provide an avenue toward the recognition of our rhetoricity and materiality, and disseminate that rhetoricity broadly as a responsible way of being, and being-for-one-another, lest the subject consume the other and reproduce the conditions of production, "the reign of the same," and the endless iterations of our compulsions (Serres 2000, 109; Kernberg 2011, 178).

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[10] Jennifer Richards' (2008) *Rhetoric: The New Critical Idiom* includes a unique glossary of rhetorical terms, and provides an overview of rhetoric's meaning throughout history.

[11] In his essay, "Criticism and the Experience of Interiority," in Jane P. Tompkins' (1980, 47) *Reader-Response Criticism*, Georges Poulet writes, "The work lives its own life within me; in a certain sense, it thinks itself, and it even gives itself a meaning within me." Although I am the "author" of this work, I hope that its life will exceed mine, and that it will breathe new thoughts into other author-readers that I could not have anticipated—that by being taken up differently it will, for the benefit of quantum rhetoric, manifest its own rhetoricality.

A Rhetoric of Doing and Being

Before examining the philosophical nature of quantum rhetoric, I must make several investments and developments clear. Quantum rhetoric started from an engagement with primary physics textbooks such as *Theoretical Physics* (Georg Joos and Ira M. Freeman), *Quantum Mechanics: The Theoretical Minimum* (Leonard Susskind and Art Friedman), and *The Metaphysics of Quantum Theory* (Henry Krips). However, in addition to Davis' *Inessential Solidarity*, this project is rhetorically and philosophically indebted to Rickert's *Ambient Rhetoric* and Barad's *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Whereas Rickert examines and develops a rhetoric of ecological and environmental effects through a largely rhetorical, albeit new materialist, perspective, Barad utilizes her training as a theoretical physicist to study the affects and effects which Rickert discusses (several years after Barad) from a more in-depth physical perspective of entanglement at the sub-atomic level. What's interesting and productive for this project is that Rickert's work does not closely engage with Barad's, as he himself states: "I unfortunately came to it [*Meeting the Universe Halfway*] too late to make it more essential to my project's DNA" (2013, 281). Though Barad gets a few pages in Rickert's book, it's essential to quantum rhetoric to more fully engage a conversation between physics and rhetoric, especially as Barad leaves rhetoric out of her project entirely. While quantum rhetoric does more than unite two theorists, the complementarity of Rickert's and Barad's projects exemplifies the productivity of rhetoric and physics on the whole.

With these investments clear, we move on to the philosophy in quantum rhetoric. As much as quantum rhetoric is a theory of *doing*, of responding—a call to action, and a calling attention to action—it is also a theory of *being*. This entanglement of doing and being makes the questions of rhetoric and philosophy, though historically opposed, quite inseparable. Philosophy's question is famously abridged by Hamlet: "To be, or not to be: that is the question" (Greenblatt 1997, 1705: 3.1, 58). But rhetoric's question has to some extent always been, "To do or not to do" (Lyon 2013, 29). So, when Aristotle writes, "Political speaking urges us either to do or not to do," he evinces rather than invents rhetoric's longstanding concern for action (qtd. in Lyon 2013, 29). Seen from this angle, "being human is not a matter of what one is or what one knows," countering tradition upon tradition in Western philosophy, "but the eventfulness of what one does and where one does it" (Lyon 2013, 29). Philosophy's quest for essence, metaphysics, certainty, and timeless truth has always rivaled and eclipsed rhetoric's quest for what actions are most effective, advantageous, opportune, and contingently and temporarily desirable for any given community. Plato (1993, 22, 10), after all, calls the Sophist "a kind of cheat who imitates the real things," a display-orator who engages in "soul-wholesaling." This conflict, both destructive and productive, will be explored in chapter 2. Here, I would like to explore how quantum rhetoric, like rhetoric on the whole, complicates the binary of being and doing, insofar as each informs the other. Because one cannot act—cannot *do*—without a sense of the state of things as they *are* at each moment, the distinction between being and doing is not as rigid as our histories of thought might suggest.

Quantum rhetoric cultivates a rhetorical ontology in several essential ways. I say

ontology—a *way* of being, and not simply a *theory* of being—because in the end rhetoric

is committed to action (Jarratt 1991, 27). This action comes from somewhere—is rooted,

but not bound, to a situation and an ecology. It responds to how things are, and their

unfolding from a certain order of things to which one must attend. Consequently, Rickert

(2013, 162) constructs a rhetorical ontology on four principles:

> (1) we come to see that rhetoric cannot be sundered from material being or reduced to epistemological considerations; (2) we understand that rhetoric is intimate with the environments in which it emerges (and not just to which it is *joined,* as in two separate realms coming together), which grants nonhumans an elemental role in rhetoricity; (3) this intimacy is not solely a matter of human projection, control, or assignment; and (4) grappling with [this entanglement of persons, discourses, environments, etc.] requires a new appreciation for their constitutive complexity.

Resonating with some of this project's developments, Rickert recognizes that because

rhetoric is indexed to the environments from which it emerges, rhetoric is not simply the

deployment of speech for political purposes, which Aristotle more or less would have us

believe. While environmental elements—from electricity, to transit, to trees, to the most

mundane objects—cannot be said to have human *agency*, they do have the capacity to

affect, to act in a network of human and nonhuman actors, hence Bruno Latour's heavily

adopted use of the term *actancy* (Latour 2005, 54). For Latour (2005, 11), "rats, viruses,

and microbes" must be included in networks of actors. Chapter 3 pushes networks to

include electrons, everyday objects, and inorganic matter on the whole. Actancy is so

impactful for Latour that sociology is not envisioned as a "science of the social," but "as

the *tracing of associations*"—associations, relations, and actors which can never be

exhausted (Latour 2005, 5). And as long as these actants retain the power to act, our

hopes for mastery remain fantasy. It is all the more consequential for our ways of being

and doing, then, to trace the associations and effects that can be traced, and to give up

groping toward totality.

Returning to the question of doing—a doing in the face of being—what we can do

is attend to how things are, to their complexity and entangledness, and in doing so create

new pathways of being through action. Attending to complexity means resisting

permanent ground—permanents structures, beliefs, and practices beyond scrutiny.

Through the contingency of Crosswhite's (2013, 14) deep rhetoric, quantum rhetoric

"strives not to ground rhetorical theory but, at times, to prevent theory, to stay with

philosophy in order to expand the question and deepen the sense of what is at stake."

That is to say, rhetoric broadens and deepens philosophy's nature of questioning by

removing any notion of a final ground awaiting disclosure. In other words, there is no

arrival. There are arrivals—moments, realizations, and epiphanies as to the temporary

solutions for complex, contingent problems. But for rhetoric, any revelation must be

followed doubly by recoil, a movement away from the blissful center of ideology and

towards critique.[12] This "double movement of revelation and recoil" ensures the

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[12] In "The Thought of the Outside," (see *Aesthetics, Method, and Epistemology*. Ed. James D. Faubion. New York: New Press, 1998), Foucault effectively shows that there is no outside to discourse, only an exterior from which one can become critical of discourse. Approaching the exterior is one such way of looking at quantum rhetoric. Moving to the edge, quantum rhetoric takes account of all that can be accounted for—discourse, practices, effects, affects, etc.—but acknowledges that the quantity of variables exceeds comprehension. Consequently, our critiques, though necessary and beneficial, always fall short of a comprehensive account of any particular moment in space-time. Quantum rhetoric works to take advantage of this failure, drawing our attention not to the pursuit of knowledge alone, but to the pursuit of the *responsible response* to the unknown.

transcendence of rhetoric, "a way of transcendence steered by logos," such that our rhetorical being is sustained as "an openness to influencing each other in the way we lead our lives" (de Man 1971, 288-89; Crosswhite 2013, 28, 61). As circumstances change, so do our questions. And even if the perennial questions of philosophy are asked once more, the responses change. Quantum rhetoric, attending to the smallest particle and the widest orbit of lifeworlds, surely permits answers to questions. In the end, however, because the number of variables to each question remain beyond apprehension, quantum rhetoric insists that questions be held open. Only then can new responses emerge.

In addition to cultivating a permanent ungroundedness (rhetoricity) to ensure responsivity to emerging complexity, quantum rhetoric expands rhetoricity through a kairotic ontology—a way of being attuned to each moment and lifeworld. Kairos is emplacement in space-time. "Kairos is not about mastery but instead concerns attunement to a situation, with attunement understood not as a subjective state of mind or willed comportment but as an ambient catalysis within what is most material and concrete, a gathering that springs forward" (Rickert 2013, 98). Kairos is not, as typically conceived, purely an opportunity which the rhetorician appropriates. It is not an open route for the skilled speaker's rise to power. Though there is no final definition of kairos—it, like all terms, changes with the situation—there are good reasons to reformulate our views of kairos in order to take into account new experience and attunements. Working against kairos as a "mastery of the moment," Rickert builds on Debra Hawhee's work in her essay "Kairotic Encounters" (qtd. in Rickert 2013, 82). Here, Hawhee insists that the rhetor does not merely seize an opportune moment. Rather, "[r]hetor and situation take

part in each other" (Rickert 2013, 82). The political situation in the West may provide an opportune time to discuss the rise of neoliberalism and its effects, for instance, and so the rhetor may do so in a skillful and effective way. However, those same effects may implore the rhetorician to do so beyond his or her own will. Similar to Burke's pentad, both the scene and the agent, in this case, have a sort of actancy—a capacity to effect action. Most times the route to action may be more complex. There will be multiple scenes, agents, actions, networks, webs, and ecologies which work together to manifest change (un)consciously. Far from decreasing our sense of responsibility and a sense of agency in this vast world of agents and actants, we will see in chapter 2 partly via Foucault's work on discourse and power that it is only in acknowledging the power of the matter around us that enlivens our will, our own capacity to act in the face of all that exerts influence over our movements. This is not to reinstate the possibility of mastery, but to circumscribe the scope of our willpower—to look to the furthest point on the horizon, but to realize that much of the universe never has been nor will be observable.

Kairos, in this sense, exceeds subjectivity. Subject and exterior are not separate, but instead "mutually involved and evolving vectors of material and discursive force" (Rickert 2013, 90). Each is affected by the other, and each is constitutive of the other. But somehow, Serres (2000, 191) writes, "We can only write of solids. Why? Because of their order and their relations. Coherence, rigour and rigidity." Yet the comfortable, clear-cut distinctions between subject and object cannot be maintained. Each is inside the other. This is why Serres (2000, 191), in the last line of *The Birth of Physics*, urges us to "[i]nvent liquid history and the ages of water," to liquefy the rigid boundaries of our

perception, and to make our teleological visions of history more discontinuous, more attentive to the flows and exchanges which complicate unified growth. This is why quantum rhetoric, through kairos—emplacement in space-time—sees the subject connected to an "ensemble of linked things, not an incoherent or chaotic ensemble of objects, but a communicating ensemble," an ensemble which flows richly "through the network of pores" in relation to each other, a deep relationality forming the rhizomatic root of all action (Serres 2000, 94-5). This is the ground of quantum rhetoric: a consistent, critical attunement to the relations between ourselves and the evolving world in which we emerge. Such a reattunement necessitates the "deliberate forgetting" of all that we know regarding subject and object as distinct absolutes (Hawhee 2012, 4). It involves depriving ourselves of familiarity, as Burke advises, "in the interests of a fresh point of view" (qtd. in Hawhee 2012, 4). No doubt what quantum rhetoric advances is not perfectly fresh, but certainly not as stale as the binary code of subject/object which has plagued Western thought for over two millennia, not least because of some of the figures who denigrated rhetoric all the while.

Responsive to entanglement, quantum rhetoric grounds rhetorical being in this reformulated world of kairos. Like ambient rhetoric, quantum rhetoric necessitates "stretching agency away from its traditional seat in subjects to a full consideration of action as material, affective, ecological, and emergent" (Rickert 2013, 129). By attending to kairos and its dispersal of subjective agency, quantum rhetoric strengthens its roots in rhetoricity: the principle of rhetorical being which deprives the subject of certainty, of unshakable comfort, of belief beyond critique. However, "rhetoric is itself no ground or

even an object. Rhetoric is ambience as affective disclosure; or perhaps we could put it conversely, saying that it is disclosure itself becoming affective, suasive. . . . Attunement remains always at issue, inseparable from the strife of differentiation and affiliation that never releases us" (Rickert 2013, 281). Seen from this perspective, taking rhetoric as ground is in fact a move to unground us. This movement reveals rhetoric as the disclosure of affectability. The disclosure of disclosure, in turn, affects us further, reattunes us to our affectability by dissolving our desires for mastery and absolute subjectivity.

Cultivating rhetoricity as such, as the ungroundedness which discloses and turns us toward our affectability, worlds our sense of rhetoricity—makes us keenly cognizant of our materiality, entangledness, and vulnerability:

> Worlding our sense of rhetoricity is not ultimately a matter of conscious apprehension, however, but a matter of dwelling: how, in our social organization, fourfoldly inherent earth, sky, and whatever sense of the divine we are granted, we in turn, dependent already on them, further disclose them so as to grant their profound conditioning in all that we do and all that is. One could call it [rhetoric], perhaps, styles of being . . . An ambient rhetoric brings to disclosure the cradle of affectability to which we are endlessly receptive, a sending that has been long in the wind. (Rickert 2013, 284-5).

Formulating rhetoric as a style of being is precisely what quantum rhetoric, through some of the terms discussed herein, hopes to achieve. While ambient rhetoric does an extraordinary job of attending to rhetorical being in terms of disclosing the way that Heidegger's divine fourfold—earth, sky, divinities, and mortals—conditions "all that we do and all that is," and in doing so discloses the "cradle of affectability" to which we continually respond, its account of affectability and rhetorical being is not as capacious as it could be. While Rickert (2013, 121) notes the "dearth of ambience" in network theories, quantum rhetoric notes not necessarily a "dearth" of materiality, contingency,

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relativity, and so forth in ambient rhetoric; it does, however, insist that these facets of rhetorical being can be considerably developed though quantum rhetoric, which in many ways works with the insights from Barad that Rickert, admittedly, has only touched on. In doing so, this project pushes rhetoric beyond the ambient and into the quantum.

In other ways, quantum rhetoric foregrounds the ambient. Especially because the term "ambient" suggests *background*, suggests a *below the threshold of*, the very use of the term has limitations. Quantum rhetoric, on the other hand, foregrounds the background. As much as ambient rhetoric makes such an attempt, its very terministic screen in some sense automatically, because of the term's history and usage, blurs its focus and muddies the very waters it tries to clear. But nothing escapes the quantum. The quantum is the only reason that macro-worlds are possible, and it is for this reason that the advent of quantum mechanics drastically restructured our understanding of the world, and remains an inescapable and necessary component of any attempt to make sense of the materiality of our being, and of our responsivity to open, affectable lifeworlds. Consequently, while ambient rhetoric goes further than network theories, complexity theory, and the like, quantum rhetoric goes further than the ambient. Chapters 3 and 5, especially, make this going further clear.[13]

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[13] In *Fear and Trembling*, Kierkegaard (2014, 94-5) writes, "'One must go further, one must go further.' This impulse to go further is an ancient thing in the world. . . . Heraclitus the obscure said, 'One cannot pass twice through the same stream.' [Plato's *Cratyllus*, §402.] Heraclitus the obscure had a disciple who did not stop with that, he went further and added, 'One cannot do it even once.'" Heisenberg (2007, 6), too, in *Physics and Philosophy*, says this of Einstein: "This time it was the young Albert Einstein, a revolutionary genius among the physicists, who was not afraid to go further away from the old concepts." It is this *going further*, albeit cautiously and retrospectively, that quantum rhetoric encourages in the continual process of becoming. Insofar as the future is unpredictable, the capacity to go

Worlding Rhetoricity toward Responsivity

The ontological effects of worlding our sense of rhetoricity correspond to how and to what ends we, as inevitably moved beings, are moved. To modify the rhetorical question, "To do or not to do?" we might ask, "To be moved or not to be moved?" Via Aristotle's *Physics*, Heidegger (Gross and Kemmann 2006, 13) formulates the quality of Being-moved, inherent to human and nonhumans alike, as the "shared ontology of all being." As Daniel Gross (Gross and Kemmann 2006, 13) discusses, a stone may become a wall, or a path, and in so doing is given to movement beyond its control. Similarly, humans possess the unique quality to be moved in body and mind, by world and by thought. We are moved by circumstances, but also by the capacity to think in and through and with others, substantiating Davis' and Serres' claim of (pre)originary togetherness, and original multiplicity, respectively. In other words, "political community and 'I' are 'equiprimordial' because any subject position I can take presupposes the world of common concern in which and from which I distinguish myself" (Gross and Kemmann 2006, 17). It is therefore impossible to ontologically separate political community, the world, and ourselves in any strict sense. For it is precisely this entanglement—this "cradle of affectability"—that both generates community, self, and world, and which permits any distinction.

The question is not really, then, *whether* we are to be moved, but *how* and *to what ends* are we moved? In *Being and Time*, Heidegger discusses movement ontologically in

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further—to respond creatively and openly to new information and events—is a necessary condition for responsible response.

part through *state-of-mind*, or *mood.* Mood corresponds to affect as a kind of positioning, a way in which one is turned or oriented toward world. For Heidegger (2008, 172) state-of-mind "is *ontically* the most familiar and everyday sort of thing: our mood, our Being-attuned." In what way, and to what extent, does Being-attuned constitute Being itself? Heidegger (1962, 173) answers: "having a mood brings Being to its 'there'. . . . the being of the 'there' is disclosed moodwise." Being and mood are reciprocal in relation to each other, sharing the sort of originary togetherness that individual beings share with others. For if Dasein is Being-there, there is no "there" without mood, without an orientation from which Being begins: "*The mood has already disclosed, in every case, Being-in-the-world as a whole and makes it possible first of all to direct oneself toward something*" (Heidegger 1962, 176). Mood— disclosing the fact of our Being-in-the-world, of our entanglement with world as embodied minds which in many ways are derivative of world itself—constitutes our starting point as beings; positioned as such in the world, we direct ourselves toward something. Or, as Jung (2010a, 189) puts it, "[t]he 'who' always implies a 'whence." To ask *who* someone is one must ask *from where* that being springs. This *where* is no doubt constituted in part through moods, through orientations from and toward world.

Yet possibilities "are 'given' to us with mood, along with the different ways of reading/interpreting our moods in the words of an appropriate response" (Scult 1999, 156). Our mood, a response to environment and other factors, ordains what further responses are possible. How our moods are formed, and how we form them, have consequences for the movements and moods to follow, for the visceral actions, reactions,

and interpretations that spring forth from them. Moved in Rickert's and Davis' direction, we only begin as beings because of our prior affectability, of our inherent capacity to respond to, and to be molded by, world. Movement and mood are originary. There is no prior state, no private being, which chooses movement. It is given.

Inasmuch as they originate Being, or are proper to Being, mood and movement are inescapable. Just as Davis recognizes that to ignore is still to respond, Heidegger (1962, 174) recognizes that "even in that to which such a mood pays no attention, Dasein is unveiled in its Being-delivered-over to the 'there.' In the evasion itself the 'there' *is* something disclosed." That is, even if one in a particular mood pays no attention to that which may disturb, confront, or unsettle its Being, for instance, something about Being's orientation is nevertheless disclosed. A turning away from one thing is still a turning toward another. Or, Althusser might point out, in trying to step outside ideology, one simply steps into another ideology. Foucault would say the same of discourse. The point is that from the point of our Being-in-the-world there are few "outsides." Because in our *thrownness* we cannot evade, we must respond: "A mood assails us. It comes neither from 'outside' nor from 'inside', but arises out of Being-in-the-world, as a way of such Being" (Heidegger 1962, 176). Our response to the fact of our affectability, as constitutive of our Being-in-the-world, is the rhetorical territory within philosophy as it relates to quantum rhetoric: how and to what ends do we respond, such that our response reconditions Being? By reconditioning Being, I mean that our response should turn us toward, rather than away from, our groundedness in affectability and responsivity, such that we come to be, and continue to be (as Crosswhite advises), rhetorically.

Heidegger and quantum rhetoric provide different answers to this question of response. Heidegger (1962, 175) indicates that, moodwise, mastery is on the horizon: "Factically, Dasein can, should, and must, through knowledge and will, become master of its moods." Going further, he claims that rhetoric, with its authority over language, can exert control over Dasein altogether: "the rhetor is the one that has power [*die eigentliche Macht*] over Dasein. Proficiency in speech [*Redenkönnen*] is that possibility to have proper rule [*eigentliche Herrschaft*] of the self over the convictions of the people" (qtd. in Elden 2005, 297). In other words, for Heidegger "rhetoric is not an art, but a power" (Elden 2005, 295). Though Heidegger deserts mastery and control in other important ways for a revised rhetoric (discussed shortly), here he dictates Dasein's control over its Being-attuned, and rhetoric's control over Dasein itself. However, Heidegger (1962, 175) rightly insists that "when we master a mood, we do so by way of a counter-mood; we are never free of moods." Reiterating the fact of no "outside," Heidegger nevertheless instantiates the Western narrative of the liberal subject who, through "a priority of volition and cognition," exerts deterministic control over one's Being-in-the-world (Heidegger 1962, 174). I'd rather not, however, play the role of the rhetorician denigrating the philosopher, even if to help even the scales. We cannot displace Heidegger's thoughts too carelessly, especially as part of Heidegger's groping toward mastery is a response to so-called "bad moods" in which "Dasein becomes blind to itself, the environment with which it is concerned veils itself, the circumspection of concern gets led stray" (1962, 175).

A rational response to a disconcerting situation, however, is not necessarily a responsible response. What Heidegger (1962, 178) draws from Aristotle's *Rhetoric* is true: a being "not only has in general its own way of having a mood, but needs moods and 'makes' them for itself. It is into such a mood and out of such a mood that the orator speaks." Moods can exist in a somewhat controllable sense. Returning to ambient music, which Rickert (2013, 109) refers to extensively in crafting ambient rhetoric, a song played at "the threshold of audibility" becomes a part of the environment like "the colour of the light and the sound of the rain." Ostensibly, one can control this environment by changing the music, and in doing so affect one's moods and orientations. In this sense, we can comfortably grant a measure of rightness in Heidegger's thought. It is not, therefore, that quantum rhetoric asserts a complete lack of control over mood and movement; rather, it accepts this mediation, but stresses more so the "degrees of indeterminacy" which Western philosophy on the whole, and much rhetoric too, has been less comfortable embracing (save for the Sophists, as the following chapter makes clear) (Krips 1990, 35). Yes, we can influence our moods, at times even control our moods. But to "become master" of our moods is as futile as it is undesirable. Futile because it is impossible. Undesirable, as each chapter touches on, because it is this originary openness, this prior affectability, which allows us to be moved, to respond to others despite the many efforts not to.

Heidegger (and much philosophy through him) and quantum rhetoric thus respond to movement and moods differently. To be clear, *it is this response* which is at stake in quantum rhetoric. Whereas Heidegger stresses the hope for greater control, quantum

rhetoric underscores the exigency of accepting the lack thereof. Because "*a state-of-mind implies a disclosive submission to the world, out of which we can encounter something that matters to us*," our response to this submission and to this encountering matters all the more (Heidegger 1962, 177). Forgoing mastery, quantum rhetoric proceeds from responsivity to the contingent, unpredictable, and even the initially undesirable. Worlding rhetoricity as such—not merely accepting or tolerating but embracing our worldly affectability—quantum rhetoric attunes itself to the navigation and mediation of our lifeworlds with the hopes that our responses to the real conditions of existence may become more cautious, responsible, and capacious in the variables they respond to.

Reinventing Rhetorical Ontology

Adopting the rhetorical philosophy of Nassim Nicholas Taleb's book *Antifragile: How Things Gain from Disorder*, quantum rhetoric commits not to resistance to unpredictability, but rather a gaining from it: "Wind extinguishes a candle and energizes fire. Likewise with randomness, uncertainty, chaos: you want to use them, not hide from them. You want to be the fire and wish for the wind" (2012, 3). Antifragility is a term Taleb coins to denote one's using rather than resisting chaos. In his tripartite system— fragile, robust, antifragile—the fragile breaks under pressure, the robust resists, and the antifragile gains (2012, 23-7). Responsive rather than resistant to change, the antifragile person mediates the conditions of existence, navigates change effectively, and, where possible, gains from rupture. Like the earthquake-proof (or rather earthquake-responsive) buildings in Japan which "allow quite a bit of movement," moving from side to side on "huge rubber or fluid-filled shock absorbers"—moving *with* rather than *against* an

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earthquake's force—antifragility characterizes the nature of one's response to unpredictable events (Vastag 2011). To be antifragile is to be built on fluid, rather than solid, ground. The logical opposite of fragility, antifragility is far from the Stoic *paraskeuē* which strives to anticipate and nullify future events through foreknowledge, meditative practices, and a certain type of apathy. For as Blanchot (1995, 3) writes, the disaster as event does not allow us to ask, "what have you done to gain knowledge of the disaster?" No, it is not a matter of knowledge, but response, for "[t]he disaster alone holds mastery at a distance" (Blanchot 1995, 9).

Quantum rhetoric rejects such responses as unsatisfactory and at times harmful. Instead, quantum rhetoric supports Taleb's (2012, 170) focus on the *flâneur*: "The rational *flâneur* is someone who, unlike a tourist, makes a decision at every step to revise his schedule, so he can imbibe things based on new information." Though the *flâneur* may have a loose schedule, he or she "is not a prisoner of a plan" (Taleb 2012, 170). The plan can and often does change. Many times there may be no plan whatsoever, but only a place to begin. Rather than getting "locked into a hard-to-revise program," the *flâneur* "modifies his targets as he acquires information" (Taleb 2012, 170). In doing so, the *flâneur* cultivates Taleb's (2012, 171) notion of "optionality": "This ability to switch from a course of action is an *option* to change. . . . an option is what makes you antifragile and allows you to benefit from the positive side of uncertainty, without a corresponding serious harm from the negative side." That is, uncertainty—which can lead to "Black Swans," as we have discussed—manifests both positive and negative change. Discarding rigid plans enables one to respond to change in advantageous ways, hopefully

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without the negative effects that some changes bring. "And it is optionality that makes things work and grow—but it takes a certain type of person for that" (Taleb 2012, 171). It is this "type of person," the rhetorical being—through the cultivation of rhetoricity, the responsivity to affectable lifeworlds—that quantum rhetoric hopes to shape.

Rhetoric is thus quintessential rather than antithetical to being. As Heidegger (qtd. in Gross and Kemmann 2006, 1) himself writes, "*Rhetoric is no less than the elaboration of Dasein in its concreteness, the hermeneutic of Dasein itself.*" For the early Heidegger at least, rhetoric was not *a* but *the* hermeneutic of Dasein, the way to understanding Being and beings as part and parcel of world. Rhetoric reveals the "contours of contingency"—constitutive of Heidegger's understanding of being and language—through tropes (discussed further in chapter 3). It is here where Heidegger (Gross and Kemmann 2006, 3) develops the concept of *Gelassenheit*: "the attitude of 'releasement' that accepts the contingency and partiality of our understanding of Being and just lets 'beings be.'" In line with accepting the rhetoricality of both language and existence itself, rhetoric both reveals and allows us to sit with, rather than resist or deny, the contingency of our being-in-the-world. Rhetoric is the hermeneutic whereby we recognize the centrality of affect to being. For "[w]ithout affect our disembodied minds would have no heart, and no legs to stand on" (Gross and Kemmann 2006, 4). Rhetoric reveals, and through a rhetorical ontology the subject can accept, that Being emerges "*as an encounter from out of this world*" (qtd. in Gross and Kemmann 2006, 15). In fact, Heidegger (qtd. in Gross and Kemmann 2006, 15) writes, "living means 'Being-in-a-world.'" It is therefore the telos of a rhetorical ontology to call attention to this Being, and to the world which

constitutes it. Of course, rhetoric is in many always already ontological. Laclau (qtd. in

Kaplan, 2010) calls for the recognition of rhetoric's "ontological generality." But

"rhetorical ontology" is not a tautology, insofar as it stresses the fusing of rhetorical

principles into a way-of-being-in-the-world, one not necessarily given by the words

"rhetoric" or "ontology" alone.

Insofar as Heidegger's work draws attention to beings and their worlds, their

exchanges and relations, and understands pathos (affect, mood, emotion) as "the transfer

point between social and naturo-physical phenomena," Heidegger is a rhetorician (Gross

and Kemmann 2006, 4, 11). More than make rhetoric a part of his philosophy, Heidegger

"*relocates rhetoric at the heart of his fundamental ontology*" (Gross and Kemmann 2006,

4). So it is that Heidegger sees in Aristotle's *Rhetoric* a foundation for his ontology,

evinced in the 1924 lectures, which formed the basis of these often cited lines in *Being

and Time* (2008, 178):

> Contrary to the traditional orientation, according to which rhetoric is conceived as
> the kind of thing we learn in school, this work of Aristotle must be taken as the
> first systematic hermeneutic of the everydayness of being with one another. . . .
> What has escaped notice is that the basic ontological Interpretation of the
> affective life in general has been able to scarcely make one forward step worthy
> of mention since Aristotle.

That Heidegger positions rhetoric at the center of being (and, in the case of affect,

responding), if even for a point in time, suggests that though rhetoric and philosophy

have a long history of divide—of denigrations and diatribes—in fact they are siblings,

perhaps separated at birth, but long in the process of arriving at each other. Quantum

rhetoric hastens this arrival for the sake of our ways of being and doing, which in and of

themselves share an originary togetherness glimpsed here by Heidegger.

Of course, much progress has been made since Heidegger penned these words, progress cited herein. Quantum rhetoric, too, hopes to be a forward step in the everydayness of being through its attention to affect, responsivity, and the like. It is a step forward in terms of new materialist and related rhetorics, as well, inasmuch as quantum rhetoric fuses the material and mental, mapping their reciprocity. Quantum rhetoric also steps in a different direction, in the context of new materialist rhetoric, by turning to quantum mechanics above and beyond the classical materialism and its counterparts which animate much rhetoric and political theory today. In some ways, quantum rhetoric steps forward, backward, and in varying directions simultaneously, such as in its reexamination of the writing classroom. Stepping backward and forward from argumentation and overt resistance to hegemonic discourses, the quantum rhetorical classroom calls students to first unsettle their positions, and to examine where positions come from before taking positions, as chapter 5 discusses at length.[14] Approaches and positions aside, what is clear is that "the meaning of Being comes to human beings in a rhetorical form, and that rhetorical form lies in fragments" (Scult 1999, 156). These fragments are not "scattered amidst the available means of persuasion in the particular case," as Scult (1999, 156) claims, but in the environs, the contexts, and the lifeworlds through which being is borne along rhetorically.

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[14] James Berlin (2003), in *Rhetorics, Poetics, Cultures*, suggests that first-year writing and critical thinking classrooms might teach students to resist hegemonic discourses. As a teacher of these courses, I often see this model employed, or, on the other side of the binary, a focus on argument, which not unusually leads to the reinstantiation of previously held beliefs. I suggest that before learning resistance, and before arguing, students simply learn where positions and beliefs come from, and to unsettle their own commitments. They can then decide whether to accept, to resist, or more likely to mediate and navigate discourses.

(Un)Grounding Quantum Rhetorical Ontology

One way quantum rhetoric cultivates being as such is through a rhetorical-kairotic

ontology, which results in "the achievement of workable or probable truths in situations

lacking certainty" (Rickert 2013, 81). Indeed, this approach to ontology constitutes the

root of rhetorical being from a quantum rhetorical perspective. Drawing from Taleb,

chapter 2 excavates the Sophistic correlation between "opportunity" and "circumstances,"

which John Poulakos (1995, 46) explores further in *Sophistical Rhetoric in Classical*

Greece. Here, I would like to make manifest the quantum grounding of this ontology,

with a few random references to ancient Chinese poetry, and one to the preeminent

philosopher Dr. Seuss. A project involving anything quantum should, after all, allow

oddities to surface—if not prefer and encourage their surfacing.

        As early as Lucretius (2007, 160, V: 422-31)—taking cues from Leucippus,

Epicurus, and the atomists—a vision of a universe beginning with chance emerges:

> Rather, for time infinite up to now
> Myriad primary particles moving in many directions, whether
> Driven by blows, or their own weight, were wont to come together
> Every which way and experiment with every permutation
> And everything that they could fashion by their combination,
> And as a result, the particles, spread out over a vast
> Span of time, by trying each movement and combination, at last
> Suddenly hit upon the combinations that can be
> The building blocks of greater things, the earth, the sky, the sea,
> And all the generations of living beings.

Lucretius (2007, 174, V: 846-56) also intimates chance origins for human existence,

writing that many beings have died "[b]ecause Nature frowned upon their growth; . . .

many kinds of creatures must have vanished with no trace / because they could not

reproduce or hammer out their race." Sounding suspiciously like Big Bang cosmology

and natural selection, for which modern physics and Darwin get too much credit, the Epicurean/atomistic account fixes being to chance. From this chance origin of beings, we can infer our own. In chaos, we begin.

Likewise, influential eighteenth century French mathematician Pierre-Simon Laplace (2015, 1) writes in his *A Philosophical Essay on Probabilities* that "the most important questions of life . . . are indeed for the most part only problems of probability. . . . and in the small number of things which we are able to know with certainty, even in the mathematical sciences themselves, the principal means for ascertaining truth— induction, and analogy—are based on probabilities." Laplace was likely unaware that even the enthymeme in Aristotle's (1991, 194, 212) *Rhetoric*, "which is in so many ways the core of his system," is mostly composed of "*enthymemes from probability*." In fact, rhetoric for Aristotle (1991, 139) is nothing more than "*those kinds of demonstration whose persuasiveness rests on probability*." Rhetoric, in this sense, is largely reduced to enthymeme, or dialectical syllogism, and example, equivalent to Laplace's induction (Aristotle 1991, 139). Probability, rather than being a recent revelation in statistics which topples classical mechanics, has always been the central ground upon which reason and communication function.

This probabilistic ground is no mere conceptual instrument, but an "*objective nonepistemic probability*," as modern physics shows, and thus independent of human subjects (Shimony 1989, 27). That is to say that quantum physics instantiates "objective indefiniteness, objective chance, objective probability, and entanglement" as the only ground upon which human understanding and practices can proceed (Shimony 1989, 37).

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It is for this reason that the connections between quantum physics and rhetoric are not the mere musings of a promiscuous mind (to which I would nevertheless plead guilty on all charges), but rather the objective entanglement of two different but highly complementary approaches to human knowledge and practice.

Yet the entanglement deepens. At the turn of the twentieth century, Belgian physical chemist and Nobel Laureate Ilya Prigogine (1997, 155) reinforces this picture in *The End of Certainty*: "chance and probability are no longer a convenient way of accepting ignorance, but part of a new, extended rationality." This rationality, as we have seen however, is not new, but only rediscovered and modified in light of an increasingly immeasurable universe on a newly quantified scale.[15] Here, as Stanford physicist Leonard Susskind and Art Friedman (2014, 236) write in *Quantum Mechanics: The Theoretical Minimum*, it is precisely the "nonclassical logical principles that govern their [particles'] behavior," confirming to a large extent Lucretius' picture of the universe. The fact that such principles are nonclassical (especially in terms of clear cause and effect) corroborates Prigogine's extension of chance into a broader rationality, compared to a container for ignorance. In other words, chance and chaos are primary rather than secondary to being. Werner Heisenberg (2007, 33, 3), who acknowledges the atomist beginnings of quantum theory, recognizes this shift as "not simply a continuation of the

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[15] Measurement and immeasurability in the context of quantum mechanics is addressed mainly via a discussion between Heisenberg and Bohr in chapter 3. For Heisenberg, quantum mechanics approaches variables which are not yet measurable. For Bohr, certain variables in certain contexts will forever be immeasurable. Bohr largely won this debate, and Heisenberg's position evolved to conform with Bohr's. Incidentally, Bohr seems to have won some significant debates with Einstein, as well, also discussed in chapter 3.

past; it seems to be a real break in the structure of modern science." And it is from this break which quantum rhetoric proceeds. Shoring up the past—denigrated, forgotten, ignored, and denied—appropriating revelations from the present, and embracing to the fullest extent possible the random arrivals of the future, quantum rhetoric crafts an ontology rooted in and sensitive to change, chance, and uncertainty. In doing so, it hopes to change nothing less than how we approach the deepest questions of life—those of both our being and our becoming.

Uniting the quantum ground of this ontology to rhetorical theory, we see that the uncertainty and chaos at the core of being validates a number of the aforementioned rhetorical attunements: Davis' rhetoricity and responsivity; Richards' and de Man's rhetoricality; Rickert's ambient rhetoric and kairotic ontology; Mailloux's historical contingency and anti-foundationalism; Sutton's and Mifsud's contingencies of the accidental or unpredictable type; Kompridis' contingency of all sensemaking structures (linking nicely to the Sophists in chapter 2); Crosswhite's deep rhetoric, which takes historically varied forms; Jung's "irreducible contingency which is 'Just-so'"; Nancy's internal difference and otherness; Latour's actancy and networks; Taleb's antifragility and Black Swans; Heidegger's Being-moved; and so on. Each of these concepts is attuned to the discontinuous, the random, the different, the uncontrollable, the beyond. Each of them, in turn, informs a rhetorical ontology which from this sometimes difficult and intimidating but nevertheless promising landscape one must act responsibly. That is to say, echoing Mailloux once more, "we must always argue our cases. In fact, that is all we can ever do." A rhetorical ontology states: take nothing for granted; make as few

assumptions as possible; never assume an issue resolved is resolved permanently;

approach the exterior of ideology and discourse so as to be critical of our practices

(discussed further in chapter 2); and finally, be wary of the comfort that certainty confers,

for it is most dangerous of all. Insofar as it prevents dialogue and responsivity, certainty

is the arch nemesis of rhetoric. Embodied in much pre-Socratic and Sophistic philosophy,

as chapter 2 shows, certainty smothers rhetoric for the sake of its complacence and

comfort. Yet, in no small part because of the advancements of quantum mechanics

(discussed in chapter 3), rhetoric's time has come. Rhetoric is rising.

In rising, however, rhetoric will not displace philosophy. It will not simply flip the

scales of history, granting rhetoric dominion over the disciplines. As stated, rhetoric is

deeply philosophical, and thus ontological. To say that rhetoric is ontological, and not

inherently opposed to philosophy, is not to venture a new breath, but to reaffirm the

importance of being to doing, and to make more productive contact between rhetoric and

philosophy. From the beginning, rhetoric was philosophical, such that Philostratus wrote,

"We must regard the ancient sophistic art as philosophic rhetoric" (1922, 5). This directly

contradicts Plato's claim in the *Sophist* of course (and in the *Protagoras, Gorgias,*

Phaedrus, etc.), that the Sophist is "a kind of magician" rather than a philosopher (1999,

23). Despite this reference among references disparaging the Sophists as charlatans and

deceivers, rhetoric has arrived from its subjugated position into an agential light toward

contingently conceived action. Rhetoric acknowledges and accepts, in other words, that

"man is not lord and master in his own house" (qtd. in Rickert 2013, 99). Or, as the

ancient Chinese poet Tao Yuanming (1993, 55) writes, "We coddle thousand-gold selves,

but / we're only guests: change soon takes / our treasure." Instead of groping toward

mastery in response to these conditions, rhetoric strives toward antifragility—toward

gaining from chaos, despite our transitory nature.

It's not so much, then, as Tao Yuanming (1993, 75) writes, that if you "[m]ove

with change through rough and smooth, [then] life's never up or down." Rather, moving

with and responding to change responsibly ensures that life is better lived than if one

persists in delusions of mastery. Rigid plans produce rigid responses. And because the

core of being is rooted in rhetoricity, from rhetoricity our responses should proceed. In

the remarkably Heideggerean words of Dr. Seuss (1990 8-9), "Out there things can

happen / and frequently do / to people as brainy and footsy as you. / And when things

start to happen, / don't worry. / Don't stew. / Just go right along. / *You'll* start happening

too." From the perspective of quantum rhetoric, the being *is* the happening, as it

precariously unfolds through history on the edge of change. Through quantum rhetoric,

we can ensure that Being is never too rigid—never too sure of itself—to respond to the

chance which continually molds it.

Project Outline: Toward Theory and Practice

Given that this chapter has largely been an extended introduction to quantum rhetoric, I

would like to quickly sketch how this project will move forward. Chapter 2 excavates the

Sophistic roots of quantum rhetoric, insofar as Sophism is a significant part of the

original Western relativism. Suppressed by both analytic and continental philosophers

(such as the poststructuralists), the Sophists, equally rhetoricians and philosophers,

provide a model with which to incorporate relativity, optionality, responsivity, and the

like into a style of being. Overall, the chapter maps quantum rhetoric's lineage in the classical and contemporary West.

Chapter 3 turns to quantum mechanics to cultivate rhetorical being in part through Einstein's relativity, which is adopted from a physical description of reality into a rhetoric/philosophy of action. Looking to the original quantum theorists, especially Bohr and Heisenberg, and to contemporary theorists like Prigogine, Susskind, and Friedman, the chapter frames quantum mechanics as a significant part of the contingent ground which forms quantum rhetoric.

Chapter 4 goes further, exploring important connections between quantum mechanics, literature, and the philosophy of language in relation to quantum rhetorical practice. Gertrude Stein, with reference to other avant-garde poets, turns language upside down in ways productive for rhetoric, representing the rise of Sophism in literature and linguistics. However, in Stein's attention to objects and artifacts, she also models an intra-active responsivity with the material world, embodying quantum rhetorical practice.

Finally, chapter 5 cultivates rhetorical being through the university over and against the neoliberal politics which threatens its public promise; special attention is given to the types of readings and assignments students do in first-year writing and critical thinking classrooms. Here, ontology is understood as something actively pursued and shaped, rather than passively understood or discovered. The project ends by fostering optionality and the rational *flâneur* through rhetorical being, which is in turn grounded in rhetoricity, and also in what Ira Shor terms "critical consciousness" (1992, 126). Critical

consciousness, defined and described, is in so many ways a striving toward rhetoric as first philosophy, through which being and becoming might be transformed.

Cultivating rhetorical being is the *telos* of quantum rhetoric. The student as rhetorical being cultivates rhetoricity by first learning to unsettle his or her ground—the ideologies and discourses which walk into the classroom with the student. Rather than learning to argue first, students learn to approach their beliefs and practices more self-consciously: "A stance of self-consciousness rather than confidence is often intellectually appropriate to the process of sorting out old assumptions from fresh understandings" (qtd. in Stubbs 2007, 14). Reconstructing contingent arguments on relative and uncertain but urgent ground, students come to practice the quantum rhetoric incumbent upon them in a world of shifting variables and intensified market pressures, as chapter 5 discusses in the context of neoliberalism. In step with James Berlin's (2003, 156) work, students learn to "challenge accepted wisdom and to come to their own positions about the issues under consideration. . . . Students in such a course should thus become better writers and readers as citizens, workers, and critics of their culture." Writing, especially, becomes an avenue toward self-reflection and difference, as opposed to the transcription of preconceived ideas. In this sense, we must agree with Barthes (1977, 19) when he writes, "Writing is in no way an instrument for communication, it is not an open route through which there passes only the intention to speak." On the contrary, students learn to see writing as a frontier for the unexpected and transformative. In doing so, quantum rhetoric places students in a position to "accept the 'unpredictable' nature of writing as change"

(Stubbs 2007, 15). Quantum rhetoric culminates in embodied reading, writing, thinking, and communicating practices, through which rhetorical being is realized.

Pedagogy, therefore, is not supplementary to theory. Pedagogy and theory are only meaningful if they are mutually binding and symbiotic. Just as light is neither composed of waves nor particles alone, but both (as chapter 3 explores), quantum rhetoric is neither theory nor pedagogy, but both simultaneously. We end on pedagogy not because it is incidental to theory, but because any rhetorical theory must manifest itself in and through action to be a rhetorical theory at all. Expanding on Berlin's pedagogy and much pedagogy through him, quantum rhetoric insists that the future of our democracy rests not simply on our ability to take a stand, offer cogent arguments, and respond sufficiently to rebuttals; rather, our democracy depends on an ability to be responsive to the breakdown of even the most persuasive framework, the most sacred ground, such that this response initiates the construction of a more effective, advantageous, and beneficial framework. And it, too, will break. But through a rhetoric anchored to flux, we can begin again: "There are, as they say, many degrees of freedom. The vortex forms and fades away within uncertainty, but elsewhere the plane is tranquil, one way or another. Space seeded with circumstances. Invent liquid history and the ages of water" (Serres 2000, 191).

CHAPTER 2

SOPHISTRY SINCE THE 20TH CENTURY
ORIGINS AND CONTEXTS OF QUANTUM RHETORIC

> We are things peculiarly responsive to other things. To develop this we have to consider the peculiarity of our responsiveness. We are responsive in all sorts of ways.
>
> —I.A. Richards, *The Philosophy of Rhetoric*

> Greek rhetoric had philosophical implications, with which not only the Sophists but Plato himself felt that they had to come to grips.
>
> —W. K. C. Guthrie, *The Sophists*

> I don't know if I can give you an answer that's as simple as the way you frame the question.
>
> —Protagoras, *Meno*

Rhetoric, like Schrödinger's cat, is both dead and alive.[1] Dead because the rhetoric alluded to in public spheres—especially in popular media—as something controlled and deployed by an autonomous subject to a series of intended effects is no longer tenable. Alive because the boundary of this death is also the frontier of quantum rhetoric. This rhetoric redistributes agency across lifeworlds and networks including

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[1] Schrödinger's cat is a thought experiment designed by Erwin Schrödinger to represent the Copenhagen interpretation of quantum mechanics. Schrödinger asks us to envision an enclosed, steel chamber which contains a cat and a small amount of a radioactive substance. The substance could or could not decay, causing a sequence of effects which kills the cat. If we do not open the chamber, the cat can be assumed to be both dead and alive, illustrating quantum superposition, whereupon two separate, distinct states are added together to create another valid state. It is not until the chamber is opened that the cat occupies one state or the other, raising questions regarding the influence of an observer on physical phenomena. Of course, the cat is not a subatomic particle, and does not behave accordingly. The experiment only approximates the difficulty with quantum logic. I use the experiment to represent two equally valid states of rhetoric: its death in one sense, and its life in another.

human and nonhuman actors toward uncertain and unknown effects. But more than

deconstructing assumptions about the definability of rhetoric's purposes, more than

reconfiguring rhetorical agency, and more than exposing the general rhetorical character

of language—all of which have been amply demonstrated in current rhetorical

scholarship—quantum rhetoric constructs a kairotic ground for plural subjects to act.

That is, while much work in rhetoric and philosophy has deconstructed the subject, truth,

culture, and so forth, it is less common that theorists reconstruct provisional ground from

which to respond to the exigent demands of everyday life. And while posing questions

and pulling back curtains is a necessary step back in rethinking our interpretive

frameworks, at some point we must step *forward*. Quantum rhetoric is a response to

recent developments in rhetoric and philosophy. Quantum rhetoric is a step forward.

      Chapter 1 gave a rough overview of quantum rhetoric in theory and in practice,

marking it as a transdisciplinary rise in contingency, unpredictability, relativity, and the

like on the levels of matter and meaning. This framework overturns systems such as

classical mechanics, which envisions a top-down model of the universe governed by

absolute, predictable laws. It also subverts frameworks like Plato's metaphysics, favoring

the flux of Heraclitus and contingency of the Sophists. Here, I alluded to the expediency

of such a worldview by defining *rhetoricity* as the prior, necessary, and actively pursued

ungroundedness which is the condition for responsible response. Rhetoricity, a key

component of quantum rhetoric, is that which moves theory to practice by ensuring that

individuals move to the exterior of their ideologies. By ungrounding assumptions (such

as through specific assignments in first-year composition courses discussed in chapter 5),

individuals and communities may cultivate their capacity to respond to difference more ethically and effectively. More generally, quantum rhetoric works to improve *responsivity* on the whole (to situations, people, places, events, etc.). And while rhetoricity, in a way, is something the Sophists have always embodied, quantum rhetoric materializes Sophistic contingency on the molecular level. That is, it literalizes and evolves our ungroundedness and entangledness. My claim is that physics *materializes* rhetoric, and rhetoric *humanizes* physics, such that their entanglement more fully reveals the human condition, and better enables us to act in the face of the precarious present.

In order to better understand quantum rhetoric's contribution to rhetorical studies, this chapter situates rhetoric more fully in the context of its Enlightenment and Romantic death and its (post)modern resurrection. Chapter 1 answered one of several initial questions: *what rhetoric is rising*? Given rhetoric's attention to terms, this definitional question takes priority. But also critical are several unanswered questions addressed in this chapter: *why is it rising*? *From what conditions is it rising*? And *why is Sophistry the ground of quantum rhetoric?* Though I cannot provide exhaustive responses, I can illuminate the ground upon which quantum rhetoric has come to contingently walk. It is a shaken ground, a ground not quite sure of itself. It is sure neither of its origin, position, nor trajectory. Nevertheless, it is devoted to action. It is devoted to, given the inevitable arrow of time, cautiously advancing despite the desire to remain still. If deconstruction and poststructuralism often blunt being into a generalized, inertial suspiciousness, quantum rhetoric energizes being to a level below recklessness, but above paralysis.

Why is Rhetoric Rising?

In *The Ends of Rhetoric*, Bender and Wellbery trace a gradual arhetorical trend during the Enlightenment and Romantic periods which erodes subjectivity and the excess of linguistic adornment. Or so the story goes. As empirical science emerges with great success in the description of the natural world, and in the prediction of its macro-behaviors, figures like Francis Bacon imagine an empirical approach to human expression and observation on the whole. Bacon, in particular, "envisions an arhetorical discourse that would ground itself in the empirical givens of nature" (Bender and Wellbery 1990, 8). Humankind is abstracted from the disarray of its individualized subjects to a total subject who objectively and collectively measures and predicts the world with increasing accuracy. During the Enlightenment and scientific revolution, scientific discourse establishes a "total command" of the world, abolishing the "rhetorical fray of feudal society" (Bendery and Wellbery 1990, 9). This rhetorical fray consists, largely, of Plato's internalized attacks on the Sophists, whom he accused of soul-peddling and trickery. Some of Plato's concerns were legitimate, understandable, or both, but ultimately wrong. Nevertheless, Plato's maxims are regurgitated through the Enlightenment and Romantic periods, leading Descartes to reject "as useless and empty not only the doctrine and practice of rhetoric, but also the teaching of poetry as a rhetorical skill" (Bender and Wellbery 1990, 11). Finally, the Cartesian cogito cements the "self-forming subject of Romanticism," wherein the "subject-centered philosophical and cultural discourse" rises and culminates in "Kant's transcendental synthesis of apperception, Fichte's self-positing Absolute Ego, [and] Hegel's notion of substance as

subject" (Bender and Wellbery 1990, 11). Combined with the objective, transcendental reason of the Enlightenment, the self-forming and independent subject of Romanticism is the final death knell for the sort of rhetoric Plato rallied against. Simultaneously, the subject is destroyed and reanimated. Erected in place of the fickle, persuadable subject of the ancient world is the fully rational, self-formed subject of the Romantic Enlightenment. And rhetoric was dead.

"But rhetoric has returned," Bender and Wellbery (1990, 23) claim, listing five conditions, five "whys," which initiate a revisionary rhetorical turn. I will not regurgitate Bender and Wellbery's excellent analysis, but only mention their five conditions briefly. *First*, the idea of scientific objectivity crumbles, revealing that "even so-called observation sentences" are theory-laden (Bender and Wellbery 1990, 23). *Second*, modernist theory and practice (especially modernist avant-garde poets, as chapter 4 discusses) deconstruct subjectivity, dismantling "the values of individual authorship and creativity," as well as isolated autonomy (Bender and Wellbery 1990, 24). *Third*, modernism upends the notion that human beings are disinterested, rational animals contributing dispassionately to the advancement of knowledge and wellbeing. Communication is steeped in rhetoric. All language, Nietzsche writes, is rhetorical, and begins at the most basic levels with trope and metaphor (Bender and Wellbery 1990, 24, 27). *Fourth*, modernism dethrones print as the principal medium of mass communication, allowing language to spread in unpredictable, unmanageable, and unrestricted ways, emphasizing that language does not flow in controlled, and thus predictable, paths toward certain effects. Laurie Gries updates this fourth point in her book *Still Life with Rhetoric*,

reconceiving "rhetoricality" for the 21st century. Finally, and in a similar way, modernism

is the Tower of Babel for cultural narrative and identity, dispersing languages and

traditions, and therefore notions of "national uniqueness and of an individual national

history" (Bender and Wellbery 1990, 25). The self-formed subject and the narrative of

continuous and gradual progress begins to collapse, such that "[t]he urbanistic

marketplace of the twentieth century is irreducibly polygottal" (Bendery and Wellbery

1990, 24). As such, the modernist scene, albeit a reductionist picture, is one of clashing

cultures, languages, and epistemologies. By studying and initiating this clashing—just as

a physicist studies reactions among particles—writers, philosophers, scientists, and others

realize that subjects are not self-constituted and disinterested. Rather, as I.A. Richards

(1979, 19) remarks, "we are things peculiarly responsive to other things. To develop this

we have to consider the peculiarity of our responsiveness. We are responsive in all sorts

of ways." It is in this responsivity that a new vision of rhetoric rises.

Modernism is the age, then, not of classical rhetoric, "but of rhetoricality, that is,

of a generalized rhetoric that penetrates to the deepest levels of human experience"

(Bender and Wellbery 1990, 25). This sort of rhetoric is that which Nietzsche had already

configured via the Sophists, of course. Moreover, a deeper influence from Buddhism or

Daoism on the Western front might have accelerated this reconfiguration or obviated the

need for its intervention. Neither was the Romantic myth without exception. Coleridge

and Wordsworth envisioned a natural agency or actancy.[2] And Thoreau, who was in fact

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[2] Coleridge (1818), for instance, in *Hints towards the Formation of a more Comprehensive Theory of Life*, adopts a largely vitalist picture of nature which is not merely inert and

influenced by translations of Chinese literature, stressed that if the cords of the human

soul are tense, nature plays them like a harp (Searls 2009, 264).[3] My claim is not, then,

that prior to modernism we find only myths of a self-formed subject with transcendental

reason. Still, we should not underestimate the impact that the Cartesian mind-body

duality had on an overwhelming number of key thinkers, or the impact that the scientific

revolution had on the belief that observational objectivity is achievable. In many ways,

everything new is something old forgotten; however, there is always a question of degree.

My claim is that the turn away from the self-formed subject and transcendental reason is

significantly stronger in the modern West than in prior periods, excavating a more

productive ground for quantum rhetoric to surface and flourish.

It takes a rhetorical revolution on a generalized, transdisciplinary scale for

Sophistry to pervade Western culture. Hence the claim of this chapter, and of Bender and

Wellbery to a large extent: modernism prefigures the conditions for the rise of rhetoric as

first philosophy, out of which quantum rhetoric grows. One might retort, "How can one

speak of modernism, and not *modernisms*?" The formulation of this question, however,

reiterates my point: especially in the early 20th century, any belief in a unified, collective

mind progressing through history and culture is undermined. Modernism consists of

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mechanistic; rather, nature consists of forces, energies, and creative powers that go beyond
predictable laws.

[3] *The Journal 1837-1861*, edited by Damion Searls (2009, 504-6), contains several references
by Thoreau to Chinese works which influenced him, including a novel entitled *Ju-Kiao-Li*. If
these works did not influence him, they at least resonated with his attunement to nature.

modernisms by virtue of its own diffraction. And it *is* this diffraction and diffusion, this manifest multiplicity, that prepares the way for the rise of rhetoric as first philosophy.

Yet quantum rhetoric is no mere step on Bender and Wellbery's rhetorical ladder. The difference between Bender and Wellbery's rhetoricality and quantum rhetoric, inclusive of a redefined rhetoricity, is one of *kind* and not degree. Bender and Wellbery's (1990, 25) rhetoricality focuses on "the groundless, infinitely ramifying character of discourse in the modern world. . . . Rhetoric is no longer the title of a doctrine and a practice, nor a form of cultural memory; it becomes instead something like the condition of our existence." Notice *three significant differences* between rhetoricality and quantum rhetoric: *first*, rhetoricality is concerned with discourse, which for Bender and Wellbery contains the symbolic world. Quantum rhetoric includes the symbolic, but equally stresses the pre-symbolic realm of affectivity—the physical, visceral groundedness of the human response, the "structure of exposure" from which we affect and are affected (Davis 2010, 3). *Second*, quantum rhetoric insists on the term *ungrounded* over *groundless*. While it is often unproductive to quibble over terms, in this case it is consequential. Discourse is not *groundless*. That is, it is not the case that discursive practices and theories have no basis or foundation. Rather, discourse is *ungrounded* insofar as it does not rest on permanent ground. As rhetorical beings, our frameworks and assumptions must often be uprooted, ungrounded, and resettled. But our frameworks and discourses are not groundless. Though our grounding is contingent and temporary, it must nevertheless rest on *something*—some real condition of existence. Our ground must be arguable and justifiable, not groundless, and hence not entirely relative. *Third*, though

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one might glimpse several implications, Bender and Wellbery stop short of configuring a notion of rhetorical being around rhetoricality itself. Quantum rhetoric goes further than rhetoricality by pursuing, due to this revelation of rhetoric as a condition of existence, an *actively pursued ungroundedness*. Quantum rhetoric, then, is in part a response on the level of being to the revelation of rhetoricality. Quantum rhetoric is the voice of Rilke (1989, 61) in "The Archaic Torso of Apollo," stating, "You must change your life."

How does modernism prefigure the rise of rhetoric as such? If we follow through with Bender and Wellbery's analysis, we find that modernism reveals the rootedness of human observation and expression. Hopeless is the desire for "a neutral and standpoint-free language of description," especially with the advent of quantum mechanics, as chapter 3 discusses (Bender and Wellbery 1990, 27). Thomas Kuhn's famous work *The Structure of Scientific Revolutions* shows that scientific inquiry and discovery are largely due to "research paradigms themselves not derivable from observed data" (Bendery and Wellbery 1990, 28). Scientific instruments and apparatuses not only participate in what phenomena are created and observed, but the apparatuses themselves, as chapter 3 discusses through Niels Bohr, are part of the entire quantum world. In other words, "[t]he distinction between the 'in here' and the 'out there' upon which science was founded is becoming blurred" (Zukav 2001, 102). There is no clear boundary between inside and outside, no view from nowhere from which to dispassionately and objectively measure and observe.

The majority of other modernist innovations and returns are familiar to those in the humanities and social sciences, and there is no need to rehash such developments in

depth. Bender and Wellbery have provided their own overview of well-known developments in Foucault's theory of discourse, power, and truth—all bound to discursive institutions and practices. They review Derrida's and de Man's work on deconstruction, as well as Burke's important notion of "terministic screens"—words which, by virtue of their own history and usage, both deflect and reflect particular realities (Bender and Wellbery 1990, 36). That is to say that Burke's modernist rhetoric shows the extent to which the very words we use condition and perhaps determine what we see "out there" in the world. Bakhtin's notion of "heteroglossia" emphasizes furthermore that our very voices and thoughts are shared: "every utterance is many utterances; every speaker is many speakers" (Bender and Wellbery 1990, 37). The work of Jean-Luc Nancy, Diane Davis, Michel Serres, and many others in chapter 1 reiterates this observation. Lester Faigley (1995, 8), as well, includes a list of broken beliefs in reference to subjectivity, objectivity, and language which include and expound on Bender and Wellbery's modernist analysis. Overall, the modernist gaze at discursive production and reception illuminates "the thoroughgoing impropriety of language and action," and shatters the separateness of subject and language (Bender and Wellbery 1990, 39). That is, the subject does not merely use or deploy language, but is constituted in and through language. As chapter 4 examines through Gertrude Stein, language works through us as much as we work through it.

Despite Bender and Wellbery's wonderful review of the modernist situation, there is more to the story—more to the rise of rhetoric as first philosophy, to the development of quantum rhetoric, and to the recognition of the "universality of the rhetorical

condition" (Bender and Wellbery 1990, 33). Beyond quantum physics and the upheaval

of classical mechanics, structural linguistics was already being upended by avant-garde

authors like Gertrude Stein and Elsa von Freytag-Loringhoven before it could take root

(discussed in chapter 4). The violence done to static and predictive paradigms of this sort

signifies, I claim, a significant transition in the West from a Platonic (transcendent) to

Sophistic (contingent) way of thinking. This transition is the story of the twentieth

century. Postmodernism, too, is in part a response on the level of thinking and being to

developments in the early and mid-twentieth century:

> This growing awareness of randomness, ambiguity, and chaos since the 1960s is expressed not only in the work of novelists like DeLillo, but also in the work of many other artists, musicians, choreographers, film makers, and architects, and even in the productions of advertisers, fashion designers, sports promoters, and politicians. It is often referred to as *postmodern*. (Faigley 1995, 3)

Notice that randomness, ambiguity, and chaos have always been with us. It is only the

awareness of them that grows and is subsequently materialized in (post)modern culture.

And although we can distinguish degrees of difference between the modern and

postmodern eras, there are no definitive markers or boundaries: "A central problem in

aesthetic discussions is what to do with figures like the avant-garde artists of Dada and

surrealism, Gertrude Stein, or the Joyce of *Finnegans Wake*, who from the perspective of

the 1990s all look postmodern" (Faigley 1995, 6). Gertrude Stein, in particular (as

chapter 4 discusses as well), works through the philosophy of her teacher William James

to enact changes in the philosophy of language and science on a deeply poetic level.

Stein, too, loses faith in the stable thing-in-itself, and sees reality instead as something

emerging between contingent relationships.

The focus, then, of (post)modern literary, philosophical, and scientific enterprises is not so much to reveal the *essence* of things, but more so the *interactions* between things. The question is not "What *is* the thing?" but "What does it *do*?" or "How does it *work*?" Consequently, the question of the twentieth century is a rhetorical one. Quantum mechanics shows it best: "They [wave and particle behaviors] are not properties of light. They are properties of our *interaction* with light" (Zukav 2001, 103). This is not a question of essence, but of action. It is unclear to what extent the sciences and the humanities, revealing the same contingencies differently at the same time, came upon these realizations through transdisciplinary communication or by happy accident. What is clear is that we in the West, in the twentieth century, have lost our Platonic heritage. What is clear is that, despite resistance from Einstein and other high profile thinkers, we have become *Sophists*. Plato may have won the history writing contest for 2,500 years, during which rhetoric, at best, served as a technology toward truth. But now rhetoric, as conceived by the earliest rhetoricians, rises. Now the Sophists put in their "oar." We are out of the Platonic mouth and into the flux and the fire: "the flux and fire of life are not to be underrated and are absolutely necessary for the achievement of wholeness" (Jung 2010a, 197). If Jung is correct, the contingency of the Sophists, which Plato successfully suppressed, may feel alienating, dislocating, and threatening. These are, after all, common adjectives used to described the (post)modern period. But this ungroundedness, this precarious uprootedness, is absolutely necessary if we are to respond responsibly to one another—if we are to hold not to the unquestionable assumptions which grant us a

measure of security (*sine cura*, "without care") amidst the postmodern flux, but rather to

values which are responsive to the shifting conditions of existence.[4]

In light of this shift toward flux, the twentieth century is not so much an era of

flux as it is an engaged, open *response* to flux. The quantum physicists, when their

classical paradigms break down, take relatively little time to accept and productively

respond to the rupture of their worldview. Bohr, especially, as chapter 3 discusses,

quickly comes to terms with the breakdown of the classical framework, adopting a new

and seemingly incomprehensible or inexpressible logic for the subatomic world. Gertrude

Stein, confronted with her inability to observe the Kantian thing-in-itself, concludes that

each object is part of every other object, as a Buddhist sutra long ago claimed: "each

object in the world is not merely itself but involves every other object and in fact *is*

everything else" (Zukav 2001, 265). Chapter 4 discusses the avant-garde poetic response,

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[4] In the chapter "What Are Poets For?" from *Poetry, Language, Thought*, Heidegger (1971, 104) traces the etymology of "security" to "careless, *sine cura*, *securum*—secure, safe." Here I adopt Heidegger's affective focus by using "security" to reference the comfort or assurance granted by certainty or confidence in one's assumptions. As long as these assumptions remain unquestioned, one may feel more affectively secure in certain ways; however, this certainty or assurance eliminates the possibility of a threshold—"the threshold bears the between"—where the "rift of difference" can be crossed, negotiated, and shared (1971, 204). Note that sharing does not and should not eradicate difference. Rather, the between (which, I stress again, is prior to subjectivity, or at a minimum co-originary with it) allows for difference to be sustained. Subatomic particles are only partially isolated. And so are human beings. The thresholds we share with each other, then, do not create but acknowledge our affectability, our always already shared-ness. They maintain a point of contact between one framework and another, granting each its ground. Again, "the threshold bears the between." Still, the between—the vulnerable space—allows crossing, remaking, and movement, such that the structures, and the threshold itself, may be reconstructed. Contingently, we arrange our frameworks, sustaining the empty space of the threshold so that what is constructed on either side can begin again.

including Stein's, to the breakdown of both the structuralist interpretation of language and the Kantian juxtaposition between noumenon and phenomenon.

In short, this shift puts the world in *motion*. Both objects and language are put into a fluid dynamic that is unstable, ever-changing, and relative to perception and experience. In rhetoric and composition broadly speaking, as chapter 5 discusses, questions of writing move from a rigid, linear path to a recursive practice which stresses not only the product and the process, but also the space and place which inform writer and text. Rhetoric, too, circles back onto Sophistic origins, with a revival of Sophistic history and practice (work cited herein).

My own work contributes to this revival, as chapter 5 expresses in depth, by foregrounding the contingency of our writing and communicating practices, advocating for a kairotic ontology that acknowledges our embodiment in spacetime, and encourages that we openly and productively respond to the shifting variables that compose our identity and communities. Through specific assignments, texts, and discussions, it is my hope that teachers of rhetoric and composition can pass this revival and revolution in our disciplines onto our students' ways of thinking and being, and to, in turn, be shaped by our students' responses.

In continental philosophy, we find similar responses to the breakdown of structuralist thinking. From Foucault's historicization of discursive practices and regimes of truth to Derrida's deconstruction, we see that the perception of truth itself, and the practices which perform and instantiate truth, are deeply enjoined to historical change. In addition to Foucault's much discussed published work on the subject, his last lectures—

particularly *The Government of Self and Others*—show practices and regimes of truth

emerging from shifting "forms of knowledge" and normativized behaviors, which

together constitute "the subject's modes of being" (2010, 41). It is not so much, then, that

humans discover truth and through historical progress adjust our modes of being

accordingly. It is rather that our modes of being are ontological effects of shifting

practices and norms, which are themselves responses to chance encounters and events. As

I have already discussed, these changes do not *devalue* our values; they make them

responsive to fluctuating conditions.

In addition to Derrida's *différance*, wherein meaning in symbols is incessantly

deferred, Wittgenstein (1986, 19) in the analytical tradition stresses that there is only a

"queer connexion of a word with an object," a relation forged out of logical necessity to

other relations for practical purposes. Other language theorists like Jean-Jacques Lecercle

(1990, 33) remind us that an exception to practical language boundaries "does not make

the rule it breaks invalid, it just breaches the frontier it marks." Similarly, Jung (2010b,

61) writes, "Yet the exceptions [to statistics] . . . are just as important as the rules.

Statistics would not even make sense without the exceptions." Concerning quantum

mechanics, Bohr (2010, 65) writes, "The lesson we have hereby received [is that] no

content can be grasped without a formal frame and that any form, however useful it has

hitherto proved, may be found to be too narrow to comprehend new experience."

Lecercle's optimism at the edge of the language frontiers, Jung's at the edge of statistics,

and Bohr's at the edge of classical mechanics exemplifies the response of many thinkers

in the twentieth century to significant upheavals in their fields, responses which signify

the *rise of rhetoricity*—an openness to the breakdown of interpretive frameworks, to the importance of what pushes boundaries, and to the reconstructive power of the exception.

Rather than lament the dissolution of meaning, for instance, figures like Lecercle and Derrida position language, like being itself, as radically open to possibilities—to different ways of living together, to a plurality of meanings not bound to one intransitive source. It *is* this possibility, this "finite opening to an incalculable chance," that many (post)modernists across the spectrum not only acknowledge, but productively respond to in their disparate but ultimately connected fields (Davis 2017, 444). Disparate because in many cases, such as with the analytic and continental philosophers, theorists are working in and through contending traditions which may or may not communicate effectively. Ultimately connected because much 20th century thought contributes to the shared end of putting a static world in motion, making fluid that which appeared solid. The universe, as it turns out, is not so rigid and predictable. And neither are language and its effects.

The (post)modern period, then, looks very much like a world of shifting ground. On the one hand, Roland Barthes (1981, 45, 43) writes that whereas classical language (poetry and prose) focused on the "decorative purpose" and order of words, modern poetry embodies a "violent and unexpected abruptness" which centers on "the contingency of words." Here, the modern poet "accepts the most momentous of all breaks [that from the language of society]," much as Stein does, in confronting the breakdown of classical (and structural) conceptions of language, thereby disclosing the relativity of language (Barthes 1981, 40). Dependence on custom and convention declines. Invention rises (1981, 45). Similarly, Derrida (1978, 4) traces the "uncertain, partial, or inessential"

picture of language at the poststructuralist turn, noting that the structuralist obsession

with language is *itself* a response to language intuited as such. The ambiguity of language

does not change during the (post)modern period. However, as Barthes and Derrida among

others illustrate, its ambiguous outpourings and more fully fledged manifestations do.

On the other hand, the rapid growth of science in physics especially, as Crease

and Goldhaber (2015) argue, teaches "us" to love uncertainty. "Us" because it is clear

that not everyone in the twentieth century embraces the uncertainty that figures like Bohr

and Heisenberg convincingly demonstrate. In fact, quite a few do not. Even Einstein, as

chapter 3 explores, "expressed his doubts [about quantum theory] early and often," hence

the famous "God doesn't play dice" quote (Crease and Goldhaber 2015, 191). Einstein

had infamous battles with not only physicists, Bohr in particular, but philosophers as

well, including Henri Bergson, who were more accepting of contingency and complexity

than he was.[5] However, such resistance is the exception, not the rule. The whole is an

ungroundedness which cuts across all fields, as we will see in due course.

For twentieth century rhetoric especially, as I.A. Richards (1979, 41-42) verifies,

"the world—so far from being a solid matter of fact—is rather a fabric of conventions,

which for obscure reasons it has suited us in the past to manufacture and support. And

that sometimes is a dismaying re-discovery which seems to unsettle our foundations." In

1938, when quantum mechanics is moving quickly to make these statements about

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[5] In her book, *The Physicist and the Philosopher: Einstein, Bergson, and the Debate That Changed Our Understanding of Time*, Jimena Canales (2015) explores the lively debates between Einstein and Bergson on the nature of time, noting that it was Bergson's notion of time which was more complex, subject-dependent (relative), and given to change.

physical reality, Richards is making them about language. In fact, he states that "an idea, or a notion, like the physicist's ultimate particles and rays, is only known by what it does" (1979, 5). Richards (1979, 10) recognizes "this universal relativity [of language], or, better, interdependence of meanings."

In Richards' statements we see the explicit coalescence of the sciences and the humanities, not only of their languages but also their perceptions. The modern rhetorician comes to know an idea (and language itself, through which ideas are generated and expressed) by its effects and relations. The physicist comes to know particles by what they do and by their relations. The ground shifts. The ground becomes *rhetorical*. The philosophical question of "What is?" is still present, of course. Yet its articulation is rhetorical: "What does it do? How does it work? What are its effects?" The rhetorical question precedes "What is?" such that the philosophical question is answered rhetorically. In other words, to ask "What is?" one must first ask, "What does it [language, particles, etc.] do?" And there is no better field *than* rhetoric—with its "ability to host controversy," to "keep questions and possibilities open"—in which to examine the significance of this rhetorical shift (Crosswhite 2013, 4-7). This examination, and the questions still unanswered herein, are critical not only for our ways of theorizing, but more importantly for our ways of being-in-the-world. Such is the task of quantum rhetoric before us: to think differently, but only insofar as our ways of thinking have the capacity to bear upon our ways of being.

With an incredibly brief glance at several major theorists from both shared and divergent traditions, we see an objective world coming apart at the seams—a world with

its meaning historicized, deferred, and forged out of practicality existentially and not essentially. This is the *ungrounded* ground upon which rhetoric can flourish. Shifting ground, not groundlessness. As Rilke (1989, 195), a modernist himself, writes, "We arrange it. It breaks down. / We rearrange it, then break down ourselves." We must be prepared to break our ground, to break ourselves, to address our ground and its foundations, to respond to the change beneath our feet, and to build new worlds through "rhetoric's architectonic power" (Crosswhite 2013, 90). This is the realm of rhetoric, and the historical moment in which to realize rhetoric's bearing on being itself. Now is the time "to allow the 'other' of philosophy and rhetoric to speak" (Murray 2017, 547).

What Conditions is Rhetoric Rising From?

Perhaps too much has been said about the historical tension between rhetoric and philosophy. The tension is already present in the framing of these terms: rhetoric *and* philosophy; philosophy *and* rhetoric. The journal *Philosophy and Rhetoric* asks "what it means to consider rhetoric a philosophical concept" (Hauser 2017, 374). We could just as easily ask what it means to consider philosophy a rhetorical concept. Indeed, this is exactly the binary that has been endlessly flipped, to the extent that Edward Schiappa suggests using the adjectives "rhetorical" and "philosophical" as opposed to their nouns to remind us "that we are talking about identifiable *attributes* rather than self-subsistent things" (Hauser 2017, 387). I agree. Notice though that even if rhetoric and philosophy are not self-subsistent things, the fact that we can identify *attributes* still intimates a difference. This difference is not nearly as stark as Plato would have it, or as several of

the poststructuralists would have it (notably, and surprisingly, Foucault, discussed in this chapter), but it is there.

I will spare an exhaustive review and address the specific tension between rhetorical and philosophical attributes that inform quantum rhetoric as both a rhetorical philosophy and a philosophical rhetoric. Its philosophy is rhetorical because quantum rhetoric takes as its key subject an "undeclinable rhetoricity"—as addressivity and responsivity, broadly speaking—which is the basis of all communication, symbolic and pre-symbolic (Davis 2017, 435). Its rhetoric is philosophical because what must be wrought through rhetoricity is an attunement to being as rhetorical—a rhetorically informed way of being. Ultimately, the militant policing of the rhetoric and philosophy boundaries becomes more productive for rhetoric than disruptive. Or perhaps the boundaries are productive precisely *because* they are disruptive. Because they complicate the questions of language and being, rhetoric and philosophy interrogate and make visible just how much language and being depend upon each other. That is, in part, what quantum rhetoric seeks to manifest.

Yet so often unity is preceded by division. As Stanley Fish (1995, 205) has reviewed, historically philosophy and rhetoric are pitted against each other through binaries largely preferential toward philosophy: "inner/outer, deep/surface, essential/peripheral, unmediated/mediated, clear/colored, necessary/contingent, straightforward/angled, abiding/fleeting, reason/passion, things/words, realities/illusions, fact/opinion, neutral/partisan." The rhetorician, glimpsed through these dichotomies, is superficial and biased, and his or her foundation contingent and relative. The philosopher

(or "man-philosopher," as Stuart Murray has aptly put it), on the other hand, is the

"seeker after truth and an objective observer of the way things are" (Murray 2017, 528;

Fish 1995, 205). This dichotomy will be taken up again in chapter 3 in the context of

classical vs. quantum mechanics, where some of the same distinctions and stereotypes

apply.[6] More than likely, any book one picks up on the subject (except those written by

self-professed rhetoricians) will portray rhetoric as the harlot, trickster, liar, and fraud,

and philosophy as the antithesis to the rhetorical subject, the white to its black. It is no

wonder, then, as Foucault (2005) notes, that Platonism eclipses alternative ways of being.

This distinction between rhetoric and philosophy is of course not natural. Rather,

it is the product of fierce narratological work against the rhetorical subject for the purpose

of philosophy. I have already discussed Plato's critiques of rhetoric in his *Sophist*. We

need not repeat his critiques in *Phaedrus* or *Gorgias* and the like at great length. Key to

quantum rhetoric, especially for its democratic application in chapter 5, is the issue of

access. Plato denounces the Sophists for "selling" their skills without discrimination.

This is true. Protagoras, as Guthrie (1971, 188) notes, taught persuasion to his students

without regard to its uses: "He turned the heads of the young by telling them that if they

only mastered the art of persuasion they could have the world at their feet: what they did

with it was their affair." One can understand Plato's concern. However, the criticism runs

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[6] Hence the "othering" of quantum mechanics by classical minds (notably by Einstein, a largely classical thinker). This conceptual and historical similarity is yet another reason quantum mechanics and rhetoric are so complementary. They are both othered by classical assumptions, suppressed and denigrated until their conclusions are undeniable, except that for quantum mechanics—due to its empirical object of study—its vindication is swift.

the other way. Plato, as Steve Fuller writes, restricted access to wisdom (and persuasion, which he was quite skilled at) to only those destined for the seat as philosopher-king. As such, Fuller (2017, 475) rightly accuses Plato of "monopoly intellectualism."

Because Plato won the history writing contest, we are bequeathed with his prejudices, his side of the coin. The task for quantum rhetoric is to show, in chapter 5, that the tension here is unnecessary. In the university, at least, we can teach each of our students not as philosopher-kings, but as capable contributors to a democratic society with their own role and voice. In this case, neither are we yelling the "rules" of persuasion from street corners, nor are we meeting clandestinely with future patriarchs to confer the power of government. Put simply, we are teaching effective, ethical speaking and listening (emphasis on *listening*) to ensure the reproduction of democracy. Idealistic, I know, and not quite as simple as it sounds. But it is nonetheless a way to begin to dissolve one ancient tension.

The primary criticism of rhetoric relative to quantum rhetoric regards its largely existential framework. Plato's antagonism toward rhetoric is summed up as follows: "the Sophists recognized only accidental as opposed to essential being, that is, the conditional and relative as opposed to the self-existent or absolutely existent" (Guthrie 1971, 193). Of course, Plato also levels the consistent attack that the Sophists are not interested in truth, evidenced by their ability to entertain arguments from both sides (Gorgias' *Encomium to Helen* and *Defense of Palamedes* are of course the classical examples). Taken together with the fact that the Sophists (Gorgias especially) "introduced poetic words for ornament and dignity," Plato regards the Sophists—after whom he fashions his

vision of rhetoric—not merely as *disinterested* in the truth, but as *disbelievers* in absolute truth, and hence a threat to his philosophical vision (Sprague 1990, 30). The Sophists are emphatically *not* philosophers, but more like politicians or rabble-rousers who "compose clever speeches" spawned from an audience's desires and prejudices (Poulakos 2008, 83). For Plato, "sophistical rhetoric is conceptually deficient. . . . Quite simply, what the sophists have to say is (philosophically) senseless" (Poulakos 2008, 80). Overall, rhetoric for Plato lacks substance. It is *too* fluid, too responsive "to the flitting events of the day" (Poulakos 2008, 80).

Responsive rhetoric is, but not in the trivial way that Plato deems. As we shall see, how rhetoric views the state of the cosmos (rhetoric's answer to the philosophical "What is?") has philosophical implications, so that even if we grant Plato's criticism that rhetoric is philosophically "senseless" (which I do not grant), this has nothing to do with rhetoric's bearing on philosophical issues. In other words, "Greek rhetoric had philosophical implications, with which not only the Sophists but Plato himself felt that they had to come to grips" (Guthrie 1971, 176). A number of these implications have already been discussed in chapter 1, especially with regard to the role of contingency and relativity in fashioning our responses to the unpredictable, to the "Black Swans" that inevitably confront us. Critical is the move from *mastery* to *mediation* (to navigate rather than control reality). Also essential is the recognition of difference within the same, which physics makes clear through diffraction (see chapter 3). Diffraction as a physical description of reality may seem philosophically senseless, yet the recognition of the other within the self—the *other* inside the *I*—bears on philosophies of subjectivity, to which

"[a]n obscene amount of political, ethical, and scholarly energy has been invested" (Davis 2010, 4). Still further implications will come to light.

The exchanges between philosophy and rhetoric are mirrored by those of classical and quantum mechanics, hence the relevance to quantum rhetoric. Einstein is the Platonic figure, shouting angrily that "God doesn't play dice." His interests are in the absolute, the fixed, and the permanent—in a world that is predicated on clear, formal laws, as was Plato's. But because physics' object of study is more or less empirical (in dealing with physical predictions, albeit on group behavior), it is more swiftly vindicated than rhetoric, which is still in the process of vindication as we speak. In fact, it is to no small extent *because* quantum physics is vindicated that rhetoric's ancient probabilistic and relativistic ground is tenable on the scale of the human and the inhuman or anahuman. It is thus upon this ground that rhetoric rises, and upon this ground that quantum rhetoric can be built. The Sophistic dialogue with philosophy *is* the classical dialogue with quantum mechanics. And it is in quantum mechanics that we can flesh out the Sophistic view eclipsed by Plato, as well as its implications for our being-in-the-world.

But first we must complete the circle of resistance. We have seen a glimpse of the ancient (ultimately productive and not so divisive) clash between rhetoric and philosophy. Yet this clash is by no means restricted to the ancient world. With all of philosophy's advances and reprisals through and against Plato, many philosophers in both the analytic and continental traditions have remained decisively inert in their approaches to rhetoric. Because this is also well-covered territory, let us take just one representative example: Foucault. Although any search on "Foucault and rhetoric" will turn up a

plethora of work, especially on rhetoric as related to Foucault's work on power, what is much less discussed is Foucault's narrow and stereotypical view of rhetoric, such that even his commitment to contingency (regarding subjectivity, regimes of truth and power, etc.) is not enough to overturn his assumptions of what rhetoric is and does. Here is a brilliant philosopher—with incisive insights into human subjectivity and historical practices in his final public lectures especially—who simply will not turn his critical eye to his assumptions about rhetoric. What's worse is that he probably did not care to, and was not expected to. Blind to his own rhetoric and especially to his philosophical heritage (which we glimpse more thoroughly in his final public lectures on Socrates' last words), Foucault is faithful to the Platonic portrayal of rhetoric as trickery, or "rhetrickery" (Booth 2004, 43).

Foucault, who is generally a careful and intricate thinker, is astonishingly simplistic and naïve when he turns to rhetoric. I dare say that is the "truth." A quick gloss of Foucault's descriptions of rhetoric reveals no more than Plato's Socrates would, and perhaps less. In *The Government of Self and Others* (2010, 236), Foucault writes emphatically that "philosophy is completely different from rhetoric. . . . . Rhetoric is precisely that which can both be deployed and be effective quite independently of the will of those who listen. The game of rhetoric is to seize hold of the listener's will in spite of itself, as it were, and to do what it wants with it. Philosophy, however, is not rhetoric." Philosophy may make use of rhetoric, as Plato's Socrates describes—insofar as rhetoric can be used to any ends—but philosophy is not *itself* rhetoric. Philosophy deploys rhetoric toward truth, but rhetoric may be used by anyone (not just a good man speaking

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well) to any end. This is why Foucault (2010, 334, 166) comes to the conclusion that rhetoric is a "body of recipes" which if not "indexed to truth" is mere flattery and passion. Rhetoric, in effect—with its "indifference to truth," and "being solely concerned with the effect to be produced on the soul of the listener"—is not something of substance (is not philosophical). In fact, inasmuch as rhetoric is mere flattery, "rhetoric is nothing" (358). Arriving at this conclusion through the *Gorgias* and *Phaedrus*, Foucault leaves such claims unchallenged and perpetuates the Platonic critique.

Foucault does not stop there. "Rhetoric is nothing for two reasons," he states (2010, 358). First, rhetoric is "not capable of attaining what it claims, that is to say, the good"; second, and consequently, being incapable of achieving the good rhetoric restricts itself to "imitation, pretence, and illusion of this end" (358). Moreover, Foucault goes further than Plato's Socrates because for Foucault the "non-being of rhetoric" is due to it not even amounting to a *tekhnē*, "a true art," since there is nothing *true* about it (359). Ultimately, Foucault (363) confirms the Platonic conception of rhetoric—"[Socrates] demonstrated that rhetoric is nothing"—and goes further by stating that rhetoric does not even qualify as a *tekhnē*. He clearly did not care to be consistent with his vision of rhetoric though. In the following lectures, *The Courage of Truth*, Foucault (2011, 13, 28) returns to saying, "[r]hetoric is an art, a technique." Socrates dies, of course, because he is not a skillful speaker (74).

Inconsistencies aside, Foucault's vision is exemplary of rhetoric's denigration over the past two and half millennia. In these last lectures, Foucault (2011, 129) maintains his Platonic route to rhetoric, identifying rhetoric with "persuasion" and

"flattery." This is confusing for a dedicated reader of Foucault like myself who, through

his earlier lectures, sees the distinction between rhetoric and philosophy begin to break

down. It is my intention to show briefly here how Foucault gets himself into trouble only

to, in the following lectures, abandon his line of thought entirely. When confronted with

the tenuousness of his own assumptions through his very own writing, he not only turns

his gaze, but also reaffirms his groundless claims.

In *The Hermeneutics of the Subject*, lectures delivered one year prior to *The*

Government of Self and Others, and two years prior to *The Courage of Truth*, Foucault

(2005, 348, 338) writes himself into a strange predicament, worth quoting at length:

> Epictetus said that philosophical teaching had to pass through *logos*, which
> implied a *lexis* and a number of choices of terms. . . . These two texts [Epictetus'
> *Discourses* and Seneca's *Letters*] show clearly that philosophical discourse is not
> in fact wholly and entirely opposed to rhetorical discourse. Of course,
> philosophical discourse is meant to express the truth. But it cannot express it
> without ornament. Philosophical discourse should be listened to with all the active
> attention of someone who seeks the truth. But it also has effects that are due to its
> own materiality, as it were, to its own modeling, its own rhetoric. So there is no
> actual separation to be made, but in listening to this necessarily ambiguous
> discourse the listener's work must be precisely to direct his attention properly [not
> to the ornament, words, and style, but to the *truth*].

As we can see, Foucault himself begins to dissolve the line between rhetoric, as he

conceives it, and philosophy, such that they run together in the process of speaking and

listening. Philosophical discourse, he writes, has its own forms of expression, lexicon,

and style—its own terministic screens. "So there is no actual separation to be made"

between philosophy and rhetoric. However, Foucault departs from this dissolution, which

even with its narrow conception of rhetoric is *still* inseparable from philosophy, by

attempting to maintain the distinction between rhetoric and philosophy as ornament and

truth, respectively. So, rhetoric may service philosophy, but it is nevertheless not

philosophy. Fair enough, if we maintain Plato's conception of rhetoric (which we do not).

But even if we uphold Foucault's approach to rhetoric, which chapter 1 has

already repudiated, Foucault is still in trouble. As he attempts to craft the rhetoric-less

discourse of *parrhesia*, or frank speech devoid of rhetorical ornament, he still cannot

seem to expunge rhetoric from the philosophical enterprise and its discursive methods:

> [W]hat is involved in *parrhesia* is that particular kind of rhetoric, or *nonrhetorical rhetoric*, which philosophical discourse must employ. . . . *parrhesia* should be defined within the space of this conflict [between rhetoric and philosophy] . . . *Parrhesia* is the necessary form of philosophical discourse since . . . when we employ the *logos*, there is necessarily a *lexis* (a way of saying things) and the choice of particular words rather than others. Therefore, there can be no philosophical *logos* without this kind of body of language with its own qualities, its own figures, and its own necessary effects at the level of pathos. But if you are a philosopher, it is not the art or *tekhnē* of rhetoric that is needed to control these elements (verbal elements, elements whose function is to act directly on the soul). It must be this other thing, which is both a technique and an ethics, an art and a morality, and which is called *parrhesia*. (2005, 368, emphasis mine)

What you are reading has been properly transcribed. To get around rhetoric, Foucault

must go as far as to claim that *parrhesia* is a form of "nonrhetorical rhetoric." It is not

mere craft, mere technique. It is "both a technique and an ethics, an art and a morality."

The trouble is that even if we grant that rhetoric is separated from philosophical discourse

in such a way, and even if we might develop a truly *plain speech*—as Foucault attempts

in his final three lectures—*parrhesia* is still rhetoric. In truth, *parrhesia* is rhetoric for the

reason Foucault recognizes it is: *parrhesia*, as plain speech, still involves a *lexis*. One

must still choose some words (Gertrude Stein might say that words also choose us) rather

than others, and string them together in some ways and not others. This is not mere

technique. This is the very foundation of symbol use, regardless of whether one is

formally trained in rhetoric or not. So, "there can be no philosophical *logos* without this kind of body of language with its own qualities, its own figures, and its own necessary effects at the level of pathos." *Parrhesia*, as philosophical *logos*, is not exempt. *Parrhesia*, as a form of discourse which to certain audiences appears "plain," is rhetoric. It *is* a way of saying and a way of seeing. It is a way of structuring reality toward (un)certain ends. Therefore, even though Foucault contends that the philosopher must attend to *parrhesia* rather than rhetoric for the ends of philosophical discourse, since *parrhesia* is in fact a form of rhetoric, precisely what the philosopher must do is attend to rhetoric in forming the philosophical *logos*.

Each of these recognitions can be preserved if we remain faithful to Foucault's view of rhetoric as the conscious, purposeful fashioning of a *lexis*, which is not antithetical to much rhetorical thought from the ancient to modern period (extending at least to Kenneth Burke). Quantum rhetoric, of course, views the formation of symbolic language as merely one fragment of rhetoric. If we admit *rhetoricity* into the range of rhetoric, wherein matter and meaning are entangled in a fundamental realm of responsivity (being-moved by others and by the entire world of matter shifting in, with, and through us), then Foucault's rhetoric becomes even more problematic. Rhetoric, from this angle, is working through the philosopher before he or she even speaks. Rhetoric, as *kairos*, is present in the material conditions to which the philosopher responds. Rhetoric is present in the faces and gestures which inform the philosopher's discourse. Rhetoric is present in the affects that are stirred in the philosopher by his or her prejudices, assumptions, and purposes. The philosopher, as such, is already listening and being

affected before composing. The philosopher is moved before moving. The philosopher, in effect, *is* a response to this movement, to the discourses and material-discursive entanglements which inform where the philosopher begins. "In the beginning was the Word," *rhema*, *ῥῆμα,* "utterance," rhetoric. In and from rhetoric the philosopher begins.

Unfortunately, though Foucault's own analysis begins to dissolve the distinctions and prejudices he inherits from Plato and Socrates, he cuts his line of thinking short, reverting to rhetoric as flattery in *The Courage of Truth*. In fact, his final lectures reveal a disintegrating and narrowing vision of rhetoric's range and worth. What rhetoric could have done for Foucault we can only guess, but his narrow notion of rhetoric is represented by more philosophers than not, including many twentieth century figures. Of course, there is present company excluded. Heidegger, as we have noted, positions rhetoric (at least in 1924) as the *hermeneutic of Dasein itself,* and as such contributes to the rise of rhetoric and rhetorical philosophy in the twentieth century across disciplines. Nevertheless, Foucault's vision of rhetoric is representative of the conditions that rhetoric continues to rise from and must rise from if it is to be more than a way of speaking—but also a way of *listening* and a way of *being*. Such is quantum rhetoric's trajectory.

We have now covered the general ground of relativity erected in the twentieth century across a diversity of fields, witnessing some of the conditions from which rhetoric must rise—mostly in its contention with a particularly influential brand of ancient Greek philosophy. Of course, though Foucault denigrated rhetoric, much of the

poststructuralist tradition, including Foucault, connects to rhetoric in productive ways.[7]

Naturally, any theory or practice which ungrounds the absolute and questions the

unquestionable is complementary and perhaps essential to rhetoric, insofar as it is

through the questioning of assumptions, traditions, and givens that rhetoric comes to be

the source of annoyance for Socrates and Plato, for whom there is only one side: the

Truth. Any theory, poststructuralism especially, which prioritizes contingency and

relativity in its methodological frame is rhetorical at bottom, whether or not this

rhetorical foundation is acknowledged.

We now to turn the Sophistic ground of quantum rhetoric. Because "rhetoric" and

"Sophistry" are not synonymous (there are many forms, schools, and approaches to

rhetoric), I anchor rhetoric specifically—though not exclusively—in Sophistic rhetoric

due to broad applications of relativity and contingency to human culture, language, and

experience. Once this relativity is linked concretely to the physical world in chapter 3,

and to the human as part and parcel of world, I argue that rhetoric and physics comprise

the *meeting point* between matter and meaning, between the atoms that make us into

humans and in some sense also *make* us human—contingent, responsive, in contact, and

rhetorical all the way down.[8] As Daniel Gross (2017, 509, 519) notes, Heidegger himself

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[7] See, for instance, Michael Carter's "*Stasis and Kairos*: Principles of Social Construction in Classical Rhetoric." *Rhetoric Review* 7.1 (1988): 97-112.

[8] I approach the notion of the human as part and parcel of world through the avenue of natural philosophy and Thoreau studies in my chapter "Ecocentering the Self: William Howitt, Thoreau, and the Environmental Imagination" in *Romantic Ecocriticism: Origins and Legacies* (2016). Here I argue that anthropocentrism vs. biocentrism is a false dichotomy. More than false, it is of no use, and is detrimental to our understanding of the (in)human. Though we cannot ignore "our" ecological footprint, we also cannot ignore our dependency

places *Physics* next to *Rhetoric* in the Corpus Aristotelicum, "away from the logical works and the *Poetics*," because *being-moved*—as the "shared ontology of all Being"—links rhetoric and physics as complementary fields oriented toward the totality of lifeworlds, of all human, inhuman, and anahuman relationships.

What is a Sophist?

In the *Protagoras* (351c), Socrates asks Protagoras, "aren't things that are pleasurable good, just in so far as they're pleasurable, leaving aside whatever else might come out of them? And with things that are painful, likewise, aren't they bad to the extent that they're painful?" Protagoras' response is part of the reason that Sophistry embodies quantum rhetoric. Protagoras responds, "I don't know, Socrates. I don't know if I can give you an answer that's as simple as the way you frame the question" (351d). Protagoras' response is emblematic of quantum rhetoric because it attends to complexity and relativity in both the question and the answer. "[S]o complex," Protagoras says in his great speech, "so variable a thing is what's 'good'" (334b). But perhaps Protagoras knows that such a complex, contingent view of goodness—and of the *nature* of all things—is less likely to be welcomed than a flat rule, an unchanging axiom of goodness itself. Perhaps this is

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on nature. I claim that dependency goes beyond survival and is linked, Thoreau indicates, to our experience as human beings. This chapter could be incorporated into quantum rhetoric due to its link between matter and meaning, between the human and inhuman or anahuman. We respond to nature (and *are* a response to nature), and nature responds to us, such that in order to secure both our survival and experience as human beings we must secure the environment which grants it to us—which grants *us* to ourselves. Therefore, I argue that we must develop the "inextricable link between biocentrism and anthropocentrism, an ecocentric way of being *in* and *for* and *because* of nature, one that negotiates a middle ground among science, rationality, and a spiritualized, morally inspiring environment" (2016, 167).

why he says to Socrates, "I wouldn't be surprised if you ended up being a pretty big name in philosophy" (361e). Perhaps this view—in conjunction with his general relativism, skepticism, and agnosticism—is why many of Protagoras' writings were burned, as we read from Diogenes Laertius and Cicero, and why the twentieth century opens up a way of thinking so often eclipsed by Platonic thought (Jarratt 1991, 1).

Complexity and relativity are also why quantum mechanics was reviled by many a physicist, including Einstein, as we will see in chapter 3. Despite Plato's successful vilification of the Sophists, and rhetoric *vis-à-vis* the Sophists, we can recover in Protagoras and the elder Sophists especially a ground for quantum rhetoric—or, rather, an *ungroundedness* for quantum rhetoric. We can recover the side of history that Plato had all but buried. We can see how Plato's "Church of Reason" was built on the graves of rhetoricians, which is "supported today by their graves. And when you dig deep into its foundations you come across ghosts" (Pirsig 2006, 215).

But ghosts are hard sought. What, exactly, *is* a Sophist? Edward Schiappa, contra John Poulakos, disputes that an "autonomous Sophistic tradition" exists (Hauser 2017, 474). Schiappa has "accused Poulakos and other pro-Sophists of falling for Plato's own rhetoric by treating a rather disparate group of characters as if they constituted a coherent school of thought" (474). In effect, Schiappa argues that attempts to anthologize the Sophists into a more or less uniform worldview stem from "their [the pro-Sophists] finding a common nemesis in Socrates" (474). Let me place myself squarely in the middle of this debate. I believe it's doubtful that we can call Sophistry a unified school of thought. However, there are *tendencies* among the Sophists that are significant enough to

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warrant the collective term "the Sophists." These tendencies, pace Socrates and his followers, are more productive for quantum rhetoric than any teaching from the other side of the historical isle.

Let me use Schiappa against Schiappa. There is no autonomous "school of Sophistry," just as there is no autonomous "rhetoric" and "philosophy" somewhere "out there" which all rhetorical and philosophical moves approach. There are, however, Sophistic *attributes* and Sophistic ways of thinking. Therefore, just as Schiappa advises that we use the adjectives "rhetorical" and "philosophical" rather than their nouns, we might do well to discuss "Sophistic" attributes rather than a school of Sophistry. Rhetoric, after all, is more interested in effects, characteristics, and practices than in essence. There may be no essence to Sophistry, but there are practices and effects which make a difference for quantum rhetoric.

But the answer remains to be heard: what *is* a Sophist? Can we ask a philosophical question about a divergent group of practitioners and thinkers? I think we can, albeit cautiously and for practical value. Edward Hussey (1995, 115) defines the *age of the Sophists*—with particular reference to the elder Sophists Protagoras, Gorgias, and Hippias—and *the Sophists* as follows: "The 'age of the sophists' means the period from 450-400, and 'the sophists' means the professors of the art of speaking who flourished during that period, and (sometimes) any other people who seem close to those professors in intellectual outlook and activities." Hussey's definition is inclusive and effective for quantum rhetoric's Sophistic grounding. Hussey (114, 116) also attends to the Sophists' "pragmatic attitude towards life, and a conviction that the proper study of mankind was

man," in addition to the Sophists' "general skepticism about any broad assertions going beyond ordinary experience" (as we will see with Hippias in particular). Most importantly, the Sophists responded to the "irreducible variety of human behaviour and character," positioning relativity and contingency at the center of their sensemaking structures, compared to Aristotle's peripheral treatment of contingency (114).

While it is true that the Sophists were generally professors of effective speaking, Plato's caricature of them falls short of realizing their commitment to education and public life. As Bizzell and Herzberg (2001, 22) note, the Sophists "were interested in exploring all branches of knowledge," but also realized that "absolute truth is not available to humans." Consequently, even though the Sophists believed in "the ability of the human mind to surmount almost all obstacles by intelligence"—and though they were well-versed in the disciplines, including cosmology, mathematics, astronomy, and the like—they nevertheless committed to *probable reasoning* rather than certainty (Hussey 1995, 114). The Sophists argued that "probable knowledge can be refined by pitting opposing positions against one another and examining arguments thus brought forward" (Bizzell and Herzberg 2001, 22).

The Sophists carried this reasoning into the educational arena. As the "first known exponents of the idea of 'higher education,'" the Sophists dubbed higher education a "second sun" which "heightens the natural abilities and enables men to use them more fully and effectively" (Hussey 1995, 115). As such, the Sophists believed virtue could taught and did not draw a genetic line in the sand regarding each person's capacity for excellence, political or otherwise. Skeptical of broad assumptions, committed to

education and practical action, well-versed in a variety of fields, and attentive to the production and reception of language and culture—what else can we call this group of people besides *rhetoricians*?

Yet the Sophists have their deficiencies which quantum rhetoric attempts to ameliorate through physics. Quantum rhetoric agrees with the Sophists on the centricity of human action and the study of the human, insofar as "[a]ssuming a posthuman stance is both imperative and insufficient since 'we' are the perps here" (Davis 2017, 434). In other words, it is crucial to realize that "we," as *plural* subjects with a "we-subjectivity" (to say it with Jean-Luc Nancy and Husserl, respectively), are capable of acting on a scale that incapacitates others' abilities to act, and which may annihilate the human and nonhuman alike. We are not *mere* atoms. We are atoms capable of bringing devastation to others—who are also irreducible to simple atoms—on a global scale. Therefore, it is still as crucial as it has ever been to study human thought and practice.

Quantum rhetoric understands the Sophists' attention to the practical affairs of humankind. However, the physics of quantum rhetoric problematizes the boundary that the Sophists draw between the nonhuman and the human. For the Sophist, the human studies nature as an object, but is not necessarily entangled with nature on a pre-symbolic level. True: we are not mere atoms. But we are *indeed* atoms. And closer attention to the nonhuman *in* the human, and to the matter shared and entangled between partially isolated subjects, can link "us" to the world in ways which are already given, but whose effects and significance are not fully understood. Apprehending our entangledness with the material world, we might—as we have seen through Einstein (2015, 61) in chapter

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1—acknowledge that we, too, are "non-rigid bodies of reference." Each body "receives the flow emitted around it," such that our bodies in no small way are not simply passing through the world, but are continuously remade by it (Serres 2000, 50). We *are* world. As bodies moving and being-moved, we must attend to this movement, to the forces which shape us, and to our responses to that which questions our complacency and challenges our inertia. This attention and response, at least, is what quantum rhetoric hopes to cultivate through rhetorical being.

Rhetorical being is cultivated through the Sophists in productive ways. In fact, we turn to the Sophists precisely because of the life practices which orient their being-in-the-world, and which are inherent to quantum rhetoric. If quantum rhetoric is an overarching yet provisional theory of the entanglement of matter and meaning, of materiality and language, of community and subjectivity, then *rhetorical being* is a way of being-in-the-world which is responsive to the entanglements quantum rhetoric reveals. Luckily, the Sophists reveal both these entanglements and the modifications to our life practices which must occur, given the real conditions of existence.

Still, the Sophists do not emerge in a bubble. As Guthrie (1971, 29-30) notes, the elder Sophists were influenced by the views of the Eleatic philosophers before them. Parmenides and Zeno, in particular, were destroyers of confidence in tradition and cultural assumptions internalized through heritage. As Hussey (1995, 108) writes, "The destruction of confidence was the making of Greek philosophy." Let us not forget that Socrates, too, was labeled a "[p]ublic destroyer of certainty" (126). Yet the Eleatics, holding to an absolute criterion of truth through clear, logical reasoning, align more with

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Socrates than the Sophists. Closer to the Sophistic tradition are the physicalist

philosophers—including Leucippus, Democritus, and Heraclitus—whose primary

doctrine was *flux*, or perpetual change. Later on, Lucretius would coin the term *clinamen*

to elucidate and defend the atomist position on the unpredictable swerve of atoms

generative of all things (to be discussed in greater depth in chapter 3).

Despite a shared tradition and understanding of nature and cosmology, which

clearly animate the relationship between the sciences and the humanities (rhetoric and

physics especially), the Sophists did not merely interpolate and reproduce Eleatic and

atomistic philosophy. One might also be tempted to argue that Sophistic life practices are

rooted in philosophical positions which precede them. As such, philosophy encompasses

rhetoric. Even if true, it would simply be a variation of the genetic fallacy to say that

because rhetoric originates from philosophy (Socrates coined the term "rhetoric," after

all), that therefore philosophy precedes rhetoric in principle. Yet rhetoric and philosophy

do not begin entirely through their historical origins. As Davis (2017, 443) writes,

rhetoric is already present as a "prelusive rhetoricity, which does not wait for human

consciousness or processes of signification." That is to say that at least on some

fundamental level (though there are profound differences of degree), rhetoric is present as

"rapport, relation, address, sending, donation, presentation" before these terms are coined

as such. They are present in the physical conditions of existence, from which the human

community emerges, and to which they are perpetually communicating with, against, and

through. Not only is the human always already a response to community, as Davis argues

in *Inessential Solidarity*, but it is also a response to matter itself. Of matter, through

matter, the human (and life itself, Davis says through Derrida) responds and addresses, always "radically open" to the lifeworlds around it (443). As such, rhetoric has always taken embodiment seriously. Visual rhetoric, including gesture and performativity, are symptomatic of rhetoric's attunement to the visceral, which the rational cannot—and is not meant to—take into account. Robert Pirsig (2006, 211) puts it best: "It [the disconnect between reason and feeling] can't be solved by rational means because the rationality itself is the source of the problem."

Rhetoric, understood as responsivity and addressivity on a (pre)symbolic level, precedes philosophy even if one maintains the inverse historically. Moreover, it is not difficult to see how the so-called "pre-Socratic philosophers" are rhetoricians in their own right, despite the fact that Corax and Tisias were likely the Western "founders" of rhetoric. Rhetoric does not belong to founders, whoever they might have been. Rhetoric does not belong to a school of thought—not even to the Sophists. Rhetoric is an irreducible condition of existence, a prior and necessary responsivity, a "primordial rhetoricity," without which there would be no "I" and no "we" (443). *Rhetoric is life itself.* Manifested as a relationality and responsivity through which life on the smallest level germinates, replicates, grows, reaches out, and makes contact—rhetoric describes a (pre)originary condition of response and address through which life can begin and continue to be, if and only if rhetorically (*response-ably*).

Why is Sophistry the Ground of Quantum Rhetoric?

There are a number of reasons why the Sophists are the ground of rhetoric understood as such, and of quantum rhetoric in particular. Let us address both. We must address both

insofar as quantum rhetoric attends to a view of rhetoric recovered in the Sophists, and not (*emphatically*) the classical rhetoric we inherit principally through Aristotle: the crystalline logic and neatly divided categories which make rhetoric method, or *tekhnē,* more than a way of being. Since our goal is to develop a "quantum" rhetoric, we must attend to the rhetoric to which the "quantum" is affixed, even though the terms are always already affixed to each other. What I mean to say is this: rhetoric has *always* been quantum rhetoric. Rhetoric has always attended to the entanglement of matter and meaning, to relativity, and contingency. Yet quantum mechanics puts us in a better position to apprehend the extent to which matter and meaning are entangled, to bear witness to the significance of entanglement, and to more critically attend to its effects.

We can see how *rhetoric*, as address and response, develops through the Sophistic attention to the production and reception of language situated "explicitly within the limits of time and space" (Jarratt 1991, 11). Davis' attention in her work to responsivity resonates with the Sophists' capacity to entertain both sides of an argument, repelling a "dogmatic inflexibility in the face of change" (Pirsig 2006, 237). The Sophist remains open to alternative views. The Sophist challenges the tradition of forefathers, as we will see through Hippias. And the Sophist remains receptive to the gradations of human thought and practice across cultures. One can understand Plato's, Socrates', and/or Plato's Socrates critique of the Sophists, insofar as they may at times claim to be "wise about everything" (nobody likes a know-it-all) and educate their students without always attending to the ends of their education (*Sophist,* 233c). Despite these critiques, we find

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in Sophistic rhetoric a contingent, responsive rhetoric *prior* to quantum mechanics, but nevertheless prototypical of it.[9]

Sophistic rhetoric grounds "quantum" rhetoric in several ways. We have discussed the philosophical question (What is?) and the rhetorical question (What does it—theory, practice, culture, etc.—do? What are the effects?). These questions are *descriptive* rather than *prescriptive*. We can only say that philosophy, more than not, asks certain kinds of questions, and rhetoric others. The kinds of questions that philosophy and rhetoric ask are effects of its frameworks. Philosophy wants to know a thing's nature, the *in-itself-ness* of some thing in the external world (the *noumenon* vs. the *phenomenon*, as Kant divides them). It is not the case that rhetoricians do not believe in object permanence. Rather, our *relation* to an object, considering human practice and experience, is no less important than the object in-itself. In rhetoric, relation takes precedence. We do not ask, Does a rock exist if no one is looking at it? We ask, How does the way I look at it affect my relationship with it? What effect does this relationship have? What are the effects of *any* given relation? More specifically, given a historical moment in spacetime, is a particular relation, practice, or interpretive framework effective, given some contingent need? Here lies the root of the divide. Being and doing.

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[9] I must stress once again that the sundering of the terms "quantum" and "rhetoric" is merely practical. I am convinced they belong together, and are two halves of the same thing (matter and meaning). I simply separate them in this segment to draw attention to the "rhetoric" which was present in the Age of the Sophists prior to "quantum" mechanics. "Quantum rhetoric" signals the historical emergence of a rhetoric at once eternal—pre-historical— which nevertheless *arrives* during specific historical moments. To separate "quantum" from "rhetoric" is thus methodologically advantageous, but not a "true" representation of the terms' relationship.

Nature and action. Not mutually exclusive, but complementary and evolving vectors of experience and life which more completely inform our ways of being and doing.

As rhetoricians, these "professors of speaking" attended not so much to the nature of language as to "the spoken word and its effects on men" (Hussey 1995, 118). Antiphon, for instance, "applied his science of persuasion to psychotherapy," curing disease of the mind through discourse as a doctor heals a body with medicine (119). Protagoras is not only credited as "the first to distinguish the tenses of the verb," but also the first "to expound the importance of the right moment [*kairos*]" in achieving effects through speech (Sprague 1990, 4). Gorgias gets in trouble with Plato and Socrates for precisely this reason, inasmuch as he "introduced poetic words for ornament" (Sprague 1990, 32). More importantly, Protagoras was "the first to give to the rhetorical genre the verbal power and art of deliberate culture and employed tropes and metaphors and figurative language," as well as many other devices which acted through language with intended effects (Sprague 1990, 43). Charged with being able "to make the weaker argument defeat the stronger," Protagoras appears morally neutral at best in the Platonic dialogues and other writings, and morally repugnant at worst (Waterfield 2009, 205).

As Waterfield (206) himself realizes, however, "This pejorative version of Protagoras' claim became a kind of slogan of the opponents of the Sophists," one which ignores "the clear value of the right to a good defence in court." The Sophists, after all, were concerned with practical speaking for practical effects, though not exclusively. Gorgias models such a defense in the *Defence of Palamedes*, as well as in the *Encomium of Helen*, wherein the audience's assumptions are undermined. This is why Jennifer

Richards (2008, 176) calls rhetoric "the beginning of critical thinking," of taking seriously the challenges to one's beliefs and positions. The discussion of effects will become more critical to quantum rhetoric in chapter 5. For now, suffice it to say that the concern for *effects*, particularly in language, has clear roots in Sophistic rhetoric. Concern for effects will be crucial in developing quantum rhetoric in first-year writing classrooms, and generally important in developing one's capacity to critically navigate assumptions and social forces.

Achieving effects through speech is precisely what gets the Sophists in trouble with Plato and Socrates. Protagoras, however, was not merely interested in effective speech. In Plato's *Protagoras* (318d) he states that, in fact, he teaches a student *prudence*: "By this I mean prudence in his own affairs, so that he may manage his own household in the best way, and prudence in the affairs of the city, so that he may be most effective in action and in speech in matters concerning the city." Two rhetorical concerns surface here: *effectiveness* and *action*, which we can merge somewhat with rhetoric's attunement to *phronēsis* (practical wisdom). Having briefly discussed effectiveness, let us turn to rhetoric's commitment to action.

We have already noted Jarratt's (1991, 27) statement that rhetoric is inexorably linked to *action*. Protagoras, for instance, "clearly recommends a course of action: a political education of each citizen of the *polis*" (Jarratt 1991, 26). In other words, when Aristotle advises that we wrench theory down from the clouds in the interests of *phronēsis,* rhetoric answers. Rhetoric says, Given the present conditions, practices, and frameworks, how might we act? Rhetoric insists that we act, despite the fact we cannot

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fully take into account each of the forces and frameworks at play (Mailloux 1989, 134).

Action as such is thus provisional and contingent insofar as the circumstances which

provoke action—the unique historical moment—are dynamic rather than static.

Circumstances change, and so must our responses. Rhetoric commands us to act in light

of our circumstances, though this light is partial, murky, and unsettling.

Protagoras' and the Sophists' concern for education as a force of action is

founded on two (reasonable) assumptions: that things are perpetually becoming

(incomplete); and that we, as perpetually becoming beings, can acquire virtue or

excellence (*arête*) and therefore improve the effects and quality of our actions. Attuned to

our actions, we tend to our becoming, to the ways in which we are approaching or

departing from virtue. Even Socrates recognizes this point in the *Protagoras* (344e) when

says, in contrast to Pittacus, "*Becoming* good is hard (I'll give you that)—hard, but

possible—bein' good, on the other hand, is *impossible*." Here, Socrates draws the

distinction between a static and dynamic state of affairs. In other words, "what Socrates

means is that we cannot *always remain* good," but that presumably through right actions

and thoughts we might embody goodness through action over time (Gonzales 2000, 130).

Given the fact that Socrates generally understands virtue to be inherent or inborn, this

presents a strange and more complex view of Socratic and/or Platonic virtue.

Attributed to Socrates or Plato, this view of virtue as not inherently inborn seems

a bit awkward, especially given the fact that the acquisition of virtue is a divisive issue

for Socrates and Protagoras in the *Protagoras*. After all, it is initially Protagoras (324c)

who states that "being good is something people can be taught and 'supplied with.'" My

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point is that if Socrates and/or Plato are indeed monopoly intellectuals, as Steve Fuller

has suggested, and if goodness is more characteristic of someone's birth traits than their

education and practices (as Plato's Socrates maintains), then emphasizing becoming—

and the very *possibility* of becoming good—suits the Sophists more than Plato or

Socrates. Goodness for the Sophists, especially Protagoras, takes root in action through

time, in acting and reacting—in doing *work*. Quantum rhetoric insists that we are

perpetually moving bodies, acting and being acted upon, with free will, but nonetheless

influenced and under pressure. Our responsibility, then, as rhetorical beings is to take

notice, to attune ourselves to our own actions and reactions, such that we might act more

nobly and virtuously before the chimeric faces of flux.

Taking action, attending to our attention, and responding responsibly all take root

naturally in the Sophistic view that virtue is acquired through *becoming*—approached but

never realized. A journey with no arrival. Socrates was right. *Being* good is impossible.

What's more, what goodness *is* must be asked again and again, in light of new

circumstances, in light of shifting historical conditions. Nevertheless, the rhetorician is

not here to ask, once and for all, What *is* goodness? Again, Protagoras says, "so complex,

so variable a thing is what's 'good.'" What we are to do is attend to how goodness

rearranges in spacetime along with the atoms that make all things. There may be some

best or effective way of approaching a baseline assumption of goodness through

philosophical positions such as utilitarianism or Kant's deontological ethics. Again, these

are primarily philosophical quests. Rhetoric asks us, rather, to take account of our best

theories, our *best* (not final) sensemaking structures, which philosophy can help us derive, and to approach that standard of goodness without ever arriving.

Appropriating Samuel Beckett's often quoted lines, rhetoric asks us to fail, but *fail better*. Quantum rhetoric—with its attention to contingency, relativity, and flux—stresses that both the literal and metaphorical ground under our feet shifts faster than we can plant our roots. Our roots dig down, but "the ground fails to come" Heidegger (1971, 92). In this abyss, quantum rhetoric reminds us that *being* good is impossible. That we must tend to our becoming, the often amorphous, rhizomatic ground which confronts the tendency toward complacency. Things are never settled. Atoms are in motion. We are too. *Solid* appears the table which is made of mostly empty space. Perhaps, then, and only then, face to face with perpetual *motion*, Burke might say, we confront the consequences of our *actions*—each of which casts ripples through spacetime, each of which *matters*.

The Sophists invite us to act, to educate ourselves, to participate in the *polis*. But each of these emphases corresponds to a greater framework of contingency and relativity which inform quantum rhetoric. In fact, they do not simply *inform* quantum rhetoric, but are precisely the reason that there can be any fundamental link between physics and rhetoric at all. We have already discussed through Protagoras how the "good" is variable and complex, in contrast to Socrates' and Plato's quest for the eternal Good and the True. I say Good *and* True because any absolute standard of goodness rests on the assumption that there is some final Truth which goodness corresponds to, or is an effect of.

For Antiphon, and the Sophists in general, truth is not so clear-cut. In *On Truth*, as Sprague (1990, 212) writes, Antiphon perceives "no permanent reality behind our

words, nothing in fact comparable to the results of seeing and knowing." In *Book I: Theory of Knowledge*, Antiphon (B 67) writes, "When a man speaks he expresses no single thing or single meaning, indeed the subject of his speech is not any single thing either of the things which the most powerful beholder sees with his sight or of the things which the most powerful knower knows with his mind." Anticipating Einstein's work, Antiphon and Critolaus state that "time is thought or measurement, not a real thing" (B 77). Of course, the arrow of time is real, but any objective standard of time is arbitrary. Similarly, speech is not meaningless, or entirely devoid of substance, but its meanings are varied. Its significations are dispersed and deferred. Relativity in the physical and (pre)semiotic dimensions: this is quantum rhetoric.

Protagoras (B 1), as we have noted, states that "Of all things the measure is man, of things that are, that they are, and of things that are not, that they are not." No clearer statement of relativity can be made. In *Theaetetus* (171a) Democritus and Plato take Protagoras to task, suggesting that "if every appearance is true, then the belief that not every appearance is true . . . will also be true, and so the belief that every appearance is true will become false." Yet Protagoras' statement simply demonstrates the Sophistic experience of traveling across cultures and witnessing vastly different cultural practices. From this body of experience and data, we can in fact derive a reasonably true statement that practices and truth differ, validating relativity. In other words, experience confirms a general conclusion about relativity that is itself not relative.

Sophistic contingency and relativity are outgrowths of the Sophistic attunement to *kairos*: emplacement in spacetime (Rickert 2013, 97). Emplacement means to start

from some place, a particular location, a culture, a moment. *Kairos* signifies time

unfolding. As a "radical principle of occasionality," *kairos* means no single response or

perception will do (qtd. in Poulakos 2008, 61). Instead, a rhetor contingently grounded in

kairos "responds spontaneously to the fleeting situation at hand, speaks on the spur of the

moment, and addresses each occasion in its particularity, singularity, and uniqueness"

(Poulakos 2008, 61). Kairotic rhetors, the Sophists, "confer meaning on new and

emerging situations" (61). That is to say that the Sophist navigates meaning contingently,

relatively, carefully—*carefully* because an attunement to *kairos* means an attunement to

change, and attunement to change requires attending to one's attention, taking care not to

apply old frameworks where they are no longer relevant. The Sophist must take notice of

the new, and reformulate responses accordingly.

Sophistic attunement to relativity through *kairos* leads necessarily to the value of

probable reason over *transcendental* reason. Given the partiality of human knowledge

and experience, and given the unpredictable flux of future events, the Sophists do not

grope toward eternal forms. Rather, to appropriate Rickert's (2013, 80) terminology, they

seek "the achievement of workable or probable truths in situations lacking certainty."

Probability, not certainty, is the basis of reasoning in quantum rhetoric. We find this

ground clearly prepared by the Sophists. The fact is that, for the rhetorician, action must

be taken. It is not sufficient to withdraw, as the ascetic does, into solitude (although at

times this feels like the only suitable option). The rhetorician acts despite uncertainty or

unfavorable conditions. Aristotle's perfect logic is sufficient only for a world which is

wholly predictable and apprehensible. Here, the "analytic knife," as Pirsig (2006, 277)

calls it, can divide up the known realities in cut and dry fashion, and act according to given variables.

But rhetoricians like Pirsig know that the analytic knife is only valid for the empirically or logically predicable world. In physics, this means the *macro*, the large scale phenomena that are observable in a clear, manageable fashion. For the micro world, and for the entirety of human behavior and endeavors, the analytic knife fails to cut cleanly. Its breaks are messy and rough, and cuts are made at grade cost. What is cut reflects, we say again through Burke, real observations. But the cut also deflects or tears away something else. For this reason we act in a world we do not fully comprehend. Consequently, our decisions presume probability, not certainty. It is, as we noted in chapter 1 through Belgian physical chemist and Nobel laureate Ilya Prigogine's (1997, 155) *The End of Certainty*, not about a point where we abandon reason, but rather a point where our very *definition* of reason must be expanded: "chance and probability are no longer a convenient way of accepting ignorance, but part of a new, extended rationality."

The Sophists work decisively through "the appeal to probability instead of fact" (Guthrie 1971, 178). The Sophistic appeal to "probable knowledge" is well-documented and essential to any introduction to the Sophists (Bizzell and Herzberg 2001, 22; O'Grady 2008, 51). Of course, we need not make Aristotle an enemy on this point. As Young, Becker, and Pike (1970, 4) observe, Aristotle's rhetoric "was concerned not with questions that could be answered conclusively but with questions that were open to debate; that is, it dealt with the probable rather than the demonstrably true." There are important differences between the Sophists and Aristotle which will surface in chapter 3,

especially in their responses to contingency and relativity. In short, Aristotle works to tame chance and contingency, while the Sophists, believing nothing of the sort can happen, respond and act within a chance framework. Fuller's (2017, 476) comparison of the Sophists and Plato is helpful here: "the Sophists saw politics primarily as a *game of chance* whereas Plato saw it as a *game of skill*. Thus, the sophistically trained client deploys skill in aid of maximizing chance occurrences, which may then be converted into opportunities, while the philosopher-king uses much the same skills to minimize or counteract the workings of chance." As chapter 3 discusses, Aristotle follows in Plato's footsteps. For him, as for Plato, one's knowledge and skill effectively navigates and tames chance, rendering randomness inert. It is for this reason that when Thales the philosopher builds a great fortune through olive presses by simply buying when the price was low and selling when high (during an unexpected harvest), Aristotle cites Thales' *knowledge* as the source of wealth: "*But from his knowledge of astronomy he had observed while it was still winter that there was going to be a large crop of olives. . .*" (qtd. in Taleb 2012, 174). Yet Thales' wealth came not from his superior knowledge, but from his *response* to and navigation of chance events. Such is the Sophistic way of being-in-the-world which some philosophers share, but which is rhetorical at root.

Probability is a crucial reason that Plato (like an ancient Einstein) condemns Sophistic approaches to truth and reasoning. Probabilities are inappropriate, in other words, because God doesn't play dice, because our world should be predictable, and thus knowable. Yet for many a Sophist, the opposite is true. Both of Gorgias' key works, *Encomium of Helen* and *Defense of Palamedes*, operate on the grounds of what probably

happened. Because in court case scenarios there is often no clear grasp of how events

unfolded, one must piece together variables and details into what is probably the case.

Gorgias epitomized probable reasoning, in each case taking a clear cut conclusion of guilt

and showing another possibility: that Helen and Palamedes are innocent. We must then

reexamine the evidence and ask, What probably happened? Such is the method of

Sophistic reasoning which in part gives rise to the courtroom logic we see today.

Why, for quantum rhetoric, is the Sophistic attention to relativity, contingency,

probable reasoning, and the like so significant? Simply because it is only from this

framework that *rhetorical being* is developed. We must remember that rhetorical being is

composed first and foremost of *rhetoricity*: a prior, necessary, and actively pursued

ungroundedness that is necessary for responsible response. Yet if in any given case we

are certain of our conclusions, and our conclusions are wrong (as they often are), then our

presumptions remain unshakable. A belief in certainty leads to conclusions which appear

certain. The consequences of the wrongness of that certainty are manifold: political,

personal, social, and so on. Yet if our reasoning remains probabilistic, we can be

convinced otherwise. If we might be convinced otherwise, we can *live* otherwise. The

first step to correcting wrong assumptions, then, is to reason within a revisionary

framework—a Sophistic framework.

Sophistry, as a revisionary and probabilistic approach to knowledge and being,

accomplishes a key end of quantum rhetoric: *questioning one's assumptions*. Only then

can reconstruction begin. Gorgias, Jarratt (1991, 20) writes, invites his audience to revise

history by undermining critical assumptions: that Helen and Palamedes are guilty of

treason as charged. Gorgias, however, by making the worse case appear stronger (or at

least probable) opens an avenue by which one's cultural narratives and assumptions can

be challenged. Utilizing *parataxis* and *antithesis*, Jarratt (1991, 21) states, allows

rhetoricians like Gorgias to muddy the waters of false certainty. An issue which seems

transparent now takes on a murkiness that is difficult but real. Such is the point on which

probable reasoning turns, and where reformulation occurs. Of course, rhetoric does not

end with probable reasoning, since "[t]he process of reformulation is itself rhetorical"

inasmuch as *all* meaning-making is rhetorical (Jarratt 1991, 26). Yet probable reasoning

opens up questions that might otherwise remain closed. Probable reasoning prevents

conclusions from being *beyond question*.

Unfortunately for the Sophists, many do not sit well with the uncertainty that

probable reasoning evinces, including the Sophists' well-known adversaries. Jasper Neel

(qtd. in Jarratt 1991, 3), writes,

> Rejecting Protagoras, Gorgias, and their followers as relativistic nihilists whose
> ideas would lead to social decay, sexual perversity, and anarchy creates a
> comfortable certainty for Western thought. By rejecting sophistry, Western
> thought can play itself out as a history in which truth, after much tribulation,
> triumphs through its own self-righteous virtue and then remains available in the
> West forever.

Whether Socrates, Plato, and their disciples had a conscious or unconscious scheme

toward a history of certainty is uncertain. It also does not matter. What does matter is that

in the crux of Western philosophy and rhetoric we have here a deep divide over one's

approach to reason. Quantum rhetoric sides with the Sophists because it sides with

reality: *reality* is uncertain. Reality is volatile, unpredictable, untamed, uncontrolled (but

mediated). The more the uncertainty, Taleb (2012, 7) writes, "the more confident these

'scientists' involved in predicting, modeling, and using PowerPoint in conferences with equations in multicolor background have become." Yet the uncertainty remains.

The Sophists, then, are a window into revision: a revisionary history, a revisionary approach to being. To decide, to be wrong, and to decide again. To appropriate a framework, to realize that said framework is no longer useful or appropriate, and to leave that framework to the side. This is the Sophist's life. Gorgias shows us a way. But so does the philosopher and Sophist Hippias. Few if any of his writings survive, and (once again) most of our information on Hippias comes through Plato. However, we know that Hippias is among the earliest thinkers of social contract theory, believing laws to be "a matter of human agreement, 'covenants made by the citizens,' as Hippias called them, instead of divinely sanctioned" (Guthrie 1971, 22). Although Hippias did uphold a vague form of universal law which maintained "the fundamental unity of the human race," he nevertheless critiqued human convention (*nomos*) for its tyrannical capacity, and took care to avoid tyrants "doing violence to nature" (Guthrie 1971, 285). In Hippias' words, "You men who are present, I think that you are all related and kinsmen and fellow citizens by nature, while convention, being a tyrant over men, forces many things on us which go beyond our nature" (Plato, *Protagoras* 337c–d). The *physis* and *nomos* distinction alluded to here suggests that a common nature links humanity. Reminiscent of Davis' "being-in-common," this nature rests on the fact that we all exist, have certain needs, and share something of a fundamental experience of being-in-the-world. But beyond being-in-common, to say

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through Davis again, there is no universally agreed upon "common-being," no *essence* which irrefutably unites humans under more specific laws and commonalities.

Insofar as convention is not universal, it is suspect. Hippias' notion of tyranny resembles Althusser's notion of ideology, for instance, which takes root in the institutions and apparatuses of everyday life, reproducing itself like a life form. For this reason, Hippias regarded convention with skepticism and criticism, such that any attempt to form a universal "we," Burke might add, triggers an alarm for the Sophistic thinker. This thinker then asks, *Who benefits* from the formation of this "we?" What is the grounding for a universal being? Is it the case that this common-being is beyond question? The Sophistic thinker distrusts convention precisely because, historically, the answers to these questions have not been favorable for a theory of universal being. Given the recent examples of Mao, Stalin, Pol Pot, Hitler, and the rest, it is perhaps easier than ever before to see the dangers present in the assumption of universalisms which present themselves matter-of-factly, and whose posture is incontrovertible. If a common nature is imposed upon us without question, as rhetoricians we must ask, *Who benefits?*

The Sophists, that is, challenge the "traditions of our fathers," which, as Euripides writes in the *Bacchae* (qtd. in Sprague 1990, 27), "no argument will overthrow." Tradition cannot be overthrown because it imprints itself as universal, properly basic, and obvious. And yet tradition *must* be overthrown if its usefulness and relevance expire. The Sophists aid us in doing the impossible: overthrowing the traditions and ideologies that are ceaselessly reproduced in the firmly entrenched apparatuses of our everyday lives, if and only if we question our assumptions. Such is where relativity, contingency,

uncertainty, probable reasoning, and the challenging of conventions leaves us: in a better

position to attend to our attention, beliefs, positions, grounding, and practices.

Notice that questioning assumptions and contending with tradition does *not* lead

one off the rails into groundless relativity. No Sophist in good conscience could advocate

such a position, since the entire Sophistic enterprise—if there was any unified

movement—was to prepare citizens intellectually and communicatively for democratic

participation. It is not unreasonable to say that groundless relativity is more likely to

produce nihilism than democracy. Therefore, even Protagoras, perhaps the most

relativistic of the Sophists, affirmed that "although all impressions are true for the person

holding them, some are undoubtedly 'better' than others—'better' in the sense,

necessarily, of 'more useful', 'more effective'" (Dillon and Gergel 2003, 11). It is true

that Protagoras holds no absolute standard of goodness, leaving him "with the concept of

'the most advantageous'" (11). Nevertheless, though seeking the effective, better, more

advantageous view may seem dubious and less rarefied than the pursuit of Truth, it is also

an approach less susceptible to the dogmatism that endures through universalism.

Protagoras concludes, "some things [are] better than others, but in no way truer" (Plato,

Theaetetus 167b). In *Outlines of Pyrrhonism*, Sextus Empiricus (qtd. in Dillon and

Gergel 2003, 13) summarizes that "in consequence of this he postulates only what

appears (*ta phainomena*) to each individual, and thus he introduces relativity (*to pros ti*). .

. . What he declares, then, is that matter is in flux." Through Protagoras and the Sophists

we apprehend something "about the fluidity of matter and about the subsistence in it of

the reason-principles of all phenomena, these being non-evident matters which cause us to *suspend judgment*" (13, emphasis mine).

We arrive at quantum rhetoric. A solid, predictable world produces solid, dependable, repeatable results. From the ideal forms—fixed and immaterial—the majority of Socratic philosophy proceeds. But *matter in flux* produces "non-evident matters," which, in turn, "cause us to suspend judgment," opening opportunities for circumspect action. From the point of *flux*, reminiscent of Heraclitus, the Sophists begin. Rhetoric begins. And so it is that philosophy and rhetoric pivot and divide on a question of *ground*. Quantum rhetoric begins with Sophistry because quantum rhetoric, anchored in flux, asks us to view ourselves as part of the entire quantum world, as continually molded and remolded through material and discursive processes beyond mastery. This contingent, variable ground places our perspectives in relation to each other. It does not always subvert tradition and values, as a deconstructionist philosophy might intimate. Rather, it puts our values into motion, suggesting that, as a "bulwark against tyranny," we question the unquestionable, and opt to feel a little less certain, a little less comfortable, despite the unsettling nature of the rhetorical position (qtd. in Guthrie 1971, 23). In this way, we might live more rhetorically, and thus more responsibly.

Such is the Sophistic task, and the task of quantum rhetoric. Rather than breathing theory into the clouds, the Sophist returns to the cave, not with the Truth, but with a more effective and responsible human practice given real, shifting conditions of existence. For the Sophist, the elite intellectual of inborn virtue is not the audience. The masses are. As such, the Sophist reaches his or her audience not through private dialectic, but through

the educational system, including public lectures. Focusing on education and the university in particular (see chapter 5), quantum rhetoric hopes to work in and through the educational system (though not exclusively) to shape the roots of *rhetorical being*—roots that guide rhetorical responsivity and responsibility. We can better shape such roots by attending to the Sophistic tradition of education in particular.

The Sophists—the first teachers, the teachers of virtue—make clear that education is a public good, and a public force. The term "Sophist," after all (aside from its main root in *sophia*, or wisdom), is traced to *sophistes*, a title commonly applied to poets: "for in Greek eyes practical instruction and moral advice constituted the main function of the poet" (Guthrie 1971, 29). "Probably it was assumed that a *sophistes* would be a teacher," Guthrie (29) continues, citing Euripides on why poets deserve admiration: "For his wit and good advice, and because he makes men better citizens." As Aristophanes explains through Aeschylus (qtd. in Guthrie 1971, 29), "as schoolboys have teachers to show them the way, so poets are teachers of men." Rickert (2013, 64) mentions other connections between Sophists and poets, which Socrates recognized, as well.[10] Despite Plato's successful caricature of Sophistry (and poetry), the meaningful connections between poetry, Sophistry, and education saturate ancient Greek philosophy and thought, and are fruitful for quantum rhetoric.

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[10] The connection between Sophists and poets will become more prominent in chapter 4 with Gertrude Stein's occupation of both roles: rhetorician and poet. By loosening connections between words and things, Stein teaches us through her poetic practice to question whether or not our words and frameworks are interpretations rather than objective structures of reality. In this way, Stein undermines assumptions through poetry: a deeply rhetorical task embodied uniquely in poetic form.

Outside the Greek tradition but influenced by it, Heidegger sees poets in a similar light as those who retrace the track to the sacred, holy, or divine, insofar as poets "more sayingly say" (1971, 140). That is, their words are more *impactful*, more likely to *effect* change (notice the rhetorical verbiage here). "[M]ore daring by a breath," Heidegger (1971 140, 114) writes through Rilke, poets are those who—in a destitute time—reorient our sensemaking structures away from a world confined to a "calculated market value," or to a market-driven (we might say *neoliberal*) life. As such, the poets, the Sophists, play an essential role in developing one's way of being. The Sophist-poet prepares the way toward thinking, being, and participating in a democratic society. The Sophist-poet educates not a select few for the purpose of governing others. Rather, he or she educates the masses so that they might more effectively and virtuously govern themselves.

For the Sophist, then, education is the principal path toward virtue. Education is the means by which we acquire what is not inborn, but only developed through instruction and practice, as Protagoras maintains. Virtue is not something that "develops all by itself" either (Plato, *Protagoras* 323c). Rather, Protagoras continues, "it comes about in people, when it does, by care and effort." As is well known, Aristotle adopts Protagoras' emphasis on education and practice into his *Nichomachean Ethics*. True, it is the case that certain fundamental hereditary traits be present for certain qualities and virtues to develop. One must not, for instance, have particular conditions or diseases which inhibit the mental faculties. Protagoras gives this much to Socrates. Overall, however, once basic genetic conditions are met, education and practice bear the burden of becoming good. By "care and effort," we craft our way of being.

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Protagoras is not an exception to Sophistic attention to education, but representative of it. Antiphon, for instance, places education on the pedestal of all human activity. He writes,

> First among human activities, I think, is education. For when a man makes a right beginning of any matter whatsoever it is likely that the end, too, will come right. For example, according to the seed which a man sows in the soil so must one expect the crop to be. In the same way, whenever one plants a good education in a young body it lives and increases for the whole life, and neither rain nor drought destroys it. (B 117)

For Antiphon and the Sophists, education is the bedrock of becoming. Education is the ground upon which human virtue takes root. In Protagoras' famous argument with Socrates over the effectiveness of the penal system, Protagoras points out that one would not discipline, would not punish, if it were not for the belief that one can learn to improve one's actions. If we cannot become good, "What's the point of punishing people who do wrong?" (Plato, *Protagoras* 324a). More importantly, if virtue can be taught, why not prioritize education to prevent the penal system's intervention? Dillon and Gergel (2003, 26) distill the Sophistic position: "society in general is perfectly capable of instilling an adequate degree of these virtues in all citizens, [and thus] teachers like Protagoras still have an important role in bringing these capacities to a high degree of excellence."

Quantum rhetoric, with its attention to *rhetorical being*—which, through its notion of *responsible response*, is inclusive of the Sophists' *virtue*—draws from and builds on the Sophistic focus on education. Quantum rhetoric insists that virtue, excellence, and the capacity to productively contribute to a democratic society is critical to the human project, and to any approach to living rhetorically. Uniting physics and rhetoric is one step, but an enormous step, in realizing our situatedness in space and time,

in perceiving the contingency of our ideology and sensemaking structures, in recognizing our affectability from within and without (affected by other bodies in motion), in coming to terms with the fact that we are never merely *individuals*, but *responses* to others, and in listening to this contingency, thus taking it into account in all that we say and do.

Education is where we can better cultivate this awareness since, as Althusser (2014, 251) writes, the educational apparatus instructs children from an early age five days a week, eight hours a day, up through adulthood (God knows how long the educational apparatus has graduate students in its purview). Accordingly, as Giroux (2011, 137) writes, the educational apparatus, and higher education in particular, is uniquely situated to prioritize "civic values over commercial interests." In this way, quantum rhetoric—as a framework which unites matter and meaning *toward* a more meaningful, critical being—speaks in and through the educational apparatus. It hopes that, through education and practice, we might respond more responsibly as citizens, as human beings bound to and emerging from each other.

Here we come to the crux of the issue. As we discussed through Steve Fuller, the Socratic and Sophistic tradition differ not so much in their approach to *truth* as in their approach to *education*. To educate the future politicians, the leaders and aristocrats, or to educate the masses? If Foucault (2011, 107) is correct in claiming that Socrates viewed democracy as the disease of "false opinion," by which he was convicted and killed, it is easy to see where the Sophists and Socrates differ. Socrates' belief that democracy is a disease is epiphenomenal to his belief that virtue cannot be taught. In effect, inborn differences determine our capacity for excellence. For the Sophists, this is manifestly

false. Antiphon, for instance, (B 91) represents the Sophistic position when he writes, "by nature we all have the same nature in all particulars, barbarians and Greeks. We have only to consider the things which are natural and necessary to all mankind. These are open to all in the same way, and in these there is no distinction of barbarian or Greek. For we all breathe out into the air by the mouth and the nose, and we <all eat with our hands>." We all, in other words, share a fundamental being-in-common which unites us amongst our differences—differences which are fundamental to our relationships, but not to our equality as human beings.

Here, Antiphon also formulates one of two essential pillars of democracy: *isegoria* (equality of speech). Together with *parrhesia* (free or frank speech), *isegoria* comprises an imperative for the (re)production of democracy, insofar as each person's speech must be taken equally, and must be welcomed in full. That "there is no distinction of barbarian or Greek" is a view incumbent upon the would-be educator of any public. Otherwise, why go through the trouble? What Antiphon represents is an open process whereby Sophists "sell wisdom *to all comers* without discrimination—by charging fees they have deprived themselves of the right to pick and choose among their pupils. So it is said to involve lecturing before 'all kinds of people'" (Kerferd 2001, 25). Therefore, while one can understand Socrates' and Plato's hesitation at the mingling of money and education, this process nevertheless provides citizens of undignified ancestry an opportunity to develop virtue. Of course, one must agree that because access has a charge, such fees must be reasonable, otherwise a similar aristocratic system may be produced. Those who have the most money may well buy the best opportunity for an

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education (one cannot *buy* education outright). Still, if one maintains a reasonable charge for one's time, knowledge, and skills, one sustains the conditions for an educated, participatory public (to be further discussed in chapter 5).

Protagoras formalizes an approach to state education on such principles. Robin Waterfield (2009, 211) recounts Protagoras' belief that "the basics of education should be available to all (that is, all young males, presumably) and paid for by the state." Considering the cultural and historical circumstances, Waterfield (211) characterizes this position as "truly remarkable," and in plain contrast to some of Protagoras' interlocutors, Socrates included. No mere moral relativist but a "utilitarian democrat," Protagoras "would have upheld the greatest good of the greatest number" (209). His position on education is thus consistent with his moral framework, constituting the basis for an effective democracy. "The noble purpose of the education Protagoras offered," Waterfield (209) continues, "was presumably to bring about such an improved state of affairs." That is, "some beliefs are better than others," and in fostering community and responsibility a state-provided education is conducive to social harmony (209).

For quantum rhetoric, the Sophistic emphasis on education becomes important in chapter 5, wherein education (especially higher education) is a means by which to foster not only social harmony broadly speaking, but also social responsivity and responsibility. Education becomes an avenue toward rhetoric as *listening, receiving,* and *responding responsibly* to the difference inherent in any democracy. Beyond democracy, quantum rhetoric takes up the Sophistic focus on education for its attention to our daily actions, virtues, and ethical commitments to one another. Ultimately, education is not an

institution, but a community which comes together in some form to attend to its everyday practices, its ways of being. In harnessing Sophistic approaches to education, quantum rhetoric gathers its rhetorical roots, stretching them toward *rhetorical being*—a way of responding responsibly. This goal cannot be accomplished without a groundedness in education. For education is our commitment to each other—our response to the calling to live with one another.

So it was that Protagoras (T17), as Diodorus of Sicily recounts in *Universal History* (qtd. in Waterfield 2009, 219), "used this piece of legislation to improve the condition of illiterate people, on the grounds that they lack one of life's great goods, and thought literacy should be a matter for public concern and expense." Protagoras thus preached *and* practiced his commitment to education and community, and in doing so lived rhetorically. *Action*, after all, constitutes any rhetorical work, in part through *phronēsis*—the practical wisdom that makes theory work by *doing* work. Quantum rhetoric takes root, then, in education because education provides—through literacy, critical thinking, questioning, dialectic, and the like—an avenue toward activeness. Not just activeness, but effective, informed action. For education to work and do work, we must once again say through Protagoras (Plato, *Protagoras* 323a), "surely everyone has the ability to partake in this sort of [political] excellence, or there would be no cities."

Becoming Sophists

In closing we ask, *Why the Sophists*? Why not the Platonists? Why not the Eleatics or another group of philosophers or rhetoricians? Put briefly, the Sophists provide an effective grounding for quantum rhetoric: they exemplify a *responsivity* to their

surroundings, to factors such as culture, time, place, and affect; they emphasize this *responsivity* over persuasion and argumentation, or at the very least emphasize responsivity *prior to* (in and through) persuasion; they attend to contingency, unpredictability, fluidity, and relativity in their ways of being and communicating; in doing the above, they move rhetoric from an art of *speaking* to an art, or way, of *listening* and *responding responsibly* to difference; they exemplify a commitment to *action*, work, doing, and practical wisdom, wrenching theory down from the clouds; this work consists of a dedication to *education* as the framework through which a participatory democracy is developed and sustained; in and through education and communication they challenge *established ideology* and sensemaking structures, the "traditions of our fathers" which are never beyond question; and, finally, they attend to the development of *rhetorical being*, that way of being constitutive of each of the above factors and more. In short, the Sophists show an alternative to the rigid reason of Socrates and his disciples, a tradition of responsible response which does not seek to know absolutely and truly, but, rather, to respond effectively and responsibly to the dynamic unfolding of events that test and stress our interpretive frameworks, and call us to gather ourselves toward the edge—the precipice upon which we break down our structures and begin again. Through the Sophists, we learn to reinvent World, our communities, and ourselves.

Yet Sophistry cannot be recovered on just any ground. Classical rhetoric had to die in order for Sophistry to be reborn. And classical rhetoric died, as we have discussed through Bender and Wellbery, when in the modern era especially very basic assumptions

about language and reality began to break down.[11] With those assumptions about a rigid, predictable, and controllable reality broken, Sophistry can be reborn. Rhetoric beyond Socrates, Plato, and Aristotle can rise. Quantum rhetoric is such a rhetoric. But quantum rhetoric is not simply a rhetoric among rhetorics. It is a rhetoric which strives toward the totality of all possible rhetorics insofar as quantum rhetoric unites matter and meaning, materiality and language, into a more unified and complementary whole.

(Post)modernism provides essential, uncertain ground for quantum rhetoric. But quantum rhetoric, in recuperating the Sophists, does more than emphasize or accentuate (post)modern practices and frameworks. Through Sophistry, rhetoric shapes its attention to responsivity, not only breaking down ineffective and unjust sensemaking structures, but also reinventing them through public deliberation, reasoning, and listening—all made possible and beneficial through a public commitment to education. The Sophists, in other words, are not content to deconstruct, as many (post)modernists are. The Sophist as rhetorician must, *because* he or she is a rhetorician, offer a course of *action*. The Sophist must steer the course, must offer a way out.

To end on John Dewey, a pragmatist and thus rhetorician in his own right, we might say that rhetoric provides what John Dewey sought in his *Reconstruction in Philosophy*. Dewey (2004, 44) writes that "the intellectual task of the twentieth century" is to shake "the dogma of fixed unchangeable types and species, of arrangement in

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[11] Of course I do not mean that classical rhetoric no longer exists, or is no longer in use (quite the contrary). Nor do I mean that, for my project to be viable, classical rhetoric must die. Such statements are simply false. What I mean is something much more modest: that rhetoric can longer be encompassed as a technology toward Truth, or as a technology in general. Perhaps what has truly died is the *notion* that rhetoric is *just* a *tekhnē*.

classes of higher and lower, of subordination of the transitory individual to the universal"—in other words, to make fluid what is rigid and inflexible and totalizing. What natural selection does for biology (making the random and contingent the constellating force of nature) quantum mechanics does for physics, and Sophistry does for Aristotelian rhetoric.

Yet Sophistry is still more. Dewey (2004, x) quotes the English scientist C. D. Darlington, who writes that what we truly need to shatter rigidity in all its forms, in theory and in practice, is a "Ministry of Disturbance, a regulated source of annoyance; a destroyer of routine; an underminer of complacency." May I suggest that Sophistry— with its fertile ground of relativity, uncertainty, contingency, and the ability to see issues from multiple points of view—is precisely what Darlington and Dewey have in mind. Sophistry, as a "Ministry of Disturbance," unsettles our positions not through uprooting values, but through *ungrounding* and *regrounding* values contingently. Consequently, Sophistic rhetoric, as Dewey (2004, 83) would command, insists that "notions, theories, systems, no matter how elaborate and self-consistent they are, must be regarded as hypotheses. They are to be accepted as bases of actions which test them, not as finalities. To perceive this fact is to abolish rigid dogmas from the world. It is to recognize that conceptions, theories and systems of thought are always open to development through use." To treat a theory or practice as "always open to development through use" is to treat theory and practice rhetorically (how does theory and practice *work*; what does it *do*?). What Dewey is looking for, in order that we might reconstruct philosophy and rigid frameworks, is *rhetoric*. Not all rhetoricians are up to Dewey's task. But the Sophists are.

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Quantum rhetoric, in recuperating this ancient ground of contingency and probability, roots itself in the ungroundedness of Sophistic rhetoric: a way of realizing, internalizing, and living by the fact that we are contingent, spacetime-dependent beings.

For Dewey (2004, 83), "we must be on the lookout quite as much for indications to alter them [theories and systems] as for opportunities to assert them. They are tools. As in the case of all tools, their value resides not in themselves but in their capacity to work shown in the consequences of their use." Once again, if value resides in the capacity of our theories and systems "to work," and to *do work* as tools do, then we are thinking rhetorically. And if we are thinking rhetorically, doing as the Sophists do, then we are more likely to *live rhetorically*. To live rhetorically, to cultivate rhetorical being, is what quantum rhetoric hopes to accomplish in the unification of matter and meaning, materiality and language, reason and resonance, speaking and listening, thinking and doing. To say again through Rilke, "You must change your life."

CHAPTER 3

COSMOLOGICAL SOPHISTRY
SOPHISTIC RHETORIC AND QUANTUM PHYSICS

The discoveries of modern physics . . . have shattered the absolute validity of
natural law and made it relative. Natural laws are *statistical* truths, which means
that they are completely valid only when we are dealing with macrophysical
quantities. In the realm of very small quantities prediction becomes uncertain, if
not impossible, because very small quantities no longer behave in accordance
with the known natural laws.

—Carl Jung, *Synchronicity*

Through multiplication upon multiplication of facts, information, theories and
hypotheses, it is science itself that is leading mankind from single absolute truths
to multiple, indeterminate, relative ones. The major producer of social chaos, the
indeterminacy of thought and values that rational knowledge is supposed to
eliminate, is none other than science itself.

—Robert Pirsig, *Zen and the Art of Motorcycle Maintenance*

Of course there is in a case like that just considered no question of a mechanical
disturbance of the system under investigation during the last critical state of the
measurement procedure. But even at this stage there is essentially the question of
*an influence on the very conditions which define the possible types of predictions
regarding the future behaviour of the system.*

—Niels Bohr, *Atomic Physics and Human Knowledge*

In the 1920s and 30s in particular, the nature of quantum mechanics turned on the

question of *indeterminacy*. In a classic disagreement, two of the twentieth century's most

famous physicists—Werner Heisenberg and Niels Bohr—settled this question

(eventually). At first, both Heisenberg and Bohr "conceived of indeterminacy as a lack of

precision in applying classical concepts" (Krips 1990, 25). That is, indeterminacy was a

kind of *ungenauigkeit*: imprecision or inexactness (1990, 25). In contrast to

indeterminacy, imprecision or inexactness implies the hope for precision. Precision can

be attained; it's just that our tools are not powerful or well-attuned enough . . . *yet*. As we know already, quantum mechanics veered in no such direction. Therefore, though Heisenberg and Bohr shared an early approach to indeterminacy, their paths diverged relatively quickly. The initial path of indeterminacy *qua* imprecision represents the classical approach. Bohr's later path instantiates the quantum mechanical approach.

Around the time of Bohr's famous 1927 Como lecture, also his first published lecture on complementarity, Bohr takes a different approach to indeterminacy. Whereas Heisenberg continued to explain indeterminacy as "a lack of measurement," hinting at the assumption that a classically conceived science would one day offer a complete description of the natural world, "Bohr took the indeterminacy to be the cause of lack of measurability, i.e. Bohr thought that no precise value can be obtained on measurement only because there is no precise value to be measured" (Krips 1990, 25). In 1930, Heisenberg (qtd. in Krips 1990, 26) converges with Bohr, writing, "The indeterminateness is to be considered as an essential characteristic of the electron, and not as evidence of the inapplicability of the wave picture." In other words, indeterminateness exists not because our theories need refinement and correction. Rather, indeterminateness inheres in nature's smallest units.

Now, talk of electrons and measurements may seem the physicist's business. Why should we in the humanities and social sciences, or the general public for that matter, mind physicists' disagreements over subatomic particles? After all, few of us will probably ever see a laboratory. None of us will likely work in a particle collider, where knowledge of such subatomic properties is crucial. Yet the importance of this shift from

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imprecision to *indeterminacy* cannot be overstated. In fact, this shift *is* the shift from the classical to the quantum. Once we admit that indeterminacy is itself a property on the smallest scale, a property that will not be muted or subdued as exception, then we begin to look at the world through different eyes. We begin to see that quantum mechanics is "not simply a continuation of the past; it seems to be a real break in the structure of modern science" Heisenberg (2007, 3). This realization means that it is not deconstruction or its progenitor poststructuralism which gives birth to uncertainty. Rather, as Robert Pirsig (2006, 142) states in the epigraph,

> [t]hrough multiplication upon multiplication of facts, information, theories and hypotheses, it is science itself that is leading mankind from single absolute truths to multiple, indeterminate, relative ones. The major producer of social chaos, the indeterminacy of thought and values that rational knowledge is supposed to eliminate, is none other than science itself.

Though Pirsig goes clearly beyond what Heisenberg and Bohr establish, it is nonetheless crucial to realize the core of Pirsig's claim: that science places indeterminacy at the center of creation. From this indeterminacy, other indeterminacies can and do follow. For now, we will examine how quantum rhetoric proceeds from this break, this departure from the classical picture.

In a letter to Carl Jung, Nobel quantum physicist Wolfgang Pauli (2014, 94) writes that the complementarity of the wave and particle picture (discussed further in chapter 4) shows that "science, being no longer classical, is for the first time a genuine theory of becoming and no longer Platonic." The divergence between being and becoming, stability and movement, is discussed later in this chapter. For now, notice that a shift from being to becoming is in so many ways a shift from *philosophy* (being) to

rhetoric (becoming). This is not to say that quantum mechanics extinguishes philosophy. Such a misinterpretation would nullify the progress that chapters 1 and 2 hopefully made regarding the tension between rhetoric and philosophy. Rather, it means that we are not neutral observers on a solid rock observing static entities "out there." Complementarity is a signal, deafening and grand, that our binary logic and static observations are not the center. The center is moving incessantly, responding to our instruments, changing with emerging conditions. To shoot at the center with our apparatuses is like trying to hit a moving target. Quantum mechanics changes everything because it changes the center.

The new center of the new physics shoves the center toward rhetoric. Quantum mechanics clears an opening for the contingency and relativity of rhetoric, such that the arrival of quantum mechanics is in principle the arrival of a rhetorical way of looking. Thus, it is not the center that becomes rhetorical (it was already rhetorical). It's the *way of looking* at it that becomes rhetorical. It bears no repeating that to look rhetorically means to look kairotically. To look kairotically means to look dynamically, to be emplaced in spacetime—to be looking from *somewhere*, not from a neutral zone.

Yet it is not only we who are moving and changing in spacetime, but also the universe itself. Nobel physicist Murray Gell-Mann (qtd. in Jung and Pauli 2014, xliv), who proposed the quark model in particle physics and coined the term "quark," suggests that "[t]he long-term consequences of such an event [the big bang] may take on the character of a law, at any but the most fundamental level. A law of geology, biology, or human psychology may stem from one or more amplified quantum events, each of which could have turned out differently." So much for Plato's ideal forms, of which all earthly

forms are mere approximations. Instead, we have, much like the Lucretian and Democritean picture, a much less stable universe—a universe which could have been different. The entire universe is a moving target with its initial conditions still very much unknown. Any attempt at precision will always be mere speculation.

In "The Decline of the Mechanical View," Einstein (2007, 121) shows just how definitively physics has evolved away from the classical picture:

> Here all the fruitless attempts to construct an ether in some simple way, as well as the other objections, seem to indicate that the fault lies in the fundamental assumption that it is possible to explain all events in nature from a mechanical point of view. Science did not succeed in carrying out the mechanical program convincingly, and today no physicist believes in the possibility of its fulfillment.

Published in 1938 after principal developments in quantum mechanics, Einstein's statement shows the aftermath of the upheaval in physics during the early twentieth century. Since Einstein was a well-known critic of quantum mechanics, we should not take his conclusion lightly. From his famous phrase, "God doesn't play dice" (a critique on the probabilistic underpinnings of quantum mechanics), to his search for a unified theory of everything, to his discomfort with "spooky action at a distance" (nonlocality and entanglement), Einstein resisted key implications of quantum theory without reserve. In a renowned debate with Bohr, Einstein published, along with Podolsky and Rosen, the paper "Can Quantum-Mechanical Description of Physical Reality Be Considered Complete?" (1935), wherein he grappled with the logical foundations of quantum mechanics (more on this later). Einstein nevertheless arrives at his 1938 conclusion that, despite his reservations, classical mechanics is not the way out. Quantum mechanics is here to stay. We must "give up the mechanical view" (Einstein 2007, 122).

Carl Jung (2010b, 5), taking cues from Pauli and the physics community—as well as from his dinners with Einstein between 1909 and 1912—firmly concludes,

> The discoveries of modern physics . . . have shattered the absolute validity of natural law and made it relative. Natural laws are *statistical* truths, which means that they are completely valid only when we are dealing with macrophysical quantities. In the realm of very small quantities prediction becomes uncertain, if not impossible, because very small quantities no longer behave in accordance with the known natural laws.

Published in 1960 but developed in the 20s especially, Jung's thoughts here convey the trajectory of the new physics: at the most fundamental level, as we saw from Gell-Mann, "laws" are unknown and/or uncertain. Our macrophysical observations only touch the surface of the layers and layers of particles which are moving quietly and violently underneath our otherwise "solid" surfaces. Jung's statement, then, is not hyperbolic speculation. Rather, it is a formalization of roughly fifty years of the new physics and its observed consequences to our theories of the universe and of knowledge itself. As astrophysicist and science writer Adam Becker (2018, 1) has recently summarized, "Quantum physics—the physics of atoms and other ultratiny objects, like molecules and subatomic particles—is the most successful theory in all of science."

Therefore, in the debate over lack of measurement and immeasurability, immeasurability surfaces not as *exception*, but as a significant part of a reformed rational framework. What quantum mechanics shows is that something once considered completely irrational (that two particles can affect each other even when no longer in contact) can become a core component in explaining physical reality. Immeasurability is reasonable. Uncertainty is primary rather than secondary. Even the law of cause and effect, perhaps the most basic of human intuitions, comes under fire at the quantum level.

Photons appear spontaneously without cause. Our entire universe—as Lawrence Krauss argues in *A Universe from Nothing* (2013)—might have emerged from at least *almost* nothing: from no space, no time.[1]

Such changes, in part, lead Jung (2010b, 100) to proclaim the "acausal orderedness" of nature, contrary to all pre-established belief. That great harmony, order, and complexity can emerge from acausal and spontaneous processes goes to show how much *rationality* and *reason* must be rethought if we are to grasp even the simplest building blocks of nature. All of our science, all of our humanistic ego stoked by the fires of scientific and technological progress, has reached a sobering precipice: despite scientific advancement we have failed to process the simpler logic, the more fundamental starting point that is quantum mechanics. Here, we find the ground of quantum rhetoric, the challenge to all previous scientific thought that commands us to change the way we see the world—and, hopefully, the way we *live* in that world.

Rhetoric, Philosophy, and Quantum Mechanics

How does the reality of quantum mechanics comes to bear on rhetoric on philosophy? This question has not been asked enough, particularly on the rhetorical side of the coin. In many ways the relation between philosophy and rhetoric resembles the relation between classical and quantum mechanics. Platonic philosophy, with its ideal forms and

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[1] I say *almost* nothing because Krauss' title is a bit disingenuous. What Krauss calls "nothing" is not nothing as in the absence of anything. Astrid Lambrecht (2002, 197) notes, "The quantum vacuum is the arena where fundamental physical processes take place, and is by no means a simple empty space where nothing ever happens or a pure abstract concept of quantum field theory." The quantum vacuum, in fact, has a rich physical substructure consisting of at least electromagnetic waves and particles which generate randomly.

absolute Truth, has seemed self-evident all along, its certainty available forever, its method (dialectic) mirroring the scientific process of arriving at truth through excising false hypotheses and conclusions in a rigorous question and answer process. Indeed, we might say that the scientific method, and the classical worldview, traces its key roots to classical Western philosophy. To be more bold, we might say that classical philosophy *is* classical mechanics: both envision a predictable, solid, measurable world.

Of course, you see the Socratic "snare" that I am setting. If we agree that classical mechanics mirrors Platonic philosophy and its relatives, then we move one large step closer to connecting quantum mechanics and rhetoric. Both are the inverse side of consequential coins. Platonic philosophy, as we have described, proceeds from the view developed in the *Timaeus* and other dialogues that the world emerges from the eternal model in the eternal demiurge, or craftsman (God). Compared to these eternal forms, earthly forms are imperfect, perishable approximations of the divine substance. Proceeding from divine cause and effect, the physical universe is ordered, stable, and rationally intelligible. The rhetoric of the Sophists, however, proceeds from Protagoras' view—and the view of the atomists—that randomness, chaos, indeterminacy, and the like are at least a significant part of creation, if not central to it.

Sophists by and large do not suppose to know whether or not a divine metaphysics exists. In the realm of cosmology, Sophists ascribe only to mechanisms and processes, from which we derive the conditions of our existence, and our ontology. The conceptual differences between Platonism and Sophistry are indeed vast, and so are the existential consequences. To begin with a Sophistic rhetoric—a rhetoric, we have seen, of

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contingency, chance, chaos, movement, indeterminacy, and rhetoricity—is to thus build a different world of action and reaction, address and response. Quantum rhetoric hopes to build this different world with a more Sophistic DNA.

The History of Quantum Rhetoric

Of course, this subtitle is misleading. Quantum rhetoric is a 21st century term. But this does not mean it has no history. Aristotle obviously wrote both the *Rhetoric* and the *Physics*, each of which attempts to understand and order contingency in some way, to understand the movement of matter and soul. But this is not the beginning. In *A Revolution in Tropes*, Jane Sutton and Marie Lee Mifsud (2015, 27) ask, "To what extent is the beginning of rhetoric a result of physics?" They argue that Aristotle's swallowing a static model of the earth—a classical physics—resulted in a more static rhetoric (2015, 27). In privileging the Parmidean account of the earth (nothing changes) over the Heraclitean account (everything changes), Aristotle restricts rhetoric's horizons. Change, for Aristotle, is (or should be) what he terms "well-behaved change" (2015, 30). This vision of change steers rhetoric away "from the random contingency, the accidental, and the uncanny" (2015, 30).

But this is also not the beginning. It is true that Aristotle "conceptualized rhetoric on an earth at rest," from which so many rhetorics trace their roots (Sutton and Mifsud 2015, 41). It is also true that Aristotelian rhetoric was in some way a response to what came to be known as classical mechanics. That is to say, the predictability and uniformity of classical mechanics had, as its foundation, much more in common with an earth at rest than with an entire universe which sprang from unpredictable particle collisions. While

there is no simple exchange between what we call the Parmidean view, Aristotelian rhetoric, and classical mechanics, Sutton and Mifsud (2015, 41) are right in suspecting that an entirely different rhetoric would have been built on a Heraclitean view, or a Sophistic view. Sutton and Mifsud turn to different questions in their book, questions which inform quantum rhetoric's orientation in and toward *difference*. For now, however, I want to briefly trace the origins of quantum rhetoric.

While it is true that "[t]he central topic of the sophistic age remained the same throughout: man, or the individual human being and the human race," and that Sophists like Protagoras ridiculed geometry, for instance, for its speculation and impracticality, this does not mean that the Sophists had no cosmology or science (Hussey 1995, 119). We should keep Hussey's (1995, 115) useful definition of the Sophists in mind: the Sophists are "professors of the art of speaking who flourished during that period [450-400], and (sometimes) any other people who seem close to those professors in intellectual outlook and activities." This definition unites the Sophists around a shared intellectual outlook and life practice. When we look at those figures most often called the Sophists, as chapter 2 does, we see a shared perception of a contingent, unpredictable, and moving world. This perception results in an approach to communication, law, morality, and culture which mirrors that view of matter. The same is true for Socrates and his disciples: a view of the world as mostly stable, predictable, and solid results in a stable, predictable, and rigid view of law, morality, and culture. No doubt an oversimplification, this observation circumscribes what counts as a Sophist, and thus pinpoints an origin for quantum rhetoric in a particular theory and practice.

We have already reviewed a largely shared Sophistic theory and practice, so let us jump to the nexus between this unique group of rhetoricians and physics. Isocrates (*Antidosis* 268) contrasts the various cosmologies of the time, reviewing the speculations of "the ancient sophists, who maintain, some of them, that the sum of things is made up of infinite elements; Empedocles that it is made up of four . . . Ion, of not more than three; Alcmaeon, of only two; Parmenides and Melissus of one; and Gorgias, of none at all." Of these views, Gorgias' *On the Nonexistent* merely parodies the Eleatic thesis that "All is One." This parody illustrates the futility of ascertaining cosmological truth in the ancient world, seeing as how any number of internally consistent accounts can be given. Gorgias' parody thus comes close to the agnosticism of Protagoras and other Sophists, applying doubt to the makeup of matter.

Skepticism and scrutiny of assumptions are inherent to Sophistry, but so is the essential cosmological crux of atomism. As we have seen, the atomism of Leucippus and Democritus posits an irreducible *clinamen*—a movement of particles in the void— wherein the first contingent, unpredictable subatomic interactions take place to produce our world. This view is starkly opposed to other (pre)Socratic philosophy which posits a fundamental, unchanged unity of all in one. Michelle Ballif (2018, 203), reviewing Barbara Cassin's *Sophistical Practice*, writes, "Contrary to the ontologists, the philosophers, who worship at the altar of the law of noncontradiction, of homogenization and the 'one,' the sophists, as 'logologists,' inhabit the unholy space of the many, 'outside of the regime of meaning as univocity.'" Inherent in Sophistical theory and practice is exchange, difference, multiplicity, and contingency, hence the claim that

nature is made up of infinite, or at least incalculable, elements—of innumerable atoms dancing in the void. From this view of the world comes a view of humanity *in* the world, which chapter 2 has explored. And from this view of humanity in the world comes *quantum rhetoric*: the entanglement of matter and meaning, of meaning *from* the nature of matter, which must inform any responsible, rhetorical account of our own nature and action, our being and becoming. *Must* inform because without attending to the nature and actions of matter, we cannot responsibly attend to the nature and actions of ourselves.

Chapter 1, and especially chapter 2, analyzed why the 20th century provides a fertile ground for the reunification of physics and rhetoric through quantum physics. In some sense, quantum physics is *cosmological Sophistry*—an application of a view, largely developed for and around humans, to the material world. In the end, it is irrelevant whether the chicken or the egg comes first, whether a view of the human proceeds from a view of the world, or vice versa. What is essential is the inextricability of the two. Plato's successes eclipsed this linkage, and the Sophistic and atomistic lineage, for 2,500 years. Yet quantum mechanics sets the scene for their reunification and renewed symbiosis. We have seen via Young, Becker, and Pike, as well as through Bizzell and Herzberg, that rhetoric has always taken probability as the ground of human action. Plato's quest for truth conquered the foundation of an essential probability. Yet quantum mechanics recuperates this buried ground. We have seen classical mechanics' unparalleled success in presenting a stable, ordered, and fully comprehensible view of the world. That is, until quantum mechanics arrives on scene. As Roger Penrose (1956, 4865) states, "There is no observation that tells against the theory [of quantum mechanics]. Its

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range is absolutely enormous. I think people sometimes say it is the most successful theory that physical science has yet produced, and that its discovery was the greatest of scientific revolutions."

Quantum physics is here to stay. As Diana Coole and Samantha Frost (2010, 5) write in *New Materialisms*, "the new physics and biology make it impossible to understand matter any longer in ways that were inspired by classical science." And although the "cultural turn" of the mid-20th century produced poststructuralist and other frameworks that privileged "language, discourse, culture, and values" over matter, new materialist and other theorists have recently renewed the interest in "the primacy of matter" in every theory, in every practice (2010, 1). There is, in other words, no escaping the fact of our materiality, of our entangledness with the world. Quantum physics, and a great deal of materialist thought, has cast a shadow over any theory which pretends that mind reigns over matter, or that discourse and values are produced in an ethereal vacuum of pure ideas. It is time to "reopen the issue of matter and once again to give material factors their due in shaping society and circumscribing human prospects" (2010, 3). It is time not necessarily to produce a *new* materialism, but a *renewed* materialism which more fully engages the human with the world, and the human *as* world (2010, 4).

Yet quantum rhetoric is *not* another materialist rhetoric.[2] Rather, quantum rhetoric is a drawing together of (new) materialisms around science, philosophy, and rhetoric: around the questions of what it means to be human and what we must do as humans,

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[2] Of course, I am poking fun at Ronald W. Greene's (1998) article, "Another Materialist Rhetoric," which develops materialist rhetoric in relation to material networks of power.

given the conditions of existence. Quantum rhetoric insists that "foregrounding material factors and reconfiguring our very understanding of matter are prerequisites for any plausible account of coexistence and its conditions in the twenty-first century" (Coole and Frost 2010, 2). Quantum rhetoric is a condition not only for a "plausible" account of coexistence (inasmuch as any theory of coexistence must take matter into account), but it is also the core condition for a *responsible* account of and approach to the rhetorical project of living and communicating ethically with one another in the face of irreducible and incommensurable difference. Informed by the contingency, relativity, and indeterminacy of Sophistry and quantum mechanics, quantum rhetoric *ungrounds* the human project, the groping toward progress—insisting that we always mind our assumptions, while nevertheless forging forward with caution, deliberation, and courage. And if Heidegger (2008, 24) is correct that "[e]very seeking gets guided beforehand by what is sought," then quantum rhetoric enables us to attend to the fullest scope of what we are seeking, and how we are seeking it.

A New(ish) Physics for a Renewed Rhetoric

In February of 1953, pioneering quantum physicist Wolfgang Pauli (2014, 95)—in a letter to Carl Jung—writes, "But as the alchemist surmised matter goes just as deep as spirit, and I doubt whether the goal of any development can be absolute spiritualization." Part of a decades-long correspondence between the physicist and the physician, this letter is one of many in which mind and matter are intricately imbricated. Roughly a decade earlier, physicist Sir James Jeans (1934) had come to the same conclusion: "Mind and matter, if not proved to be of similar nature, are at least found to be ingredients of one

single system. There is no longer room for the kind of dualism which has haunted philosophy since the days of Descartes." No longer room because quantum physics, the most successful of scientific theories to date, dissolves—as we read through Bohr in chapter 1—absolute boundaries between body, mind, and world.

Both Heisenberg and Jeans wrote monographs entitled *Physics and Philosophy* (1958 and 1942, respectively). In addition, between 1932 and 1958 Jung and Pauli developed in-depth correlations between quantum physics, psychology, and philosophy. Countless other works have developed such accounts in recent decades. Are not the connections, then, between mind and matter already well excavated? What does *rhetoric* and physics add? How do they connect? Why, when taken together, are they productive? How do they transcend a mere interdisciplinary intersection? In other words, what can physics do for rhetoric, and what can rhetoric do for physics? These are the questions the rest of the chapter is devoted to answering.

The short answer I have been alluding to is that physics *materializes* rhetoric, and rhetoric *humanizes* physics. That is, physics provides an objective, empirical, and material ground for rhetoric's longstanding ungroundedness—a productive ungroundedness which has always rivaled philosophy's quest for absolute truth and unity. Rhetoric, in turn, interprets value from the material facts of existence, facts which inform how we live. In short, Stephen White concludes that advancements in physics—and science altogether—impact our general ontology, "our everyday relationships to ourselves, to others, and to the world" (qtd. in Coole and Frost 2010, 5). These advancements, however, give rise to "pressing ethical and political concerns that

accompany the scientific and technological advances predicated on new scientific models of matter and, in particular, of living matter" (2010, 5). Taken together, rhetoric and physics work to understand the world and our place within it. Ultimately, a study of physics must transcend psychology and philosophy because the fullest account of our being and becoming must be rooted in *rhetoric*—in the fundamental address and response that both generates and sustains not *bare* life, but life worth living.

One wonders why, if I have been heralding the virtues of Sophistry, we not simply return to the Sophists, as many rhetoricians have in the last century. Why not write a follow-up to Susan Jarratt's *Rereading the Sophists* entitled *Re-Rereading the Sophists?* Because the Sophists are not enough. Because even though a largely correct and prescient physics (atomism) informs their views of the human, their anthropocentrism precludes matter from taking a more active role in rhetoric and philosophy. Quantum rhetoric puts Sophistic rhetoric in conversation with physics in order to animate rhetoric materially.

The Sophists, furthermore, reduce language to a science, such that the Sophists are better known for their grammatical architecture and syntactic divisions than for their views of the world and humankind's place in it (Hussey 1995, 115). For instance, "Thanks to Plato's satirical genius Prodicus has long been associated in the minds of students with petty verbal distinctions rather than with broad physical theories" (Benn 1909, 411). It is likely that if our progeny remembers one thing about Protagoras, it will be that he was the first to distinguish Greek verb tenses (Sprague 1990, 4).

Reading certain Sophists, especially Gorgias, one understands why Isocrates

disparages them in *Against the Sophists* as claiming to know too much. Here, Isocrates

condemns the Sophists for "applying the analogy of an art with hard and fast rules to a

creative process" (*Sophists* 11). On the whole, Isocrates convicts the Sophists for

"making greater promises than they can possibly fulfill," especially regarding Gorgias'

claim to be able to give impromptu speeches on any subject (*Sophists* 1; Sprague 1990,

31). No person can be a competent instructor or communicator of each subject, so we

must take seriously Isocrates' conviction that at least some Sophists attempted "to teach

others when they [were] themselves in great need of instruction" (*Sophists* 14). Needless

to say, this instruction was not free (chapter 2 has already addressed the popular

discontent with the Sophists' instructional fees). It is with correction and revision, then,

that quantum rhetoric recovers Sophistry.

Quantum rhetoric combats Sophistic *anthropocentrism* and *arrogance* (which are

not unrelated) by ungrounding any attempt to make an exact science of language or to

master human knowledge. Our discussion of Paul de Man's *rhetoricity* (chapter 1), which

dovetails with Bender and Wellbery's *rhetoricality* (chapter 2), prevents any notion of

language as controlled and deployed toward certain effects. A rhetor may have intentions,

but cannot ensure those intentions are actualized (nor is the value of such actualization

self-evident). Quantum physics materializes this view of language by, as chapter 1

discussed, instantiating an "objective indefiniteness, objective chance, objective

probability, and entanglement" at the core of all being—of which, needless to say, human

beings are a part (Shimony 1989, 37). From this view, human subjects delivering

language do not do so in an alternate universe governed by the predicable patterns of classical mechanics. Our bodies and minds, subject to the indeterminacy of matter, produce language which is itself entangled in that same indeterminacy—both in its conception and reception. We no longer live in a deterministic world, the world which—bestowed to us by classical physics—gave philosophers throughout the centuries no choice but to be determinists. "Practically all modern philosophers of the first rank—Descartes, Leibniz, Locke, Hume, Kant, Hegel, Mill, Alexander, as well as many others—have been determinists" (Jeans 1981, 205). Still, they "hoped to find a loophole of escape" from convincing deterministic arguments (1981, 205). Those philosophers who rebelled—such as Hermann Lotze and William James—did so in dire straits, incessantly wrestling with seemingly incompatible views of mind and matter (1981, 210).

Quantum physics presents a different picture. While we cannot yet derive a conclusive argument for free will from quantum physics, it is nevertheless a picture more conducive to free agents (such as ourselves): "The classical physics seemed to bolt and bar the door leading to any sort of freedom of the will; the new physics hardly does this; it almost seems to suggest that the door may be unlocked—if only we could find the handle" (Jeans 1981, 216). In effect, quantum physics hints at a universe "which looks as though it might conceivably form a suitable dwelling-place for free men" (1981, 216). With free agents comes at most free response, and at least not predetermined reaction. As such, Lucretius' conceptual *clinamen*—a concept invoked to reify atomism—applies as much to letters as to atoms. For letters are atoms, Michel Serres (2000, 141) writes: "for linguistic atoms as well as for the letters of matter, a given element placed here or located

in such and such a vicinity, is not the same as the same element elsewhere and in a different context or structure." Like atoms, letters combine in indefinite rhetorical situations toward perhaps probable but nevertheless uncertain effects. That letters are contrived does not controvert their indeterminacy. Our inventions are just as susceptible to chaos, to time and to chance, as natural law. In this way, quantum rhetoric corrects a Sophistic overreach with notions of *rhetoricity* and *rhetoricality* empirically corroborated by quantum physics.

To say that quantum physics empirically corroborates rhetoricity and rhetoricality means that it illustrates a world grounded in uncertainty, indeterminacy, chance, chaos, and relativity. These principles and patterns, described and defended in chapter 2 by the Sophists, were either rejected, suppressed, or denounced for 2,500 years by Platonists and likeminded philosophers who held in their minds a (pre)Newtonian worldview. Quantum physics, by empirically overturning classical physics on a fundamental scale, thus recuperates and validates central Sophistic commitments.

Quantum physics, in rendering a nonessentialist universe—in showing form but not predetermined, timeless form—depicts a cosmos more congruent with Sophistic rhetoric than classical philosophy. The nonessentialist view, first and foremost, points toward contingency and entanglement as basic universal conditions requiring no further explanation, no further cause: "If one holds to such a nonessentialist attitude, then the general question of whether correlations require explanation is not a particularly useful question to pursue" (Fine 1989, 181). Here, philosopher of science Arthur Fine explains that entanglement—and the subatomic correlations of which entanglement consists—may

indeed have no classical account, no deeper causal explanation which might satisfy our Newtonian minds. The failure to account for the universe classically does not necessitate a fuller classical account in the future. From all angles, it seems that the failure of classical mechanics at the most fundamental level is the failure of an assumption: the essentialist assumption.

The failure of the essentialist assumption empirically grounds Sophistic rhetoric's ungroundedness. In Fine's (1989, 194) words, "Nonessentialism leads us to engage with our theories seriously, and in detail. In the end, that is how better understanding comes about." Because explanations often invoke "prior metaphysical assumptions" to make sense of the world, adopting a nonessentialist worldview forces the observer—or the communicator—not to impose an unobservable worldview on observables (Hughes 1989, 196). Of course, nonessentialism in quantum mechanics is *itself* an assumption: "the classical assumption that elementary particles have an 'intrinsic' nature which can never change is replaced by the assumption that they can act either like waves or particles, depending on how they are treated by the surrounding environment" (Bohm 1989, iii). We are free neither of assumptions nor ideology. Yet, as Protagoras stressed, certain assumptions are better than others. Nonessentialism, a case-in-point, persuades us to admit the conditions of contingency, randomness, chaos, and the like into the scope of possibility. Deeper patterns may emerge. Cause and effect may reign supreme. *Nonessentialism* permits the possibility of order. Yet *essentialism*, conversely, forecloses the possibility for the central role that indeterminacy and relativity play in the quantum mechanical picture (which is, we recall again, the most successful scientific theory yet).

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The quantum mechanical picture may be "accompanied by resistance and some sense of a lost paradise of reason," yet this picture converts our attention from questions of *essence* toward questions of *effect*—from philosophy to rhetoric (Fine 1989, 192). Quantum physics absolves rhetoric's sin: its omission of essence, of bottom nature. In turn, rhetoric's historical emphasis on practice, effect, work, and productivity mirrors longstanding concerns in physics, which become more rhetorical with quantum physics' nonessentialism. Because we only know a thing by what it *does*, rhetoric's perspective takes precedence in the quantum mechanical framework. But the fact that a thing *is* what it does is a rhetorical point only corroborated and understood sufficiently through quantum mechanics' empirical authentication over the past century. This verification is a crucial step toward a *rhetorical* world, and to rhetorical beings within it. To develop rhetorical beings—the *telos* of quantum rhetoric—is to develop beings who do not assume a common, consistent nature (whatever kind it may be), but those who find contingent ground resting on real conditions of existence.[3] Quantum physics is the turning point, the rhetorical event horizon irrevocably pulling us—beyond the point of no return—into a universe rhetorical at root.

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[3] Naturally, the stark difference between essentialist and nonessentialist worldviews is emblematic of Diane Davis' (2010, 5-6) distinction, in *Inessential Solidarity*, between "common being" and "being-in-common." All humans share real conditions of existence which give rise to a "being-in-common." Yet a shared *essence*—most often a metaphysical proposition—is a bridge too far. The physical and metaphysical bridges may connect in the end, but our lack of certainty should preclude us from maintaining the factual validity of metaphysical projects in the face of new evidence. Our practices and virtues need not be groundless, but must be *ungrounded* from the certainty of unshakable assumptions impregnable to a more expansive notion of reason.

A Renewed Rhetoric for a New(ish) Physics

We have seen that the new physics materializes and corroborates Sophistic rhetoric's attunement to uncertainty, contingency, and relativity. In other words, quantum physics provides empirical data which paints a more rhetorical than Platonic, or classical, picture. In this way, quantum physics grounds Sophistic rhetoric's ungroundedness. We have also seen that quantum physics addresses the more anthropocentric and egotistic traits of certain Sophists (Gorgias in particular), thereby ameliorating Sophistic rhetoric's weaknesses. Finally, quantum physics—in depicting a nonessentialist, indeterminate world—complements Sophistic rhetoric's attention to effect, work, action, and doing over a determined essence or bottom nature. Consequently, quantum physics' world is more hospitable to free will, and thus to the rhetorical agents who attend to their own attention, to the capacity to act deliberately.

In this section, then, I'd like to observe the inverse side of this coin to see how a renewed rhetoric complements the new physics. *First*, Sophistic rhetoric's focus on our *affectability*—on the fact of our ability to affect and be affected by other bodies—attends to the consequentiality of physics, of entangled bodies in motion, thus humanizing physics and giving it meaning; *second*, rhetoric foregrounds, rather than masks, the effects of our *symbolic instruments*, as well as the results which necessarily follow from our terms; *thirdly*, and consequentially, rhetoric fronts the centrality of *language*, *instrumentation*, and *symbolic subjectivity*, thus distancing us more critically from our practices and observations, better enabling physicists to reach the *exterior* of their

ideology and instruments, becoming more attuned to the investments and prejudices of their symbolic enterprise.[4]

Let's expand the *first* point: rhetoric gives meaning to the facts of physics. By *gives meaning* I mean that rhetoric endows physical facts with value for our daily lives. Quantum physics shows us that particles are entangled, that they affect each other long after they come in direct contact. This physics shows us that we, too, are composed of atoms, and that—as Bohr said—there is no boundary, strictly speaking, between the atoms of our bodies and the atoms of the "outside" world. Yes, we are agents, speakers, listeners, and actors *in* the world. Yet at the same time, we *are* world. The quantum mechanical picture shows this to be so. But it is *rhetoric* which gives this material fact significance. Here, we can apply to physics and rhetoric what Rosa Eberly (qtd. in Edbauer 2005, 23) writes regarding texts and textual production: "Rhetoric matters because rhetoric—*which demands engagement with the living*—is the process through which texts are not only produced but also understood to matter." Some tinkering for our context would reframe the latter part of this quote as follows: physics is the process through which facts are produced; rhetoric is the framework within which facts are understood to matter.

In this sense, learning the facts about atoms, and about the relations between spacetime and the entities within it, does not in and of itself impart value or meaning. Meaning requires an interpretive act. This is rhetoric. Furthermore, as Edbauer (2005, 23)

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[4] In "Ideology and Ideological State Apparatuses," Louis Althusser (2014) argues that while we can never get outside of ideology, we can reach a position to critique it.

concludes, "When we approach a rhetoric that does indeed engage with the living, hooking into the processes that are already in play, then we find ourselves theorizing rhetorical publicness. We find ourselves engaging a public rhetoric whose power is not circumscribed or delimited. *We encounter rhetoric*." Rhetoric, indexed to physics, engages with the living, "hooking into the processes at play," thereby widening the scope and power of rhetoric, which gives physical facts meaning. This meaning is *public* because quantum physics is not a mere subfield in the sciences. Quantum physics is the ground of being, the "Being of beings," as Heidegger (1971, 100) writes of nature through Rilke. In this sense, the facts of quantum physics have tremendous public value in the sense that these facts inform what it means to be human, what it means to be part of the world, and to be part of the endless exchange of matter. And because the principles of quantum physics so vitally complement, materialize, and revise Sophistic rhetoric, these facts must inform any responsible rhetorical practice—how we *do*, how we live.

Second, rhetoric foregrounds the effects of our language, instruments, and symbols on how we think and act—on how we observe, believe, communicate, and perceive the world. In "Terministic Screens," Kenneth Burke (1966, 45) writes, "Even if any given terminology is a *reflection* of reality, by its very nature as a terminology it must be a *selection* of reality; and to this extent it must function also as a *deflection* of reality." The very words we use compose the reality we see. Burke gives the example of different photographs of the same objects. In this case, different color filters reveal different features of the objects. He stresses, then, that "something so 'factual' as a photograph revealed notable distinctions in texture, and even in form," depending on the

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filter (1966, 45). Borrowing from Pascal, Burke (1966, 45) states that our terminologies—our language—*directs our attention*. Our use of certain words to describe an object, as we will see in chapter 4 with Gertrude Stein, portrays one picture, and other words another picture. No word or symbol perfectly reflects the thing-in-itself, the object as it exists outside of human perception. Writers like Stein, in fact, hold that the more valuable object, the object of more significance, is not the thing-in-itself, but the thing *in relation* to ourselves (more on this in chapter 4).

Burke's observation is not generative of rhetoric's attention to the effect that our language has on our perception of reality. Neither is this issue restricted to the effect that terminology has on *perception*. We discussed in chapter 2, for example, how the Sophists traveled around different parts of Greece and realized that culture, norms, codes, customs, and the like shifted from area to area (Jarratt 1991, 11). Perception of reality, and normality, changed not only with the language one used, but also with the culture and practices that one inherited and evolved. This is why, as Sprague (1990, 212) writes, Antiphon the Sophist perceived "no permanent reality behind our words, nothing in fact comparable to the results of seeing and knowing." Language does not mirror reality (neither does seeing). Instead, language crafts perception from real conditions of existence, which can and do change. While philosophers have long since sought to penetrate the Truth through language, rhetoricians—giving up the ghost of the thing-in-itself—have focused on our relationship to the world, to language and reality.

Relativity is one of the reasons that rhetoric has long been treated as the harlot of the arts. Hence Protagoras' infamous codification of relativity, referred to here by

Socrates (*Theaetetus* 152a): "As each thing appears to me, so it is to me, and as it appears to you so it is for you—you and I each being a man?" Because man is the measure of all things, Protagoras claimed, so our realities are relative to our measure. Again, our perceptions of reality must be rooted in the real conditions of existence, lest perception becomes fantasy. Wallace Stevens (1965, 33) is useful here in stating that "reality adheres to imagination and that the interdependence is essential." Applied to rhetoric, our perception of the world is relative, but that our perception adheres to the real conditions of existence is essential. One cannot deny the Holocaust in the face of Auschwitz. One should not fashion a groundless worldview.

Quantum physics agrees. To Bohr, for instance, it may be a meaningless question to ask what a particle does when we are not looking at it, but that a particle exists when we are not looking is fundamental to quantum physics and all of science.[5] There is something *there*, even if our terminology and instruments affect what we see and how it behaves. For example, the wave-particle duality we have discussed refers to the early difficulties in assigning definite, consistent characteristics to subatomic particles. But that something exists that at times behaves like what we call a "wave" and at other times a

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[5] Bohr and other physicists were influenced by Ernst Mach's verificationalist, or logical positivist, philosophy which attempted to eliminate "extraneous unobservable entities" (Becker 2018, 26). Einstein himself took this advice to heart in developing his theory of special relativity, part of which meant excluding the disputed invisible cosmic ether (2018, 26). Though some positivists did go further, believing that "science is simply a tool for organizing and predicting perceptions, and that the metaphysical content of theories . . . really bears no relation at all to the actual stuff in the world," most physicists hold to a more realist picture—that our theories at least *correspond* to reality (2018, 185). The question of *how well* is up for interpretation in parts of quantum physics, such as quantum field theory and relativistic quantum mechanics (Krips 2018).

"particle" is not in question. What is in question is how to best describe the phenomenon we relate to, given its relativity to our instruments and perception.

Quantum physics attends in depth to the relativity of our perception of reality. In the epigraphic quote—a snapshot of a famous disagreement between Einstein and Bohr—Bohr (2010, 61) insists that the very way we design an experiment affects what we observe, and how we observe it:

> Of course there is in a case like that just considered no question of a mechanical disturbance of the system under investigation during the last critical state of the measurement procedure. But even at this stage there is essentially the question of *an influence on the very conditions which define the possible types of predictions regarding the future behaviour of the system*.

Sounding much like Burke if he were a physicist, Bohr stresses that it is not merely mechanical disturbances (or systemic imperfections) which affect measurement. Rather, the *entire process* of measurement—the experimental setup and our method of observation—affects what is measured and how we perceive it. Here, Thomas Kuhn (Becker 2018, 182) argues that scientific *paradigms*, or what we might call ways of seeing, "influence what experiments are done, how they're performed, and how the results are interpreted." This is precisely the reason that David Bohm (qtd. in Becker 2018, 105) stresses the need for "tentative concepts" in order to "guide the choice and design of experiments, as well as to aid their interpretation." Nothing here implies that science, language and symbol free, perfectly mirrors reality. Rather, science works through terministic screens which reflect and deflect particular relations to the world.

Both rhetoric and physics understand that language and science consist of our *relation* to the world—a world that is there whether we exist or not. That we observe this

relation relative to multiple variables and not the world directly means that, as Einstein

(qtd. in Becker 2018, 29) realized, "It is the theory which decides what we can observe."

Confirming Bohm's earlier comments on the importance of tentative concepts in guiding

our experiments, Einstein also coalesces with what Burke (1966, 49) writes regarding

science: "all laboratory instruments of measurement and observation are devices invented

by the symbol-using animal"; consequently, "any observation of a physicist must

necessarily be stated within the resources and embarrassments of man-made

terminologies" (1966, 50).

Thirdly, and consequentially, rhetoric foregrounds the ways in which

(pre)symbolic elements affect our interaction with and perception of the world, urging us

to take those effects seriously. Burke (1966, 16) simply formalizes what the Sophists

implied all along: that each human being is a "symbol-using (symbol-making, symbol-

misusing) animal." Protagoras knew this from the start. The original human, for

Protagoras and the Sophists, was not born with innate, flawless reason which set about

mirroring the facts of the world through language.[6] Our faculties, including reason, must

be inculcated in us, hence the Sophist's *raison d'être*: to educate the masses in order that

they might effectively participate in public affairs. Naturally, this point was anything but

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[6] See Protagoras' creation myth in Plato's *Protagoras* (320d–322d). On this account, "a sense of right and wrong" is only given to humans after Zeus worries that baser instincts may cause humans to "perish altogether from the earth" (322c). Therefore, he asks Hermes "to take down to people a sense of right and wrong" (322c). When asked to whom to give it, he says, "Give it out to all of them" (322d). Equal distribution of this faculty grounds democracy. Protagoras then stresses that virtue (or *excellence*, properly understood) must be taught. It only "comes about in people, when it does, by care and effort" (323c).

self-evident. Plato went to great trouble to argue in his dialogues (as chapter 2 discussed) that education is a privilege, not a right. The Sophistic position that humans are symbol (mis)using animals and must acquire excellence through education is simply an effect of their recognition that humans—imperfect and deeply entangled with their surroundings— bring their words and worlds to bear on their commitments, practices, and communication.

While it is true that quantum physics has a firm grasp on the effect of instruments on observations, Sophistic rhetoric's attunement to the human as a nexus of complex social and material factors sharpens the physicist's attention to the impact of the human condition on science. A number of physicists discussed in these chapters recognize the extent to which humans use, misuse, and abuse symbols. Many do not. One goal of quantum rhetoric is to expand Sophistry beyond the "field" of rhetoric—to manifest rhetorical observations in transdisciplinary ways. Imagining that physicists, in their first days of learning their instruments and procedures, also learned from Burke (1966, 45) that even the "unemotional" sciences are *suasive*, that even the "hard" sciences employ metaphors (black holes, wormholes, electromagnetic fields, event horizons, dark energy, waves, particles, etc.), perhaps physicists and scientists at large could hone their attention to (pre)symbolic affectivity. We must acknowledge the effects of apparatuses, yes, but also the effects of our expectations on our experiments, of our local culture, of the steps of a particular method, of points of artificial division between one element of our experiments and another. Sophistic rhetoric attends to the entire (trans)human spectrum of affect and effect. Attending to rhetoric, then, is an exercise in attending to our

attention—to what moves us, what resonates with us, what repels us, and what matters to us. To refuse to attend to these factors is to refuse not only to be a rhetorician (though one always is), but also to refuse to be a physicist—one who observes and analyzes our relation to the world. For you cannot analyze our relation to the world without rhetoric. What's more, you cannot *be* in the world without rhetoric.

Rhetoric thus complements physics in the way it gives meaning to physical facts, foregrounds (pre)symbolic effects in our relation to the world, and sharpens our attention to the world we bring with us to our actions and observations. The examples in each section reveal that rhetoricians and physicists have in many ways been working side by side, albeit in different "fields" and with different instruments. One goal of quantum rhetoric is to show that these fields and instruments are not so different. In fact, what rhetoric and physics share is so fundamental and so consequential that it would be irresponsible to ignore their material and discursive entanglement. For Heisenberg knew that all mathematics, all symbols, and all instruments derive from language—our relation to the world. Referencing Heisenberg, Burke (1969a, 260) writes, "the world's substance can never be established any more firmly by instruments than they can by words. . . . instruments themselves are so fundamentally implicated in language, deriving both their formation and their interpretation from this source." The picture of the world that instruments and data show us is as much about our relation to the world as it is about the world itself. To understand this relation, we need both the human and the nonhuman. We need rhetoric and physics. Quantum rhetoric takes these two halves—a rhetoric which attends more to the human (*Sophistic rhetoric*) and a physics which attends more to the

nonhuman, or anahuman (*quantum physics*)—and combines them toward a fuller picture of both: of human beings as individual, conscious agents acting in the world, *and* as part and parcel of world. It is my hope that in drawing these disciplines together, in collapsing the boundary between mind and matter, we might more productively—dare I say more *truly*—engage both.

Turning toward Movement Relativistically

Now that we have seen what quantum physics does for Sophistic rhetoric, and what Sophistic rhetoric does for quantum physics, I would like to examine some of the crucial points which unite rhetoric and physics. These shared concerns, practices, ways of looking, and ways of being further complement one another in productive ways. *First*, rhetoric and physics share a unique attunement toward *movement*. That is to say that neither Sophistic rhetoric nor quantum physics has ever imagined a static world. In fact, Sophistic rhetoric and quantum physics owe their very existence to movement—to the recognition of shifting conditions, environments, values, responses, and (pre)symbolic engagements. The world moves, and we move with it. Indexing physics and rhetoric to each other magnifies the place of movement in our lives, its centrality, scope, and effects. This attunement to movement gives voice to related variables: relativity, contingency, probability, chance, rhetoricity, and rhetoricality (to name a few). Woven into one consistent and consequential worldview, these factors are best accounted for—and best humanized—at the juncture between rhetoric and physics.

How are rhetoric and physics entangled around *movement*? Nassim Nicholas Taleb (2018, 227*n*)—in a tongue-in-cheek comment—writes, "social scientists are not

good with things that move." This caustic remark is reminiscent of his earlier work,

Antifragile, where Taleb (2012, 7) writes, "the rarer the event, the more confident these

'scientists' involved in predicting, modeling, and using PowerPoint in conferences with

equations in multicolor background have become." Putting aside the simplistic but not

untrue sarcasm, Taleb marks the essential boundary between the quantum mechanical

(dynamic) and classical (static) world. Classical minds, driven by classical assumptions,

naturally desire to tame chance. This is not to say that classical mechanics or philosophy

denies change or chance. Rather, as we saw earlier through Aristotle, the classical view

desires "well-behaved change"—change which we can wrap our classical instruments

around. Well-behaved change is not necessarily controlled, but is nevertheless perceptible

and predictable. As such, the effects of well-behaved change may be subdued, prevented

even. This is Aristotle's and Newton's change. Yet because physics and rhetoric conceive

change dynamically, randomly, and contingently, *movement*, in turn, is also understood to

be dynamic, random, and contingent—as are its effects. Rhetoric and physics, attending

to unpredictable change and chance, apprehend the facts of movement that the last

century has revealed. Two halves of the same coin, physics and rhetoric perceive and

give meaning to this movement—this change we can mediate, but never control.

     The entanglement of rhetoric and physics around movement impacts and gives

voice to related factors, including chance, change, contingency, rhetoricity, rhetoricality,

and relativity. We have discussed some of these factors more in-depth in chapters 2 and

3. Of these factors, *relativity* is a central intersection. The previous two sections touched

on the relativity of our perception and relation to the world—the relativity of life

practices, customs, codes, and measurements. This is the principally *rhetorical* relativity

that earned the Sophists their banishment from the Platonic kingdom of eternal forms.

But there is another relativity: the relativity of the world itself, of the things we call

movement, time, mass, and so forth (which also consist of relations *to* or *toward* world).

The Sophists are not as well known for this relativity. But this was their relativity, as

well—the relativity that we more easily relate with the physicists. One need not jump to

conclusions to connect the Sophist's worldly relativity to the more human,

phenomenological relativity that they are better known for. But it is precisely this *worldly*

relativity that quantum physics refines and corroborates. In doing so, quantum physics

provides an empirical foothold for the relativity that humans experience in navigating the

world, in traveling to different cultures as the Sophists did, in building a responsible

human practice to others unlike ourselves.

Worldly relativity shows us that humans—in differing from one other, in looking

and acting differently across the vast differential terrains that divide us—mirror that

worldly relativity that produced us. That is to say that we are only here as a human

species because we have responded to our environment effectively, advantageously, and

responsibly in the face of chaos, indeterminacy, and uncertainty. We have responded

rhetorically. Taleb (2018, 220-21) makes an interesting point that humans have survived

not because of our pursuit of (metaphysical) truth.[7] Rather, we respond to what works, to

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[7] It is interesting to note that Einstein himself refers to "truth" in quotation marks towards the
end of his life, "finding it to be bounded and constrained by much broader 'conceptual
systems,'" demonstrating a more *instrumental* vs. *scientific realist* attitude (Canales 2015,
36-7). "Scientific truth," Einstein thought, "was different from 'empty fantasy' only in degree

what helps us survive. We are here not principally because of our search for *truth*, but for *effect* (one might want to call this a *biological* or *natural* rhetoric). This is not to say that truth is unimportant or nonexistent. It is only to say that before we were philosophers, we were rhetoricians. The primacy of rhetoric runs deep in our veins, and the rhetorical orientation should not be underestimated not only because it is necessary for our survival, but because it is necessary for a meaningful life. In other words, one cannot respond *responsibly* without rhetoric—without an engagement with our (pre)symbolicity and affectability: the very things that make us human.

Together, physics and rhetoric portray a clearer picture of the crucial place relativity plays in our lives. Having discussed *phenomenological* or *experiential* relativity, let us see how rhetoric and physics productively converge on *worldly relativity* (these artificial labels are imposed merely for expediency). Sprague (1990, 212) writes that Antiphon, for instance, held that "[t]ime has no reality." We read accounts in the fragments (B 77) that for Antiphon "time is thought or measurement, not a real thing." As we discussed in chapter 2, there is something we are moving through that we call "time." Yet for the Sophists, as for Einstein and the physicists (and for rhetorical philosophers like Bergson and Merleau-Ponty), time is more like an objective condition that we experience relatively and punctuate arbitrarily. As Merleau-Ponty (qtd. in Canales 2015, 50) writes, "I myself am time." This rather vague profession complements a more exact Sophistic interpretation of time as *kairotic*, as "a succession of discontinuous occasions,

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and not in kind. They simply differed in how much certainty they could attain" (Canales 2015, 37).

rather than as duration or historical continuity" (qtd. in Poulakos 1995, 61). The Sophists

admit time's reality without diminishing its potentiality.

Sophistic time, in other words, pinpoints the reality of the condition we call

"time" without imposing a rigid order upon its emergent unfolding. For, as Jung (2010a,

288) recognizes, "It is only the intervention of time and space here and now that makes

reality." In other words, that we are here now—different than we were yesterday, and

different than we'll be tomorrow—means that there are dimensions we call time and

space which differentiate moments. As Ray Cummings (1921) writes, "time is what

keeps everything from happening at once."[8] But to impose rigid measurements on time

and space detract from its *kairotic* or emergent reality—its indeterminacy, uncertainty,

and unpredictability. Here, Sophistic rhetoric and quantum physics unite, insisting that

time is real, but time is also what we make it, and what the indeterminate world around

and through us makes it. Consequently, we should not allow our contrived instruments,

inventions, and interventions to diminish time's *kairotic* potentiality. Sophistic rhetoric's

experiential and material account of time is corroborated by quantum physics. But

quantum physics does not show us the human consequences of time's *kairotic*

dimensions. For this, we need rhetoric—a responsive, responsible account of our relation

to the world, to others, and to ourselves.

Time is not the only worldly dimension that Sophistic rhetoric and quantum

physics shape relativistically. The *material composition* of the world as we experience it

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[8] This quote, from Ray Cummings' (1921) short story "The Time Professor," has been
misattributed to Albert Einstein in particular, but also to Richard Feynman and others who,
nevertheless, might have easily made such a remark.

is also relative, such that characteristics like "hot" or "cold" cannot rightly be understood as properties of things themselves, but as properties, yet again, of our *experience* of things.[9] This is to say that our relation to the world consists not only of our languages and instruments, but also of our *sensations*—our direct, tactile interaction with the world. We engage the world bodily, but that our relation is bodily does not mean that said relation reflects the world factually. Protagoras' vision of nature, for instance, stipulates that "[i]t is our own feelings and convictions that measure or determine the limits and nature of reality, which only exists in relation to them and is different for every one of us" (Guthrie 1971, 184). On this view, Protagoras felt that if two people have different sensations of the world, both are equally valid. In the case of temperature, "If what I feel as warm you feel as cold, we cannot argue about it" (Guthrie 1971, 186). For Democritus, a natural philosopher, "[t]here *was* a permanent *physis* or reality, namely atoms and void," which lies behind all experience; "For Protagoras there is none" (Guthrie 1971, 186).[10] Even if

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[9] Chapter 4 discusses this point in great depth through Gertrude Stein's work in relation to William James, Kant, and quantum physics. This chapter takes the classical distinction between *noumena* (things-in-themselves) and *phenomena* (things perceived) to a new rhetorical and quantum mechanical level that is significant for quantum rhetoric.

[10] Just as Gorgias' *On Non-Existence* is a critique of philosophical theory rather than a scientific hypothesis (which served to show that anyone can come up with any number of internally consistent, logical theories to explain the world which are nevertheless speculative), I remain unconvinced that Protagoras embraced an "extreme subjectivism" that denied all physical reality (Guthrie 1971, 186). Similar remarks have been made about Bohr's claim, as we have discussed, that the question of what an electron does when we're not looking at it is a meaningless question. Such a statement does not imply that no physical reality exists. It seems to me that a proper reading of both Protagoras and Bohr—who are alike in more ways than one—shows their "extreme subjectivism" to be simply demonstrative of the primacy of *perception* in our relation to the world. Something exists which we are relating to. But to perfectly map the thing-in-itself beyond our relation is simply unintelligible. The relation always remains and is equally if not more important than the thing-in-itself.

such a rendering of Democritus' and Protagoras' views is accurate (which I do not believe to be the case for Protagoras), this fact shows where rhetoric and physics converge: on the primacy of *relationality*. Neither the atomists nor the Sophists believed that perception mapped onto reality. Honey seems sweet to some and bitter to others, Democritus notices. But honey itself "is neither sweet nor sour" (Guthrie 171, 184). In the end, rhetoric and physics converge in showing us that the relative terms "hot" and "cold," or "sweet" or "sour," are more true than the quantitative temperatures which attempt to "eliminate the 'unscientific' notion of hotness" (Krips 2014, 43). Without physics, we are left with the question of whether anything at all lies behind our relative experience of hot and cold. Without rhetoric, we are left thinking that our experience of hot and cold can be objectively mapped on to things themselves, omitting our relation to the world. Rhetoric and physics may be different "disciplines," but their juncture gives us both the world and our place within it.

Rhetoric and physics so readily complement one another on these issues because, as I have said, Sophistic rhetoric attunes us more to the human, and physics more to the nonhuman or anahuman. Of course, natural philosophy produced great tension in the ancient world around questions of nature, the human, and their relation: "In terms of the *nomos-physis* debate, in which many or all the Sophists participated, and which has had a richer later history in Western thought, the wind has no *physis*, no real nature; there is only *nomos* (law, convention—here, what appears to a group of people)" (Waterfield 2009, 207). Quantum rhetoric resolves and dissolves this dispute. Joining rhetoric and physics, we see that both *nomos* and *physis* have their place. That they each have their

place does not mean they are wholly distinct, however. It is therefore only at the intersection of rhetoric and physics that legitimacy and importance can be given to both *physis* and *nomos*, to the world and our relation to and through it.

Differential Rhetoric

That the world is dynamic, moving, and relative has profound consequences for our lives and conceptions of matter. Classical mechanics produces a static vision of the world composed of static relations to fixed properties, conditions, and elements. Quantum physics turns this vision upside down. Its "general acausal orderedness" ungrounds the classical view, showing that the fundamental laws of nature do not apply, and are even reversed, on a micro scale (Jung 2010b, 100). A universe without fixed relations, properties, and elements means that things are a bit more entangled and indeterminate than they originally appeared. Jung, for instance, notices during dream analysis that the unconscious mind (or whatever we might call it) is exceptionally responsive to its environment. He concludes that "[i]t would be wildly arbitrary and unscientific to restrict the self to the limits of the individual psyche" (2010a).

This section expands what I call *differential rhetoric:* that, in response to quantum physics in particular, we see the self to be a *response* (not a mere *product*) of the larger entanglement with others and the world. Differential rhetoric emerges from a view of a dynamic, moving, and contingent world, one in which matter is exchanged indefinitely between and among bodies. This exchange is *physical:* the exchange of cultural artifacts, practices, and bodily contact with others and the environment. This contact leaves its mark bodily and psychologically. But this exchange is also *ideological* and *discursive*:

the exchange of language, signs, traditions, and ideas. Each factor is enmeshed with world, *is* world. It is only against the backdrop of this communicating world—the world to which we are a response—that we find ourselves emerging. Consequently, there is no wholly apart "self," no absolutely private being. There is only my "self" as a response to "others" and to "world," such that even to use the words "self," "other," and "world" as if referring to entirely separate entities becomes harmfully misleading. In this section, I will develop the beginnings of a *differential rhetoric*: a rhetoric emerging from quantum physics, yet contained by quantum rhetoric, which places difference at the center of being and becoming. Differential rhetoric is one crucial, theoretical step on the way to *rhetorical being*: the practical *telos* of quantum rhetoric.

As Rilke (1989, 169) writes, "Your life is so inexpressibly your own because it is laden with so many." In this sense, differential rhetoric does not extinguish the self. Rather, it reframes the self as the unique intersection of difference—the self as nexus, exchange, amalgamation. What may seem obvious to us now has long been disputed in the West, as we well know, where "[a]n obscene amount of political, ethical, and scholarly energy has been invested in 'the individual,' that indivisible atom, absolutely detached and for-itself, which is situated at the origin of the origin. And yet, 'one cannot make the world with simple atoms,' Jean-Luc Nancy reminds us" (Davis 2010, 4). Jean-Luc Nancy is correct, yet the physical foundation for the rupturing of Western subjectivity lies far deeper than many philosophers of subjectivity would like to admit.

Quantum mechanics shatters Western assumptions about subjectivity on a (sub)atomic level. Bohm (1989, iii) writes that "quantum concepts imply that the world

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acts more like a single indivisible unit, in which even the 'intrinsic' nature of each part (wave or particle) depends to some degree on its relationship to its surroundings." The world, as singularity, is irreducible to completely separate parts. An ecosystem may have separate entities called streams, mountains, lowlands, etc. Yet these "separate" entities cannot and would not exist without each other. Bohm (1989, iii) pinpoints the difficulty in understanding this picture: "It is only at the microscopic (or quantum) level however, that the indivisible unity of the various parts of the world produces significant effects, so that at the macroscopic (or classical) level, the parts act, to a very high degree of approximation, as if they did have a completely separate existence." The key words are "as if." It may appear to us that human bodies, like atoms, are distinct from one another. That we can point to my body and yours suggests existences separate from one another. This is true. I am not you. And yet quantum physics shows that, in some sense, I *am* you. If the atom to human analogy works sufficiently well, we might say that humans are so entangled with one another that, like Leonard Susskind and Art Friedman (2015, 231) write of particles, we can furnish no information about the individual human that does not contain information about the world. In other words, physics "compel[s] us to give up the idea of individually distinguishing the atoms or molecules of a given substance" (Joos and Freeman 2014, 626). Quantum rhetoric, in turn, compels us to give up the idea of individually distinguishing largely separate subjectivities.

What is the significance of quantum entanglement for quantum rhetoric? Put another way, what is the significance of entanglement for the formation of a general rhetorical ontology rooted in the real conditions of existence? Joos and Freeman (2014,

626) write that we cannot fully differentiate atoms from each other due to two factors: *interference* and *diffraction*. *Interference* simply refers to, for instance, when two waves merge together. Analogously, two paths converge when we meet an old friend. Our plans that day shift in response to this meeting, causing two separate paths to form a shared path. Interference, in this sense, is an obvious condition of existence, one which bears clear effects on our "subjectivities."

Diffraction encompasses interference but is less obvious, and is a key material point upon which differential rhetoric rests. Physically, Karen Barad (2007, 74) explains, "diffraction has to do with the way waves combine when they overlap and the apparent bending and spreading of waves that occurs when waves encounter an obstruction." Water, sound, and light waves all diffract. Diffraction—from Latin *diffrāctiō* (breaking up)—is the process of encountering interference through difference: "a diffraction pattern does not map where differences appear, but rather maps where the *effects* of differences appear" (qtd. in Barad (2007, 72). What Donna Haraway, quoted here, is in effect pointing out is that diffraction is *rhetorical*: it consists of effects and appearance rather than bottom nature or essence. This is one reason why diffraction serves as a useful tool for crafting a rhetoric of and around difference and contingency.

Barad notices some facts about diffraction that inform differential rhetoric. "If you look at a razor blade carefully," she writes, "you'll see that the shadow cast by the razor blade is not the sharply delineated geometrical image one might expect. In particular, there is not a single solid dark area in the shape of the blade surrounded on all sides by a uniformly bright background" (2007, 75). Looking carefully "reveals an

indeterminate outline around each of the edges: along both the inside and outside edges there are alternating lines of dark and light that make the determination of a 'real' boundary quite tricky" (2007, 75). Difference is in the same. Black and white are contained in one another. In this example, "the diffraction pattern can be understood to result from the combining (i.e. superposition) of individual wave components as they emerge past the various edges of the razor" (2007, 79). Diffraction is composed of interaction and effect at points of contact. Whereas *reflection* consists of mirrored images, of inside and outside, of representation, *diffraction* deals in differences, relationalities, and intra-actions (2007, 89). In this sense, diffraction "attends to specific material entanglements," making it a useful trope (which is more than a trope) for developing "a methodology that is attentive to, and responsive/responsible to, the specificity of material entanglements in their agential becoming. The physical phenomenon of diffraction makes manifest the extraordinary liveliness of the world" (2007, 88, 91).

This methodology, attentive and responsive/responsible to differences and entanglements that matter, is most fully developed in quantum rhetoric. It is here, I believe, at the nexus of Sophistic rhetoric and quantum physics where we can best develop a "contingent ontology" that is shaped by materiality and rhetoricity (2007, 89). Diffraction, both a "material-discursive practice" and a "critical practice," shows the possibility of collapsing the different/same binary, and consequently the self/other binary (2007, 94). Differential rhetoric, then, utilizes the facts of diffraction to better understand "which differences matter, how they matter, and for whom" (2007, 91). Differential

rhetoric starts with difference, starts with the assumption that all things are coming together, breaking apart, and recombining, and then asks how we might live responsibly in the face of unpredictable yet assured change.

Physical diffraction empirically grounds and informs differential rhetoric's attunement to *relational diffraction*—diffraction composing our relation to the world, to others, and to ourselves. As Jung (2010a, 155) concludes, "Natural man is not a 'self'— he is the mass and a particle in the mass, collective to such a degree that he is not even sure of his own ego." Western individualism has long crippled collective identity. Its emphasis on subjectivity has long eclipsed the fact of being's "multiple, differential character" that Nancy (1991, xii, 31) and others describe as an "originary pluralism." That we are originally a "we"—that "I" am a response to my community and my environment, albeit a unique and individual response—is founded on the observation that we are always already communicating. There is no prior "I" who develops outside of communication with my community and the world. As Bataille writes, "Communication is a fact that is not in any way added onto human reality, but rather constitutes it" (qtd. in Nancy 1991, 21). That communication is originary rather than derivative of the human condition means that *togetherness*—singularity—precedes *individuality*. That is to say "I" start as a relation to the world, not as a private being which lets the world in.

Davis (2010, 14) concludes that "it's not so much that the subject responds to alterity, then, but that 'the subject' *is* the response to alterity." In other words, our "individual" being only individualizes itself against the backdrop of "an exposure to an alterity that it draws out and communicates" (Nancy 1991, xii). Community and world

are the vast communicative and material reservoirs against which I come to differentiate and understand my subjectivity. To acknowledge this fact, and to explore myself as a response to a transcendent alterity (*beyond* myself and my control) is to look at myself differentially and diffractively. That is, my identity is a continually evolving and emergent abstraction of indefinite and indeterminate processes coming together and breaking apart.

To ground ourselves differentially and diffractively situates *rhetoricity* (affective ungroundedness) at the core of our ontology insofar as the recognition of diffraction's primacy foregrounds difference, exchange, communication, and relationality. Of course, being is *singular plural*, as Nancy's (2000) eponymous book reminds us. But we are only singular beings *because* we are plural, because there is a community and ecology that gives birth to us, raises us, and shapes us. Francis Bacon writes, "There is no excellent beauty that hath not some strangeness in the proportion" (qtd. in McMahon 1945, 737). Differential rhetoric begins with this difference in the same, this "original multiplicity"—true of atoms and of ourselves—because it is only from this point that we can build rhetoricity: that prior, necessary ungroundedness which attunes us to our affectability (Serres 2000, xii). Beginning here, we are better equipped to live responsively and responsibly—that is, *rhetorically*.

Grounding Rhetoricity's Ungroundedness

I have ventured differential rhetoric as a subfield of quantum rhetoric because of the necessary role that difference—and attunement toward difference—plays in quantum rhetoric's theory and practice. There can be no quantum rhetoric without difference

because it is precisely an attunement toward difference which generates rhetorical being. By *difference* I mean, first and foremost, that which is *perceived* as different, strange, unorthodox, irreverent, unreasonable, and counterintuitive: that which challenges our sensemaking structures. To acknowledge, recognize, investigate, attend to, and embrace difference is to live rhetorically. Differential rhetoric is a key factor in approaching the rhetorical life, one which I plan to elaborate and develop in subsequent projects.

The responsibility to live rhetorically is made manifest by the dynamic, moving, and contingent world that Sophistic rhetoric and quantum physics unearth. Yet how do we approach difference in our various life practices? How do we challenge our sensemaking structures? In this section I return to *rhetoricity*—the prior, necessary ungroundedness, "an affect*ability* or persuad*ability*," which enables symbolic action—in order to approach rhetorical being (Davis 2010, 2). For quantum rhetoric, rhetoricity is an *actively pursued* condition which, attending to difference, ungrounds attempts to totalize, unify, and reduce humanity and the world to clear, fixed, knowable, and ideal forms. Rhetoricity is the antithesis of Platonism and classical physics. As such, it is the practical nexus of quantum rhetoric—the condition which makes the rhetorical life possible.

This section grounds rhetoricity's ungroundedness, and reifies and explicates its rhetorical ontology. Here, I ground rhetoricity in specific examples from rhetoric and physics where rhetoricians and physicists attend to their own assumptions, ideals, and practices. That is, rhetoricians and physicists not only theorize but also embody the rhetorical life. In *what* rhetoricians and physicists write, in *how* they write it, and in the *effects* of their ontology and communicative practices we see the rhetorical fruits of their

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labor. We see an emergent rhetoricity at the center of their endeavors reflective of the rhetoricality (uncertainty, unpredictability, relativity) at the center of the cosmos.

Several authors cited thus far have noted in human behavior a tendency toward sameness, repetition, routine, and comfort. Whether it's Serres' (2000, 109) "reign of the same," Levinas' (2013, 195) "sphere of the same," or Freud's repetition compulsion (Kernberg 2011, 178), many theorists have come to the same conclusion: many humans, if not most, prefer sameness. This sameness applies not only to preferring people like us (in appearance, culture, practices, etc.), but also the sameness of routines, environments, and worldviews.[11] The *tendency toward sameness* affects everything from the social issues of our time to the defense of classical mechanics in the face of the quantum mechanical revolution. As Francis Bacon notices, "to an accurate observer it is manifest that hard bodies are most impatient of pressure, and have, as it were, a very acute perception thereof; so that when forced ever so little out of their natural position, they strive with great velocity to free themselves and return to their former state" (qtd. in Briggs 143). It seems that what is common in nature is common in humankind who, after all, emerges from nature. Human beings—forced from their natural positions, beliefs, practices, and perceptions—strive to return to their former states, to preserve sameness.

Cultivating rhetoricity, then, is no simple task. Nevertheless, rhetoricians respond. We have read Burke's work on attending to terministic screens, on realizing the ways in which our words reflect and deflect reality. We have read that Heidegger defines rhetoric

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[11] I have taught David Brooks' (2003) article, *People Like Us*, in first-year composition, which works well pedagogically for an introduction to this subject.

as "the art of listening," which attends to the way in which our being is moved and affected by world (Gross and Kemmann 2006, 3). Furthermore, we have seen Davis (2010, 14) stress rhetoric's revelation of an "irremissible inclination," a "preoriginary obligation to respond" to alterity. Here, she commands that we not "nonchalantly file [our] nails" in the face of difference, but respond responsibly (2010, 14). To ignore or avoid difference is not an option because "ignoring the other becomes a conscious *effort*," insofar as "the active refusal to be responsive is a response and no longer simple indifference" (2010, 11). I have also stressed that when Kompridis (2006, 65) quotes Adasdair MacIntyre in saying that "we are never in a position to claim that now we possess the truth or now we are fully rational," he is, in principle, approaching rhetoricity. He is ungrounding any attempt at the final unmasking of truth. Such is de Man's rhetorical practice when he insists that any *revelation* must be followed doubly by *recoil*: the critique of revelation. This "double movement of revelation and recoil" creates a rhetoric of "transcendence steered by logos," such that rhetorical being is sustained as "an openness to influencing each other in the way we lead our lives" (de Man 1971, 288-89; Crosswhite 2013, 28, 61).

James Crosswhite's notable *Deep Rhetoric* has informed quantum rhetoric but has not been sufficiently explored thus far, especially for its value in responding to difference. Crosswhite (2013, 2) claims that it is the job of rhetoric to navigate uncertainty toward the good, which he equates with practically guided reason, justice, and wisdom. On the subject of reducing violence and suffering, he writes that rhetoric supplements "ultimate perspectives" for more practical ones which are open to

deliberation and argumentation—to *difference* (2013, 172). Rhetoric, he concludes, is valuable for its "ability to host controversy" and keep "some controversies open" as a way of maintaining "the freedom to change our minds or to create something new or to adapt to new conditions" (2013, 5-6). Crosswhite's "deep rhetoric"—a philosophical rhetoric that quantum rhetoric draws from but reconfigures materially—is, after all, a rhetoric toward difference, a responsible response to injustice and violence, to the destruction instantiated in part by tendencies toward sameness.

Rhetoricians, therefore, are explicitly and unapologetically grounded in ungroundedness, openness, and responsiveness to alterity. The Sophists, too (discussed in chapter 2), made a living ungrounding assumptions and causing their interlocutors to look at their convictions from different (and often reversed) angles. But what about the physicists, whom we have not discussed thoroughly in this regard? What is their response to difference? Do they unground themselves as the rhetoricians do, and how might their rhetoricity exemplify rhetorical being? I claim that quantum physicists (and many physicists in general) cultivate rhetoricity by foregrounding their assumptions in theory and practice. Doing so, in the spirit of Protagoras, better enables them to overturn assumptions in favor of new, better theories. The historian Tom Holland writes that "[t]he Romans judged their political system by asking not whether it made sense but whether it worked" (qtd. in Taleb 2018, 144). In much the same way, physicists evaluate theories based on their effectiveness in explaining and navigating the world. As with Crosswhite's deep rhetoric, the effect of their theories is the measure of their worth, making physics a rhetorical enterprise through and through, and a useful model for rhetoricity.

More contemporary (quantum) physicists like Leonard Susskind, Art Friedman, Georg Joos, Ira M. Freeman, Henning Hoeber, and Armin Wachter exemplify foregrounding one's assumptions. In Susskind's and Friedman's (2015, 295-6) *Quantum Mechanics: The Theoretical Minimum*, they write,

> Mathematically, we've made no assumptions about the shapes of our wave packets. But we have tacitly thought of them as being nicely shaped functions with a single maximum, smoothly trailing off to zero in the positive and negative directions. This condition, though not explicit in our mathematical assumptions, does have a real impact on whether a particle behaves the way classical mechanics would lead us to expect.

For the sake of our purpose, we need not delve into wave packets and the effect of assumptions on their conceptualization. The key is *that* the assumptions are made explicit in the initial exposition of the subject. Not only are the assumptions made explicit, but equally explicit is the recognition that such assumptions "have a real impact" on the behavior of particles.

One would need a detailed chart to account for each time such assumptions are made explicit not only in Susskind's and Friedman's book, but in Georg Joos' and Ira M. Freeman's *Theoretical Physics*, as well. Here, you would be hard-pressed not to find phrases like "Newton also makes a similar assumption," "we assume our reference frame," "assumption of an absolute space," "we are naturally inclined to take for granted," "we must make assumptions concerning the structure of matter and of electrical charges" throughout each area where assumptions are made, whether those assumptions are convincing or not (2014, 229, 231, 258-259). In each of these cases, as is common practice, assumptions are not in the fine print, not footnoted, and not relegated to an aside. Rather, they are foregrounded as essential to each theory's contingent framework.

In Wachter's and Hoeber's (2006, 383-4) *Compendium to Theoretical Physics*,

their chapter on the foundations of statistical physics foregrounds two key assumptions

regarding time and probability which establish the basis for statistical physics.

Assumptions, otherwise known as *postulates*, are charted and recognized as such: as the

provisional ground upon which frameworks rest. Perhaps this is why Einstein (2015, 77),

in his relativity essay, writes that science operates in a particular fashion:

> Guided by empirical data, the investigator rather develops a system of thought
> which, in general, is built up logically from a small number of fundamental
> assumptions, the so-called axioms. We call such a system of thought a theory. The
> theory finds justification for its existence in the fact that it correlates a large
> number of single observations, and it is just here that the "truth" of the theory lies.

The investigator is guided by "empirical data"—real conditions of existence—which

founds a theory from initial assumptions. Notice, though, that even if this theory

"correlates a large number of single observations," it is nevertheless "truth" in scare

quotes—not Platonic, scientific realist Truth. That is to say that the real conditions may

change. A theory may emerge which better explains and responds to the facts. This

realization leads Einstein himself to recognize his own assumptions. For instance, he

writes that "[t]he relativity theory begins with these two assumptions [regarding the speed

of light and uniform laws of nature]" (Einstein 2007, 177-8). He concludes that "nothing

should be too obvious; if we wish to be really careful, we should analyze the

assumptions, so far taken for granted, in physics" (2007, 184).

Physicists may foreground the recognition of assumptions in exemplary ways, but

how do they respond when their assumptions break down? What is their attitude toward

the failure of crucial assumptions? As Einstein (2007, 184) writes, "An assumption

should not be regarded as unreasonable simply because it differs from that of classical physics." In the same spirit, he writes, "It is essential here, as always in science, to rid ourselves of deep-rooted, often uncritically repeated, prejudices" (2007, 178). When quantum physics appears, it challenges physicists to do just as Einstein describes. So how do the physicists respond? Richard Feynman (2011, 33), for instance, responds to Newton's classical assumptions in the face of quantum physics' success with clarity and candor: "Newton's laws are *wrong*—in the world of atoms. . . . things on a small scale behave *nothing like* things on a large scale." Bohm (1989, 105), too, as we have noted, ejects classical assumptions in developing his own quantum theory, writing that physicists "must be ready, if necessary, to abandon even what seemed most secure and beautiful in the old point of view, in favor of what may seem arbitrary and ugly in the new point of view, if this should help explain something." Abandon the old point of view he does despite great difficulty and alienation, as Becker's (2018, 89-116) chapter on Bohm describes. These examples, among others, suggest that physicists successfully focus on the effects of their assumptions on their observation and interaction with the world. Should the effects of their assumptions inhibit their work and convolute their understanding of nature, they are replaced with new, more effective assumptions—until still better ones emerge (Bohm 1989, iii).

How do more contemporary physicists respond and critique assumptions? Wachter and Hoeber (2006, 6), for instance, write to their readers, "Looking ahead, we mention here that both of these assumptions [regarding absolute time and total mass of a closed system] are dropped in the framework of special relativity." Dropped because they

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simply do not work. Rather, they *do* no work. Susskind and Friedman (2015, 51) address assumptions as effects of *intuition*, which is typically unreliable in quantum mechanics: "No, we were not built to sense quantum phenomena; not the same way we were built to sense classical things like force and temperature." Nevertheless, if we can sustain our discomfort and stay with the phenomena as we observe them, listening to the data we receive, then "eventually we do develop new kinds of intuition" (2015, 52).

Likewise, Susskind and Friedman (2015, 159) stress that classical concepts often do more harm than good in quantum mechanics: "These classical concepts are deeply ingrained in our thinking. They are the foundation of our instinctual understanding of the physical world, and it's very hard to get past them. But get past them we must, if we are to understand the quantum world." Paul Dirac (2017, 1-2), in his *Lectures on Quantum Mechanics*, agrees. He comes to a similar conclusion, not only because our intuition lines up with the classical view, but also because "[i]t is very much easier to visualize what one is doing in terms of classical mechanics." Classical mechanics, that is, satisfies both our intuition and ease of perception. Even so, he reiterates the quantum mechanical conviction: "classical mechanics is not good enough to describe Nature. Nature is described by quantum mechanics" (Dirac 2017, 2).

These examples, among numerous others, suggest that physicists provide an effective, practical model for both foregrounding and revising assumptions in light of new evidence. That physicists follow the evidence despite discomfort—despite the fact that quantum mechanics is counterintuitive and makes visualization of a physicist's work difficult—is demonstrative of the physicist's rhetoricity, one which rhetoricians of all

stripes should seek to advance and to emulate. Of course, not every physicist is an Einstein, Bohm, or Feynman. Not even Einstein, as chapter 1 touched on, was ready to give up certain assumptions regarding probability and locality. Sometimes change is slow to come, as well, as the early years of quantum theory verify. Nevertheless, physics was a field upended relatively quickly in the scheme of the history of assumptions. An entire worldview was toppled within several decades, a worldview which spanned at least 2,500 years. Physicists from various perspectives and commitments responded, cultivating a rhetoricity which allowed them to critique and reframe their practice.

It is for this reason that quantum rhetoric turns to physics, and to physicists, for an effective model of what a response to an ontological or epistemological breakdown should look like. For, as I.A. Richards (1979, 5) well knew, "an idea, or a notion, like the physicist's ultimate particles and rays, is only known by what it does. Apart from its dress or other signs it is not identifiable." If an idea or an assumption does not correspond to the real conditions of existence, to what we observe, then it does not work. If it does not work, we should not hesitate to—once again via Bohm—abandon our view "in favor of what may seem arbitrary and ugly in the new point of view." This is rhetoricity. This is an ungroundedness responsive to contingent but real conditions. This is rhetoric, as the Sophists originally envisioned and practiced it:

> In the Sophists' intellectual world, where nothing was accepted as *a priori* anymore, the only sure criterion was immediate, concrete human experience. Gods, traditions, and mythical memories no longer counted for anything. Our own judgments, our own feelings and interests now constituted the sole criteria. (qtd. in O'Grady 2008, 51)

Rhetoric, for the Sophists through contemporary rhetoricians like Jarratt, Davis, and Crosswhite, recognize rhetoric's ungrounding potential. Rhetoric's power consists in its ability to effectively and efficiently pull the rug out from under our feet when "immediate, concrete human experience" demands it. That rhetoricians and physicists equally foreground their assumptions and respond to their breakdown implies that they are mutually productive agents in the pursuit of rhetoricity. It is my hope, then, that the juncture of rhetoric and physics (which in the beginning were never separate) will multiply each field's strengths, resulting in a net force with the power to overturn the "reign of the same," to undo our repetition compulsions, and to bring us one step closer to engaging difference and its productive effects for rhetorical being.

Turning toward Poetry

At this point we have seen how rhetoric and physics orbit around a dynamic, contingent world. Rhetoricians past and present have made this dynamic world the nexus of their reason and response. The material relativity of the cosmos, along with our perception of it, has compelled rhetoricians to respond responsibly to the shifting conditions of existence. Consequently, rhetoricians have crafted a rhetoric toward difference—what I am calling *differential rhetoric*—that situates rhetoric as an art of listening in addition to an art of speaking. Quantum physicists, too, upon the breakdown of the totalizing classical view, advance rhetorical responsivity and rhetoricity, overturning the very assumptions that made them physicists in the first place.

Protagoras attunes us to the effects of our actions, suggesting that the measure of their *worth* be the measure of their *work*. Rhetoric, in this sense, has consistently oriented

itself around work, effect, and doing. "To do or not to do," that is the rhetorical question (Lyon 2013, 29). Physics, in turn, measures its theories by their results, by what they explain, accomplish, and account for. New evidence from our relations to the world may tell a different story, and physicists have demonstrated a sensitivity to this reality, foregrounding assumptions in their work. Gorgias knew that "truth was contingent upon a particular *kairos* (an opportune moment of 'opening'), that is to say, truth can be found only within a given moment" (O'Grady 2008, 50-1). Physicist and chemist Ilya Prigogine (1997, 155) knows this much, as well, writing, "The laws of nature, which no longer deal with certitudes but possibilities, overrule the age-old dichotomy between being and becoming." Imprinting the world upon our hearts and minds as such better enables us to attend to our materiality over the mind-body duality, movement over stability, difference over sameness, rhetoricity over certainty, and utility over truth.

Rhetoric and physics are thus not merely connected. Quantum rhetoric is not an exercise in interdisciplinarity. It is not another way to connect what some figures are doing in one field with what some figures are doing in yet another. Rather, quantum rhetoric is a *return* to—and a *revision* of—the historical nexus between rhetoric and physics, both of which are situated at the crux of the tension between two major worldviews: one static, and one dynamic. Platonism may have been more successful and effective in the history of thought. It may have had more disciples. But these facts speak neither to its truth nor its worth. And although Sophistic rhetoric has enjoyed a revival in the 20th and 21st centuries, recuperating and rereading the Sophists is not all that can be done. Quantum rhetoric—in anchoring rhetorical practice in quantum physics, and in

indexing the physical world to the worth imparted to it by rhetorical deliberation and contemplation—joins two necessary yet never truly separated halves. Aristotle wrote *Rhetoric*. He also wrote *Physics*. That he split the two artificially may have been his greatest sin. Quantum rhetoric does not absolve Aristotle. If anything, it convicts him. At least, it corrects him.

I have attempted in this chapter to ground rhetoric and physics in each other, to complement one another's strengths, and to strengthen one another's weaknesses. I have done this principally by emphasizing that physics materializes and corroborates rhetorical practice and that rhetoric humanizes the facts of physics, giving them human worth and making them impactful for our daily lives. Chapter 4 turns to some of the historical ground that prepares the way for quantum rhetoric, in addition to examining the role that poetry and poets play in ungrounding assumptions—in developing rhetoricity. Here, I insist that quantum rhetoric is not a rhetoric merely for rhetoricians, or for physicists, but for all those who pursue alterity through inquiry. In this way, quantum rhetoric cuts across disciplines. It is not interdisciplinary, but *transdisciplinary*. As the entanglement of matter and meaning, quantum rhetoric applies to all (pre)symbolic acts. Yet the poet, as I illustrate through Gertrude Stein in particular, is in a unique position to create, to approach the *new*—the different, the nonsensical, the irreverent. Poetry, a creative practice, develops rhetoric's classical attunement toward *invention*, the first of the rhetorical canons. As such, poetry is primary to rhetoric. Poets, furthermore, exemplify quantum rhetoric in much the same way as rhetoricians and physicists do. Poets *are*

rhetoricians, I stress, and Gertrude Stein—among several other avant-garde poets I

mention—is a productive and responsible model for (quantum) rhetoricians to emulate.

Poets, in short, show that "the flux and fire of life are not to be underrated and are

absolutely necessary for the achievement of wholeness" (Jung 2010b, 197). Poets, in

pursuing fire and flux, change and revolution, are Sophists who principally create rather

than instruct. Insofar as poets are equally if not more despised by Plato than the Sophists

(the lowest rung on *The Republic's* ladder), we have good reason to turn to them for

salvation from sameness. Let us, then, end on the words from Gaston Bachelard (1994,

146-7) who, though often labeled a philosopher, I consider a poet of the first rank:

> The intellectualist philosopher who wants to hold words to their precise meaning, and uses them as the countless little tools of clear thinking, is bound to be surprised by the poet's daring. . . . Words—I often imagine this—are little houses, each with its cellar and garret. Common-sense lives on the ground floor, always ready to engage in "foreign commerce," on the same level as the others, as the passers-by, who are never dreamers. To go upstairs in the word house, is to withdraw, step by step; while to go down to the cellar is to dream, it is losing oneself in the distant corridors of an obscure etymology, looking for treasures that cannot be found in words. To mount and descend in the words themselves—this is a poet's life. To mount too high or descend too low, is allowed in the case of poets, who bring earth and sky together. Must the philosopher alone be condemned by his peers always to live on the ground floor?

CHAPTER 4

AN EVENT ON THE HORIZON
GERTRUDE STEIN, QUANTUM PHYSICS, AND THE RISE OF RHETORICITY

All distances in space and time are shrinking . . . Yet the frantic abolition of all distances brings no nearness.

— Martin Heidegger, *Poetry, Language, Thought*

Language is no longer a mere instrument, it seems to have acquired a life of its own. Language speaks, it follows its own rhythm, its own partial coherence, it proliferates in apparent, and sometimes violent, chaos.

— Jean-Jacques Lecercle, *The Violence of Language*

Stein's inventional disposition toward language . . . offers a comprehensive rhetorical *theory* for the twentieth century that is rooted historically, institutionally, and culturally in each of rhetoric's traditional canons while also signaling what is to come.

— Sharon J. Kirsch, *Gertrude Stein and the Reinvention of Rhetoric*

In 1905 with Einstein's publication on the special theory of relativity—where the speed of light was found to be constant at any point in space, but that the perception of space and time (which became *spacetime*) was relative to the observer's position—the "tidy affair" of classical physics, which applied a top-down model of the universe that was static and objective, began to break down (Barad 2007, 233). Relativity, alongside quantum theory and its various interpretations, showed our experience of the universe to be relative, and the universe itself to be often unpredictable, ever-changing, and disordered.[1] This order of things was not shattered easily though: "only with Einstein's

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[1] In *Futurability: The Age of Impotence and the Horizon of Possibility*, however, Franco Berardi (2017) examines Henri Bergson's claim that "[d]isorder is simply an order that we do not seek." Order and disorder, then, require interpretive work. The terms themselves are

theory of relativity, Planck's discovery of quanta, Bohr's model of the atom, [and] Heisenberg's Uncertainty Principle, did this concept of an ordered universe, which is nothing but the mere sum of its parts, and which has an objective existence in itself, begin to disintegrate" (Kucharzewski 2004, 499). This change, furthermore, was not *epistemological*—not a matter of mining the unknown. Rather, it was deeply *ontological*: "objective indefiniteness, objective chance, objective probability, and entanglement" were the universe's new building blocks (Shimony 1989, 37). These developments sparked a "genuine philosophical crisis [where] basic beliefs about space and time, causality and reality" were overturned (Crease and Goldhaber 2014, 257). As we read in chapter 3 from the great Richard Feynman (2011, 33), "Newton's laws are *wrong*—in the world of atoms. . . . things on a small scale behave *nothing like* things on a large scale." In a way, a world that was stationary and consistent, and thus knowable and predictable, was set into motion.

In 1989, physics quickened its pace when the results of NASA's Cosmic Background Explorer (COBE) mission "confirmed the Big Bang theory of the origin of the universe," and thus that the universe was, in fact, expanding, accelerating at greater and greater speeds, and that, whereas beforehand it had only been the stuff of science fiction, some parts were even accelerating beyond the speed of light, thus for the most part unknowable and totally beyond apprehension (Filippenko 2009).[2] The boundary in

interpretive gestures with their own assumptions. What counts as order? I would suggest that quantum physics is simply a new order, though disorderly in the eyes of classical physics.

[2] Einstein's special theory of relativity holds that no object with mass can travel at faster-than-light speeds; however, the theory does not prevent empty space itself from expanding

spacetime whereupon space itself begins to accelerate beyond light, taking all matter within with it, is called an "event horizon," meaning the literal boundary where events begin to occur for the observer, insofar as events beyond the horizon, in a region accelerating beyond light, cannot affect an observer. While some event horizons "either have or will be observable," perhaps in the future when regions of space slow to light speed, sending light our way, other substantial parts "never have been or will be observable" (Swinburne 1966, 211). In other words, whatever happens beyond those horizons is inconsequential; this space may, for all intents and purposes, not exist. This discovery meant that, in contrast to previous beliefs that given enough time science would demystify and describe the entire universe, some parts of the universe would forever evade us.

But spacetime was not the only thing set into both motion and relativity at the time. In 1890, William James (1950a, 237), often considered the "father of psychology," published *The Principles of Psychology*, devoting a chapter in *Volume One* to the "The Stream of Thought," where he states that "[w]ithin each personal consciousness, thought is sensibly continuous," reversing the Humean doctrine which states "that our thought is composed of separate independent parts and is not a sensibly continuous stream." James (1950a, 234, 230), in effect, puts thought into fluid motion, connected and irreducible to simple parts, going as far as to say that "every given thing is really a resultant of our

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during the big bang, since, Michio Kaku explains, "no material object is breaking the light barrier." See Michio Kaku's "4 Things That Currently Break the Speed of Light Barrier," (*Big Think*, 2015) and *Physics of the Impossible* (New York: Doubleday, 2008).

experience of the whole world up to that date," and, furthermore, that "*no state once gone can recur and be identical with what it was before*." Experience is not reducible to parts, and neither is it reproducible in the scientific sense. An experience is an amalgamation of every experience an individual has had beforehand, where the new always carries the old (Kirsch 2014, 36). James, in this respect, demonstrates the complex and collective factors that forge consciousness and the relativity of experience just as Einstein demonstrates the relativity of the universe to an observer.

These parallel movements, of course, are not without influence on Gertrude Stein, and in many senses shaped who Stein was and what she did with language and thought. We might even say that Stein herself is an amalgamation of all human thought up until that point. While it is difficult to know what direct effect, if any, Einstein and the emergence of quantum physics had on her, it is clear that she, being "a student of James while being enrolled at the Harvard Annex from 1893 to1897," seems to employ the Jamesian stream of thought philosophy in an attempt, as this chapter examines, to trace the essence of the thing-in-itself, to know an object for its essence, to close the gap in space between the object accelerating beyond light and her understanding of it (Kucharzewski 2004, 502). Stein's attempt to cross this distance, however, "brings no nearness," insofar as it is her very search for the thing-in-itself that leads her not only to the absence of essences in things, but to the *productive* and *provocative* power of the language—so long as one is responsive to it—to disclose new existential possibilities and relationalities (Heidegger 1971, 165).

It is in her relation to language that Stein takes on the role and practice of a *rhetorician*, not only due to how she uses language, but also to how she allows herself to be used *by* language, to work *with* and be worked *on* by language in a kind of relationality to the alterity of language—to its being other than a transcription of thought—that produces new existential encounters with things that are never things-in-themselves, but instead things emerging between her and her relationship to words. What makes Stein a unique literary and rhetorical figure, then—one who, as Sharon Kirsch discusses, is central to modern rhetoric—is not simply how she uses language. Rather, it is her openness to where language leads her, rather than over-determining where she may or may not be led. For, as much as Stein guides language, language guides Stein. This openness makes Stein, much like the physicists of her time (discussed in chapter 3), a productive model of *rhetoricity*—an exemplar of quantum rhetoric's ungroundedness.

Central to quantum rhetoric is not simply that Stein is an important rhetorical figure, which Kirsch and others have illustrated. What is more central is that Stein's responsivity and response-*ability* to language (to borrow from Diane Davis)—crucially coupled with the rise of quantum physics—demonstrates and instantiates the rise of rhetoric not as a *tekhnē* or a mere means of persuasion, but as *rhetoricity*: a particular relationality to language and world as *other* which questions our interpretive frameworks. Stein's rhetoricity, in turn, illustrates the entanglement of matter and meaning, the ways in which the "outside" world is always already within. Seemingly mundane objects are, in fact, of great magnitude and significance, as is our relation to them through language and sensation. In this way, Stein embodies quantum rhetorical practice, showing that the

human condition is one perpetually imbricated in an "affectivity or persuadability that precedes and exceeds symbolic interaction" (Davis 2010, 19).

Stein's avant-garde work, side-by-side with the emergence of quantum physics, in other words, does not just signal the coming (back) together of seemingly divergent disciplines, which can and will be used to discuss each other's projects, but rather the emergence across disciplines of *rhetoric as first philosophy*. Not philosophy "proper" (the *what is?*), and not ethics (though Levinas' work will be instrumental here), but rhetoric as rhetoric-*ity*—as language which "creates and is created by the rhetor," evolving rhetoric into a broader "theory of contingency," whereupon openness to possibility, to the other and alterity, to uncertainty and difference, constitutes a "possibility-disclosing practice" that has underpinned much scientific and literary methodology since the twentieth century (Kirsch 2014, 37, 116; Kompridis 2011, 255).

This chapter portrays Stein's literary-rhetorical (post)modernism and quantum physics as parallel, coalescing movements, each of which helps us talk about the other, and which, together, signal the rise of rhetoricity—of the "rhetorical imperative," in other words, "to receive and respond [and to] remain open" in the face of ideological, epistemological, and ontological conflict, which confront both Stein and Newtonian physics at the turn of the twentieth century (Davis 2010, 119). In the case of both quantum physicists and Stein, each follows where their symbolic systems lead them, rather than superimposing their ideological limits, closing themselves to alterity.

Here, we will focus on the physics of Einstein and beyond to discuss, principally with the help of William James, how concepts of space, time, and language begin to

come apart at the seams during the time of two 'steins, insofar as each 'stein turns classical schemes of understanding the universe and experience upside down, building toward quantum theories of both physics and language itself—equally dependent on rhetoric as first philosophy. And with the help of a third 'stein, Ludwig Wittgenstein, we will wade into the domain of Stein's language with *Tender Buttons* in order to examine how she upholds and overturns classical epistemology by both searching for the Kantian noumenon, the thing-in-itself, and by pursuing a sensuous, paradigm-changing play with words that creates a thing-in-itself-for-itself, an existence without an essence—her words fluid, continuous, unpredictable. Throughout this analysis, physics—and *quantum physics* in particular, "the most successful theory in all of science"—will give us a concrete language with which to discuss Stein's larger body of work, as well as the rise of rhetoricity it testifies to (Becker 2018, 1). Insofar as rhetoricity is the crucial building block of quantum rhetoric, and of cultivating rhetorical being (the *telos* of quantum rhetoric), Stein is essential for both modeling and representing the rise of rhetoricity.

Our master metaphor will be the aforementioned cosmic event horizon, that boundary in spacetime where space itself begins to accelerate beyond the speed of light, thus becoming unobservable, trailing only darkness. This event horizon is physical: the real spacetime boundaries of our universe. It is mental and perceptual: the essence of *the thing*, the object that Stein often times contours with words, its essence sending little to no light back to map its reality, if there is indeed a reality in all that transcendent space; and it is Stein's work itself, for as she approaches the event horizon of the thing and its (existential) essence, her work, too, becomes incapable of being apprehended, gone too

far beyond light, breaking what once were thought of as binding laws in language and thought. This master metaphor will both unite quantum theories of physics and language and *provide* a language with which to understand the difficulty of understanding Stein, making the perpetual struggle more expressible, and her work less impenetrable.

In this sense, Stein, as well as her work, constitutes a sort of singularity, something irreducible to simple parts. Davis (2010, 7) writes,

> In contemporary physics, a singularity indicates a particular anomaly that escapes all known laws of physics (the big bang is a famous example) but that is not simply observable because it resides in a black hole, which sucks everything inward, including light, and remains hidden beyond an event horizon. A naked singularity, on the other hand, is described as an anomaly that occurs (theoretically) without an event horizon; it therefore would be an observable yet still wildly ungraspable "event." The singular being is not enclosed in a form and cannot appear or even exist alone; singularity is by definition shared.

The question that Davis raises, with regard to Stein, is what kind of singularity is she? Is Stein located beyond an event horizon, unattainable, or without an event horizon, yet seemingly ungraspable? I would like to venture the latter, particularly with regard not to the truth of Stein's work (of what she means *really*), but to what, in truth, her work *does* on the emerging horizon of rhetoricity in both her time and our own—in how she, rather than unmasking truth, comes upon a clearing, or creates a clearing (*lichtung*), that demonstrates the inventive and innovative power of language itself to work on us as much as we work on it. Stein is surely working on this horizon of meaning and rhetorical practice, becoming entangled in an irreducible singularity with language that gives rise to the ingenuity of her work. Perhaps we can catch sight of what she is doing on this horizon, which I claim is principally rhetorical, shedding further light on this often misunderstood figure and her contribution to rhetoric. Or perhaps she will always remain

in her own dimension, a rhizome in space, hopelessly beyond apprehension. Moving

forward, we will hope for the former.

The Breakdown of Symbolic Systems: A Call to Respond

Key "principles" behind quantum physics are *uncertainty* and *indeterminacy*, in direct

contrast to the *predictability* of classical physics, to the extent that, as Bohr said, "anyone

who claimed fully to understand quantum physics thereby reveals that they have not yet

begun to comprehend it" (Crease and Goldhaber 2014, 111). A case-in-point for this shift

in epistemology is traditionally located in the *wave-particle duality*, where light was

believed to be either wavelike or particle-like in nature for decades before it was

theorized by Louis de Broglie, Bohr, Einstein, and others to have both wave and particle-

like qualities, proved in 1924 by de Broglie, despite years of dispute. In the *double-slit*

experiment, two narrow slits are cut in a screen with a light source behind it. Leave two

slits open and the light "produces a definite interference pattern on the screen"

(Kucharzewski 2004, 505). The photons pass through both slits and interact with each

other like waves. But put photon detectors atop the slits, fire one photon at a time through

each slit, and the photons register on the screen "like bullets shot from a gun" through

their respective slits with no interference (Kucharzewski 2004, 505). Now light appears

to be made up of individual photon particles.

Depending on how you observe light, then, it behaves differently, never showing

both aspects at the same time.[3] In fact, "*[a]ny* interaction that is strong enough to

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[3] Quantum mechanics requires interpretations, and there are several interpretations of the
double-slit experiment in particular. See Adam Becker's (2018) recent book, *What is Real?*

measure some aspect of a system is necessarily strong enough to disrupt some other aspect of the same system" (Susskind and Friedman 2015, 12). Bohr (2010, 61) went as far to say that any measurement with any apparatus will filter our understanding of phenomena, insofar as an experiment's design influences "*the very conditions which define the possible types of predictions regarding the future behaviour of the system*." Predictability, certainty, and uniformity thus break down at the level of light. Heisenberg's Uncertainty Principle formalizes these observations: one "can never simultaneously demonstrate the wave characteristics and the particle characteristics of an electron"; electrons will "act either like waves or like particles, depending on how they are treated by the surrounding environment" (Kucharzewski 2004, 505; Bohm 1989, iii). Nevertheless, Einstein complemented, these seemingly contradictory characteristics more completely inform our understanding of particles. Furthermore, Heisenberg's Uncertainty Principle, "which was originally proved for electrons, [was extended] to all the elementary particles" (Joos and Freeman 2014, 692). In every observation, then, there is this degree of uncertainty, this quantum level of entanglement, of apparent contradiction.

What quantum theory tells us is that our observation of something, of the thing, is relative to how we observe it, tying us back to Einstein's relativity. Even as physicists attempt to observe the nature of light, the nature of the real thing, they cannot entirely transcend the human element. Yet long before quantum physics materialized this theory,

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The Unfinished Quest for the Meaning of Quantum Physics. The principle interpretation is that the measurement apparatus interferes with a sea of probabilities, forcing a photon to take a definite position. Another interpretation is that consciousness itself, in the act of observation, causes the wave function collapse. This position has few supporters today.

Kant articulated his idea of the *noumenon*, the thing-in-itself, which is by definition

unknowable, insofar as once we look at the thing, it changes (Kant 2007, 20). With this

groundwork laid, we can situate Stein between Kant and Einstein, and between classical

physics and this rupture in spacetime, attempting to get at the thing-in-itself, as we will

see shortly with James and *Tender Buttons*, to work around the element of observation

within observation, collecting perspectives from different angles—sight, sound, smell,

etc.—combining sensations into what might be the noumenon, or at least an imitation of

it. "In fact, one might conceive the whole object of *Tender Buttons* as an attempt to show

that the essential thing-in-itself is capable of being drawn forward," struggling with or

opposing Kant's notion that our sensations of objects "cannot rightly be considered

qualities of things, but only as alterations in our subject, alterations which may, indeed,

be different in different people" (Knight 1991, 36; Kant 2007, 66).[4] On the other hand,

Stein bridges classical physics and quantum physics by turning away from the noumenon

altogether and engaging in a sensuous play with words *as* words, as constructions of

consciousness and nothing else, her words constituting a "dance among the sonic, visual,

connotative, and referential elements of language—a beautiful attempt to experience

words, feeling, and history in new ways" (Axelrod 2014, 274).

It is in this evolution—in this transition from trying to unmask the truth to

creating her own truth—that Stein takes a distinctly rhetorical turn, insofar as when she is

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[4] For a differentiation of objects and things—"that which stands before, over against,
opposite us," as opposed to a thing independent of our relation to it—see Martin Heidegger,
"The Thing," *Poetry, Language, Thought* (New York: Harper & Row, 1971), 165-82.

confronted with the impossibility of unearthing the noumenon, rather than writing up against the wall, she allows language to draw her, in the face of the withdrawn noumenon, away from her initial ideological position that things could be "put into words" (qtd. in Knight 1991, 40). Instead, embracing rhetorical practice, I claim, allows her to create things *with* words. In this respect, the rhetorical canon of invention, for Stein, is not so much discovery as it is creation: "creation must take place between the pen and the paper," Stein writes, "not before in a thought or afterwards in recasting" (qt. in Kirsch 2014, 37). "The creation," Kirsch (2014, 37) writes, "occurs in the midst of writing; it comes 'out of the pen and out of you' by drawing on the past to shape the present. It creates and is created by the rhetor." Writing, therefore, is no mere instrument. Writing is the (re)invention of the subject through words that are not the writer's own, but from without. Yet for the writer to be affected by from what is without, like Stein is, he or she must not be ideologically closed to possibilities not already thought. The writer, and the rhetorician, must be open to alterity.

When Stein, as well as quantum physicists, confronts alterity, that which is from without, it is not another individual, not another *Dasein*, which she opens up to through language: the other is language itself. It is language *as* other which leads Stein away and astray from her assumptions and interpretive frameworks, transforming discovery into creation. Similarly, in the case of quantum physics, it is not necessarily the other as individual which the quantum physicist must principally remain open to. It is the quantum physicist's symbolic systems, where language leads him or her, that must be embraced in order to engage new possibilities. This openness, this obligation to respond

to language and where it may or may not lead, defines what Davis (2010, 14) calls "response-ability," the responsibility first and foremost to respond: "According to [Levinas], this response-ability is not only what brings an existent into being; it *is* the *clinamen*, the inclination toward the other. Being and knowing surely do follow, but if it were not for this irremissible inclination, this preoriginary obligation to respond, then in the face of the other I would nonchalantly file my nails." Levinas, in other words, stipulates that ethics is first philosophy, that before all else is ethics. Davis, however, demonstrates that even before this call to respond ethically is the call to respond.

And respond Stein and quantum physicists do. They do not "file their nails" in the face of the otherness of language, in the face of all that their symbolic systems call into question and overturn. Instead, they practice a "self-decentering learning that makes a cooperative new beginning possible," and which "precludes the very idea of a final unmasking," instead opening up "alternative and potentially transformative possibilities of becoming" (Kompridis 2011, 255, 61). It is important to insist here that while Levinas takes ethics to be first philosophy, and that while Kompridis—whose investments lie in evolving *critical theory* into a more "possibility-disclosing practice"—also emphasizes an openness to the other as first philosophy, both Levinas and Kompridis accidentally illustrate that rhetoric (response-ability, receptivity, affectability) is first philosophy, that before a call for a particular kind of response is the call to respond. This call to respond, this openness to respond, is exactly what Stein and quantum physicists, side-by-side in the early twentieth century, instantiate as first philosophy, demonstrating a rise of rhetoricity that can be seen at the fundamental level of what these literary and scientific

giants of their time do. First, however, they must be brought to the point where their interpretive frameworks break down, where there comes a choice to respond by *ignoring* or by *listening* and being led.

Approaching the Event Horizon of the Noumenon

Turning first to *Tender Buttons*, we find that what Stein does, in attempting to get at the noumenon, is approach the thing-in-itself from multiple dimensions, experiencing it over and over—in repetitions with a difference—in order to form a more comprehensive experience of the object, and thus a more complete look into the thing-in-itself. She takes heed, in other words, "of the different way in which the same things look and sound and smell at different distances and under different circumstances," so that if the noumenon, in all its unknowability, constitutes an event horizon, a thing accelerating beyond light, Stein endeavors to close the spacetime gap. In "The Stream of Thought," James (1950a, 231) states the difficulty in such a task: "close attention to the matter shows that *there is no proof that the same bodily sensation is ever got by us twice. What is got twice is the same* OBJECT." Quite emphatically, he declares that although we may experience the same *object* twice, the experience which colors it is one of a kind, unique in each encounter. The underlying difficulty of objective observation, of course, returns us to the problem of the wave-particle duality, of observation affecting our perception of an object. But while quantum physicists have attempted to demonstrate both the wave and particle-like nature of light at the same time, and have failed, perhaps Stein approaches the noumenon of the things she observes more successfully.

In *Tender Buttons*, Stein maneuvers around the subjectivity of observations by exploring objects through unconventional linguistic avenues. She explores, for instance, in "Dirt and Not Copper," how "dirt and not copper makes a color darker. It makes the shape so heavy and makes no melody harder" (2008, 129). Here, she unleashes semantic categories in the pursuit of the thing. For Stein, a shape can be "heavy" and a melody "hard," defying traditional boundaries of language and thought. In "A Plate," a disease can be "compressed" and an address "splendid" if such a description can approach the noumenon from another angle, uncovering its essence, or else creating a new existential encounter with a taken-for-granted object in a quantum world where "there is no single stance or 'view from nowhere' from which to perceive" an object's essence (Stein 2008, 131; Crease and Goldhaber 2014, 183). Especially because all objects in space, as Einstein (2015, 61) puts it, are "non-rigid bodies of reference," our descriptive frames must be just as supple. In each of our observations, our "position must always be described with reference to something. . . We must have what we call some *frame of reference*" (Einstein and Infeld 2007, 156). Building frame upon frame, gathering observations from various positions, Stein traces the thing-in-itself with words.

Thus, these descriptions of things are not arbitrary. Neither are they random, automatic associations. Instead, they mark a genuine search for meaning and essence behind an object. Taking "A Long Dress" as a case-in-point, the prose is permeated with questions of essence: "What is the current that makes machinery, that makes it crackle, what is the current that presents a long line and a necessary waist. What is this current. What is the wind, what is it" (2008, 132). The repetition of "what is," assumes of course,

that there is an essence to the object in question, unless the "what is" refers to a merely

existential reality. But being that she approaches each object from untraditional angles of

vision, again and again, reiterating the copula, it is fair to deduce that she may indeed be

attempting to bring the supposedly unknowable object forward from beyond the speed of

light, to draw its light out into the observer's field of vision.

Returning to "A Long Dress" in this respect, one color is insufficient to apprehend

the thingness of the dress: "several colors are needed to simulate not the appearance of

the dress but its essence, its 'intensity of movement'" (Knight 1991, 37). Stein (2008,

132) gestures toward this essence: "Where is the serene length, it is there and a dark place

is not a dark place, only a white and red are black, only a yellow and green are blue, a

pink is scarlet, a bow is every color. A line distinguishes it. A line just distinguishes it."

While this passage is difficult to decipher an absolute meaning from, if there is one, it is

clear that the melding of colors, of plural colors into a single color—when white and red

are black, when yellow and green are blue—signifies the many avenues of perception

Stein feels are necessary to have a complete experience of the thing-in-itself. It can be all

these things at once, or perhaps none. But what is certain is that one color, one traditional

color, is inadequate to grasp whatever essence may be there. Just like light, the object is

an assemblage of seemingly contradictory properties. Yet, as Einstein states, bringing

these contradictory elements together deepens our understanding of the thing.

What Stein might be trying to do, having been a student of James, is embrace the

idea that any experience is a fusion of all experiences by observing reality from every

dimension. In this respect, Stein uses "language as an enveloping net faithfully

contouring the ever various lumpish matter of 'reality.' Language, here unbuttressed, is

allowed to collapse in upon the object, even as the object remains in constant motion"

(Knight 1991, 42). We might surmise—being that Stein more than likely "encountered

James' theories in detail" during her time at the Harvard Annex, especially in his

advanced seminar on "Consciousness, Knowledge, the Ego, the Relation of Mind and

Body, etc."—that Stein employed a Jamesian ethos in attempting to traverse the alteration

of observation in getting at the thing-in-itself with as few restrictions as possible

(Kucharzewski 2004, 502). Her philosophy might well have drawn from James' (1950a,

233) extensive analysis on this point:

> For it is obvious and palpable that our state of mind is never precisely the same. Every thought we have of a given fact is, strictly speaking, unique, and only bears a resemblance of kind with our other thoughts of the same fact. When the identical fact recurs, we *must* think of it in a fresh manner, see it under a somewhat different angle, apprehend it in different relations from those in which it last appeared. And the thought by which we cognize it is the thought of it-in-those-relations, a thought suffused with the consciousness of all that dim context.

Not only did Stein infuse James into her "Portraits and Repetition" essay by transferring

"concepts and ideas developed by James into the context of a modernist aesthetics,"

which Kucharzewski (2004, 502) adeptly demonstrates, but much of her work approaches

the objects of study from all available avenues—especially, in the modernist sense, from

the point of view of the "fresh," the *new*.

How does she approach the new? How does she apprehend an object in "different

relations from those in which it last appeared?" Wittgenstein, our third 'stein, can be of

some assistance, though there does not seem to be any evidence that he had a direct

influence on Stein, or vice versa. There is a direct connection to James, however.

Wittgenstein not only appreciated James "for his intuitions and for the power of his imagination," but "in a sense he even developed them," building upon the metaphor of the stream, and particularly upon the relationship between perception, objects, and language (Boncompagni 2012, 36). He states, in effect, that objects and words only stand in relation to each other through logical and practical necessity—in other words, for linguistic functionality (Knight 1991, 39). It's not that naming an object gets at its essence. Rather, naming an object constitutes the "baptism of an object," that *this* now means *this*, allowing us to communicate toward action, toward doing something *with this thing*. Here, the focus is not what the thing *is*, but what can we *do* with the thing, making its essence less consequential, even inessential (Wittgenstein 1986, 19). There is only really, then, a "queer connexion of a word with an object," a relation forged out of logical necessity to other relations, other practicalities (1986, 19).

Since the word does not describe an object, but "only corresponds to it," it is necessary to transcend or break through logical necessity to get at the thing-in-itself (1986, 20). In *Tender Buttons*, though it is "necessary" for a mind "to have a mouth and eye glasses," and it is "necessary" that "no mistake is intended," necessities do not apprehend the object, necessitating Stein's exploration of objects beyond names and relations (Stein 2008, 130). For while Wittgenstein believes that objects can only be named and *not* put into words, Stein, as she states in her *Lectures in America*, "truly yearned to 'put [things] into words,' to go past simply naming" (qtd. in Knight 1991, 40). A name, one-dimensional and static, might access a particular aspect of an object—the *wave* aspect of light, the *particle* aspect of light—but fails "to capture the moment to

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moment quality of anything's existing" (Knight 1991, 41). The moving, existing, living

moment, for Stein, is essential, as she indicates in "Portraits and Repetition": "As I say a

motor goes inside and the car goes on, but my ultimate business as an artist was not with

where the car goes as it goes but with the movement inside that is of the essence of its

going" (Dubnick 1986, 98). The *essence* is movement. This movement creates the

possibility for an evolving moment-to-moment living, compared to the moment-to-

moment unchanging-ness of a static object and its name (explored further later on). Thus,

another of her underlying philosophies on approaching the noumenon might again have

drawn from James' (1950a, 241) consolidating analysis of the inadequacy and

reductiveness of naming:

> Here, again, language works against our perception of the truth. We name our
> thoughts simply, each after its thing, as if each knew its own thing and nothing
> else. What each really knows is clearly the thing it is named for, with dimly
> perhaps a thousand other things. It ought to be named after all of them, but it
> never is. Some of them are always things known a moment ago more clearly;
> others are things to be known more clearly a moment hence. Our own bodily
> position, attitude, condition, is one of the things of which some awareness,
> however inattentive, invariably accompanies the knowledge of whatever else we
> know.

If there is a thing-it-itself, it cannot be brought forth through a simple name, but only with

a practice of movement and motion and movement through moments, in "a space," as

Stein says of America in *The Making of Americans*, that "is filled with moving, a space of

time that is filled always filled with moving," much like an engine which even when

idling is still in motion (qtd. in Harrison 1965, 95). For at least since Galileo, with "his

constitution of an infinite, and infinitely open space," Foucault (1984, 1-2) states, "a

thing's place was no longer anything but a point in its movement, just as the stability of a

thing was only its movement indefinitely slowed down." Things are therefore always in motion, as quantum physics verifies, moving through moments. But to catch them in flight you must *look*, must "ATTEND *to a difficult object and hold it fast before the mind*" (James 1950b, 561). Looking at what is most difficult to observe—at what moves as one looks, at subatomic particles seemingly still yet vibrating, at words and objects seemingly static yet dynamic—is Stein's business.

Several pieces in *Tender Buttons* exemplify Stein's look into movement, motion, and moments. Here, Stein strives to slow and show the animate thing and tear it apart from its ordinary, logical, and stultifying relations. She writes in "Water Raining," "Water astonishing and difficult altogether makes a meadow and a stroke" (2008, 136). Stein brings "Water," an insufficient name for the thing, to life through the action of "water raining." The title itself gives the inanimate object "water" an activeness, a moment-ness, in the progressive tense of "rain," putting static water into motion (2008, 136). Once the object is in motion, in the moment-to-moment of raining, its thingness is drawn forth with the somewhat less conventional word "astonishing." She then employs the unusual word "difficult," which may mean difficult to traverse or to apprehend. "Altogether," she writes, bringing us back to James' point that an experience of an object is a culmination of experiences, this astonishing and difficult water "makes a meadow and a stroke." It is the *action* of the water that makes an otherwise still or inanimate meadow come into being. Perhaps the meadow is *not* a meadow, then, without some form of movement bringing it to life, instigating or motivating what we may read as the brush "stroke" of a painter, or a stroke of words from a writer, from Stein herself, who attempts

to capture this moment-to-moment object in the essence of its *thisness*, to hold it "fast

before the mind."

"Water Raining" is not an exception in Stein's work. In "A Plate," too, what

makes a plate is not merely the surface, material, shape, feel, and so on of the inanimate

object. A plate is also "[a]n occasion for a plate . . . If the party is small a clever song is in

order" (2008, 131). A plate, in other words, is the occasion for the plate itself, the party,

the song, the aliveness that the plate in part makes possible, the getting-together around

the plate, the "[p]lates and a dinner set of colored china" (2008, 131). Once again, Stein

focuses on the motion and activeness around what would otherwise be a still object, aside

from its vibrating atoms. A plate is thus not a plate on its own. It is only a plate in a kind

of *altogetherness*, which is its *thisness*, its amalgamation with a dinner and party and

colored china and a song, altogether being one—irreducible to the sum of its parts. As

Bohm (1989, iv) puts it, "quantum concepts imply that the world acts more like a single

indivisible unit, in which even the 'intrinsic' nature of each part (wave or particle)

depends to some degree on its relationship to its surroundings." Indeed, developments in

physics "compel us to give up the idea of individually distinguishing the atoms or

molecules of a given substance also" (Joos and Freeman 2014, 626).[5] In this sense, Stein

does not invent an entangled world, but attends to its entanglement through language.

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[5] See also Karen Barad's (2007, 333) discussion in *Meeting the Universe Halfway* regarding ontological vs. epistemological entanglement. She states that "*phenomena are ontological entanglements*," objectively entangled in their physical realities (2007, 333). It is not our limited *knowledge*, therefore, that makes phenomena appear entangled.

What Stein's attention to movement, motion, and moments suggests is that, even while searching for the noumenon, she already recognizes the *contingency* of objects, of things-not-in-themselves, but things always brought into being through context and proximity and relation to others. What it also suggests, or reveals—insofar as Stein is open to this contingency, exploring it throughout *Tender Buttons* and the better part of her work—is that an underlying current in Stein's work is a practice of rhetoricity, of rhetoric as *first philosophy*, operating at the level of a transformed, complicated rhetorical canon—a rhetoric for the twentieth century and beyond, leading us to Kirsch's (2014, 58) project on Stein's reinvention of classical rhetoric:

> For Stein, arrangements are agreements that can solidify, break, or reinvent habits. They can be a kairotic choreography on the space of the page and across time, organizing language dynamically, sequencing toward particular ends, sounds, or repetitions to achieve immediate effects in the words and on the reader. Arrangement in Stein's hands becomes an inventive style.

Kirsch notes how Stein utilizes rhetoric not as a superimposed skill on preexisting content, but as a dynamic, effect-generating practice. Invention and arrangement are not methods of styling text for an audience, though they can be; for Stein, "[w]ords on the page are inevitably received as objects of arrangement. We arrange them even as they arrange our perception and experience" (Kirsch 2014, 55). Stein evolves rhetoric away from a *tekhnē* (a mere knack or means of persuasion) toward a philosophy of language which generates, arranges, and rearranges objects, words, experiences, and reality.

In an essay on James' conception of truth and reality, Henri Bergson (1946, 178) draws together the significance of this altogetherness for our experience and communication of reality:

To be sure, our experience is not incoherent. At the same time as it presents us with things and facts it shows us relationships between the things and connections between the facts: these relations are as real, as directly observable, according to William James, as the things and facts themselves. But the relationships are fluctuating and the things fluid.

Our experience of the world, in other words, is not reducible to the individual things that make up the world. There is much more: the complex interactions of things, as well as their relationships in time and space which fluctuate, as James says, every time we encounter them. These relationships shape a stream of thought and occurrence that forms a fluid reality for the observer within a frame so relative, so moving, so moment-to-moment, that it takes a poet like Stein to wind down time just long enough to expose the hidden layers of reality below the surface before the things accelerate once more beyond light. For "[r]eality flows; we flow with it; and we call true any affirmation which, in guiding us through moving reality, gives us a grip upon it and places us under more favorable conditions for acting," for seeing, for feeling, and especially, in the case of Stein, for *being* (Bergson 1946, 182). It is this grasp on and pursuit of rhetoricity, of ungroundedness, that enables Stein to explore and create a constantly transforming reality. To this extent, rhetoric *must* be first philosophy, and we—intra-related, affected subjects that we are—must respond, must follow where language and the world lead us. We must cultivate *rhetorical being*: the practical crossroads of matter and meaning, of quantum rhetoric.

Returning to the wave-particle duality, we might say that when one slit of our perception is open, a ubiquitous thing like a plate appears to be a solid object—nothing more than its material composition. Open a second slit though and we see the fullness of

the plate, that it is "nothing flat nothing quite flat and more round, nothing a particular color strangely, nothing breaking the losing of no little piece" (Stein 2008, 131). It is all of these things together, inseparable. It is not that the plate is not a simple, inanimate, and mostly flat object; it is. It is not that the plate is not part of a party and colored china and a song; it is that, too. It is that the plate is everything simultaneously, just as Bohr, Einstein, and others say of light as both waves and particles. The only difference, perhaps, is that where physicists have failed to observe the wave- and particle-like nature of light simultaneously, Stein has captured both the motionlessness and motion of the plate in the same moment. She has, effectively, as James exhorts, not named the plate after one of its characteristics, but "after all of them."

In both "Water Raining" and "A Plate," then, Stein separates the objects of water, a meadow, and a plate, among others, from both their names and ordinary relations in order to get at the thing-in-itself, which is fluid and complex. Whereas a name, Wittgenstein writes, speaks for itself, carrying relations for easy use, Stein reaches through the name and into the noumenon by way of movement and multiple, untraditional angles of vision. In doing so, she explores the immanent immediacy of the object not in its static unchanging-ness, but in its now-ness, its "[n]ow we are seeing, now hearing; now reasoning, now willing; now recollecting, now expecting; now loving, now hating"-ness (James 1950a, 230). This now-ness, this moment-ness, is the *happening* of the thing, which is what makes the thing a thing. In "A Mounted Umbrella," for instance, Stein (2008, 134) asks,

> What was the use of not leaving it there where it would hang what was the use if there was no chance of ever seeing it come there and show that it was handsome

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and right in the way it showed it. The lesson is to learn that it does show it, that it shows it and that nothing, that there is nothing, that there is no more to do about it and just so much more is there plenty of reason for making an exchange.

"What was the use" of the thing, in other words, if it was not in a place where it could be seen and "show that it was handsome and right?" It is in *showing* itself that the thing comes to life. The thing must be seen, must be showing, to mean something and to be something, encouraging our exchange—our experience—of the thing. "The lesson is to learn that it does show it," and "that there nothing more to do about it" than this showing, this being in a moment of being seen.

In "A Cloth," too, what shows the being of the cloth, the purpose of the cloth, is the occasion for contact with it: "Enough cloth is plenty and more, more is almost enough for that and besides if there is no more spreading is there plenty of room for it. Any occasion shows the best way" (Stein 2008, 135). The cloth's essence is indeterminate and dependent on one's interaction with it. It is the occasion for the cloth which shows what the object is, what it can do, and how it can be used. It may not be too farfetched to think, then, that the cloth, like the plate and the umbrella, is not fully a cloth without the occasion—the party perhaps, where its material composition is integrated into a larger scene or moment, where it collects with other waves of light into an irreducible interference on a screen where "[s]ome are finding in this thing that every one is one being existing," where "[s]ome are finding in this thing that any one is being existing." For in seeing the thing "being living" we find ourselves existing (Gutenberg 2005).

In discovering that a thing is *not* a thing-it-self, but a thing which comes into being in contingent and ephemeral connections with other things, Stein overturns the idea

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that the noumenon is something independent of world. What Stein shows and embraces in showing it, following where language leads her, is that things come into being through contact with one another, due to one another. This openness, this receptivity to the interconnectedness of things, in turn, creates avenues toward existential realities that would otherwise remain closed if we were to superimpose our ideological limits upon language—if we were to, in a similar sense, reduce language and rhetoric to discovery, rather than a process of invention and re-arrangement. For, as James states, though "the 'new' always carries with it the 'old,' even when or especially when we create in language. . . . the apperceiving mass, the old itself, is modified by the particular kind of new which it assimilates" (qtd. in Kirsch 2014, 36). "Thus," Kirsch (2014, 36) explains, "creation does not happen out of nothing, but within language, within the words in which we write and speak, words that carry histories within them that shape our understanding of both the present, the past, and ourselves." "Rhetoric," Davis (2010, 15) submits—in relation to the obligation to respond to language openly, acknowledging its inventive and possibility-disclosing potential—"is first philosophy."

It is in opening this second slit in so many ways, in our realization of what objects are and do and what they are a part of and apart from, that Stein not only uncovers the hiddenness, or perhaps ignored-ness, of an object—whether this *thisness* is essential or existential—but also brings words together in new ways. In doing so, she overturns conventional categories of syntax and semantics, bringing forth, if not the essence of the thing-in-itself, at least refreshingly new encounters with too-familiar objects (explored in the next section). Altogether, in broadening and narrowing our apprehension of these

objects, she draws any potential noumenon out from beyond the spacetime boundary of the event horizon, shedding light on what was once thought to be totally beyond our grasp. And if we are only deluding ourselves about the noumenon, about Platonic forms, about the essence of things—ignoring when Sartre (1956, 5) says that "[t]he appearance does not hide the essence, it reveals it; it *is* the essence"—then certainly Stein might make us believe that in her words we have nevertheless encountered the thing-in-itself more than Kant might have dreamed.

The Quantum Mechanics (and Rhetoricity) of Language

If Stein has failed to capture the noumenon, either because of her methods or because it isn't there, she has certainly (re)created objects. She has drawn forth their potential for "being living" by acting as a particle collider for words. The principle purpose, of course, of a particle collider in physics—like the 17 mile Large Hadron Collider between France and Switzerland, created by CERN—is to smash particles together, to, returning to Wittgenstein, break them apart from their "logical and necessary relations." In observing the collision and recording the data, we learn something about them and their thingness.[6] Through an act of violence, the thing is observed and apprehended. It cannot be apprehended through any simple, easy violence, but only through violence on a grand

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[6] The Large Hadron Collider (LHC) collides particles near the speed of light through a 17 mile tunnel in order to produce computer-analyzed data about the subatomic world—a kind of violence on both massive and miniscule scales. See Mario Campanelli, *Inside CERN's Large Hadron Collider: From the Proton to the Higgs Boson* (Singapore: World Scientific, 2015). See also Don Lincoln, *The Quantum Frontier: The Large Hadron Collider* (Baltimore: Johns Hopkins University Press, 2009).

scale, at high speeds through large tunnels, violence that was previously inconceivable, violence that is difficult, enduring, and rare—as rare as what Stein does with words.

For physics, technology enables violence. For Stein, however, it is only through the technology of *writing* that she can collide words, words as individual particles wedged together out of necessity, to learn about their thingness. If we are thinking of quantum physics and (post)modern literary aesthetics as parallel movements (not that there is only one physics and one aesthetics), we can theorize that what makes both movements possible *is* violence: a ripping-apart-of-things to learn about things, to approach the new. As Paul Ricoeur (1998, 32) writes in *Violence and Language*, "violence and language each occupy the totality of the human field." However, it may be that Stein is also undoing the violence imposed on language, unbinding the artificial connections between words which limit their potential. Jean-Jacques Lecercle states in *The Violence of Language* that words consist of two categories: relevant and irrelevant. Irrelevant words are discarded, ignored, or marginalized. As such, they compose a "remainder" which is left out of the language equation. This remainder is not outside in a region of chaos, but in a region that is "no longer or not yet acceptable" in the order of things, but "still intelligible" (1990, 25, 23). The remainder is a horizon unseen. Because language speaks through the speaker, due to discursive convention and social context, and because a speaker is regulated, or regulates, language based on relevant, logical relations between words, there is a violent relation between speaker and language. Lecercle discusses who the agent of violence is. Stein, however, frees language from violence *with* violence, bringing us closer to the horizon or rhizome of the remainder,

destroying delimitations and opening language to its widest reach, its largest diameter—much like removing the limitations on pi as 3.14, as Wittgenstein has discussed, and opening it to its other 12.1 trillion digits and counting (1986, 83).[7]

Stein accomplishes this emancipatory violence in part by upending the restrictive, practical use of syntax and semantics, by accelerating these particles, smashing them together where they've never belonged, thereby meeting "the remainder in all its various and enticing shapes" (Lecercle 1990, 99). We can see this collision as an effort to learn about the thingness of signifiers and signifieds. Yet instead of building on what is hopefully an established point, we will focus on this collision as "verbal play," as part of a project that is "amusing, revealing, consoling, and joyous" without having to unearth something natural in objects and words themselves (Axelrod 2014, 274). In this sense, Stein "playfully loosens the connection between words and objects"—through this rhetoric of re-arranging invention—thereby "exposing the possibilities of language," its chaos, contingency, and rhetoricality (Kirsch 2014, 9).

Here, as Heisenberg (2007, 160) states of elementary particles, Stein engages language as "a world of potentialities or possibilities rather than one of things or facts."

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[7] In 2013, Alexander J. Yee and Shigeru Kondo calculated 12.1 trillion digits of pi, and new efforts are made each year to increase the digits with more powerful computer technology. See Alexander J. Yee and Shigeru Kondo, "12.1 Trillion Digits of Pi," *Number World*, December 28, 2013, www.numberworld.org/misc_runs/pi-12t/. Discussing pi, Wittgenstein writes, "The fact that we cannot write down all the digits of ТТ is not a human shortcoming, as mathematicians sometimes think. Teaching which is not meant to apply to anything but the examples given is different from that which *'points beyond'* them." See also Alfred S. Posamentier and Ingmar Lehmann, *Pi: A Biography of the World's Most Mysterious Number* (Amherst, NY: Prometheus Books, 2004).

She follows the linguistic counterpart of the *clinamen*, the unpredictable swerve of atoms in the void toward new, exciting terrain (Serres 2000, 149). Her results release words from their habitual pathways, from their classically determined matrices. And if atoms are like letters, as Serres (2000, 141) writes, letters are like atoms for Stein—(re)arranging the totality of all there is into the infinity of all that can be in the most mundane objects and words. Rather than uncovering the truth about objects and words, we might say via Karen Barad (2007, 91) that Stein's *"practices of knowing are specific material engagements that participate in (re)configuring the world"* through words.

In "Roast Potatoes," for instance, Marjorie Perloff (1996, 37) states that Stein plays a "game of testing the limits of language, which is, for Stein, the game that matters." Perloff (1996, 35), too, frames this testing of limits with an epigraph from Wittgenstein's *Philosophical Investigations*: "Grammar only describes and in no way explains the use of signs." We can complement this point with Lecercle's (1990, 24) statement that "[t]he grammarian's task has to be descriptive" rather than prescriptive. Grammar tells us what we're doing, not what to do. The "rules of grammar," Lecercle (1990, 25) continues, "are comparable not to the laws of physics, but rather to frontiers"—frontiers which are, like boundaries, "arbitrary and changeable." "Discursive practices," in other words, "are boundary-making practices" that are by no means final or definitive (Barad 2007, 335). Wittgenstein concludes that when a boundary is drawn in language, as with a grammatical rule, it is purely functional: "When a sentence is called senseless, it is not as it were its sense that is senseless. But a combination of words is being excluded from the language, withdrawn from circulation" (qtd. in Perloff 1996,

35). As with Lecercle's remainder, impractical language is excluded from use. And it is often the "inspired poet," or else the "delirious patient," who reclaims the remainder and pushes boundaries into new frontiers, showing us what is on foregone horizons and beyond (Lecercle 1990, 60). Grammar, in the simplest sense, "is something that is made as we talk about it" (Kirsch 2014, 33). In Stein's work, then, is not only the "rhetorization of literature," but also the "rhetorization of grammar" (de Man 1979, 19, 15). Grammar embodies rhetorical invention. By rhetorizing grammar, Stein becomes a rhetorician.

Stein, our "inspired poet," objects to the violence of exclusion. Returning to "Roast Potatoes" (the entirety of which reads "Roast potatoes for"), Perloff (1996, 36) notes the semantic possibilities of three words which push language beyond one dimensional use:

> The words withdrawn from circulation here are those that would determine whether "roast" is an adjective or a verb and whether Stein's sentence is indicative or imperative: "We're having roast potatoes for dinner" as opposed to "Please roast those potatoes for dinner," or "for me." The sentence's incompletion provides intriguing semantic possibilities. "Roast potatoes" are "for" what or whom exactly? Why do we cook and eat them? Or are the potatoes an example, "Roast potatoes, for instance"?

By writing less, by giving no context for three words which typically appear in well-defined relations, Stein deepens the reader's interpretive task, thus drawing complexity from seeming simplicity. Perloff (1996, 36) expands at length on the possibilities of puns on the word "for": four as a number, *four* in French, meaning *oven*, or even *fore* for before, thereby signifying the fullness of signifiers if torn apart from traditional contexts.

Stein, in other words, turns grammar upside down at every corner. Throughout *Tender Buttons*, non-count nouns become count nouns: "A Piece of Coffee." Adjectives

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describes adjectives: "dirty is yellow." Verbs act upon other verbs: "The settling of station cleaning is one way not to shatter scatter and scattering." Nouns act as verbs: "if they dusty will dirt a surface." Instead of adjectives describing nouns, nouns describe adjectives, and paradoxes abound: "If the red is rose and there is a gate surrounding it, if inside is let in . . ." Entire sentences read like palindromes: "if they do this and it is not necessary it is not at all necessary if they do this." Not to mention the traditionally illogical, mismatched descriptions of sounds, shapes, and so forth, mentioned earlier: "It makes the shape so heavy and makes no melody harder" (2008, 128-30).

Indeed, it seems that all traditional grammatical constructions collapse onto each other just as they begin to construct a clear sentence. They are thus carefully conveyed so as to convey no one, solid, sheer truth. Everything appears to negate everything else, to avoid any meaning but what the reader, at least with *Tender Buttons* and its relatively greater obscurity, can bring to it, inviting the reader to partake in the construction of meaning, to make meaning inextricable from this interaction, and to make a thing itself. Her poetry and prose shatter meaning, especially familiarity, break open words and expose parts and surfaces never before observed.

Stein is, in other words, the *quantum mechanics of language*: partially observed, but unpredictable and often inexplicable, breaking universal laws, reversing conventional processes, misbehaving, contradicting—but provocative, profound, paradigm-changing. At a fundamental level, Stein's approach to language operates at a quantum level of *rhetoricity*, a realm that cannot and should not be plumbed for certainty and objectivity, but, instead, embraced for its unique capacity to both create and transform. For, as

Levinas (2013, 174) declares, "[l]anguage does not exteriorize a representation preexisting in me. . . . Language *effectuates* the entry of things into a new ether in which they receive a name and become concepts." At the most basic level, rhetoric is the practice, Stein's practice, of *effectuating* contingent reality though language, as much as it is an open response to where that language leads.

In such "poems," if this name is suitable, Stein approaches and collides words in ways which do not exhaust their *thisness*, but create a "sensuous play" of words by asking or suggesting what else they might be or do outside of definite boundaries. In other words, Stein rhetorically reinvents words to "draw out specific semantic implications not normally present" in language (Perloff 1996, 37). Stein's work in *Tender Buttons*, and her work on the whole, being "freed from the snare of categories," manifests an unseen reality where "the denotated world collapses, its tables and orders break up, awash in process, and [where] concurrent syllogistic discourse breaks down. Words as buttons fastening side to side, signifier to signified, become tender, pliable, alive in the quick of consciousness" (Schmitz 1974, 1207). In short, Stein creates a world where "every one is one being existing," where reality is entangled, dynamic, and irreducible to simple parts—where reality is *quantum rhetorical* (Gutenberg 2005).

Apprehending an Event on the Horizon

Lecercle (1990, 33, 6) states that "[t]here is something in language that exceeds scientific inquiry," a "dark side" that may be manifested in "nonsensical and poetic texts, in the illuminations of the mystics and the delirium of logophiliacs or mental patients," or again in the words of an "inspired poet" who enables us to experience the unexperienced. In

both science and language there are remainders left unexplored or marginalized. In science, Lecercle (1990, 22) states, these remainders are treated differently: "[s]cientific grammar does not ignore the existence of a remainder. It denies it—which is a kind of avowal—under the collective name of 'exceptions,'" that which is, like the remainder, "not yet accounted for by the present state of the theory." For this reason, "quirks and oddities," remainders and exceptions, are too often excluded "from the field of serious research," too often left in total darkness, far beyond light (1990, 99). Still, "[a]n 'exception' does not make the rule it breaks invalid, it just breaches the frontier it marks. And beyond the frontier, as we have seen, there lies not the outer darkness of linguistic chaos, but language that is still intelligible" (1990, 33). Linking Lecercle to Wittgenstein, there is at times a tendency in both science and language to neglect or treat with contempt that which is presently beyond our ken, that which questions or problematizes practical relations between particles or words. We ignore, marginalize, or criticize what we don't understand, whether it be part of our discursive universe or the universe itself. There are simply some horizons we will not approach, and therefore fail to apprehend.

Yet ignoring complexity will not simplify the cosmos. Instead, scientists like Bohr and Einstein have embraced the beyond, the new frontier, the quantum breakdown of convenient laws, complementing and broadening our understanding of ourselves and our place amidst chaos and cosmos. The chance, contingency, and indeterminacy that make up our new world, as Belgian physical chemist and Nobel laureate Ilya Prigogine (1997, 155) writes, are "no longer a convenient way of accepting ignorance, but rather part of a new, extended rationality." Authors like Stein, at the expense of reaching a

wider audience, have refused to exclude the seemingly nonsensical remainder, instead

reaching into the abyss of abandoned discourse and taking hold of a new thing, an unseen

thing, an uncreated thing, thus founding new frontiers. But while "[a] physicist who

supports the second principle of thermodynamics will not encounter instances of

perpetual motion," suggesting that there are certain laws of physics that will never be

broken, "a linguist who believes in the syntagmatic and paradigmatic axes of language

will come across cases of glossolalia—he will meet the remainder in all its various and

enticing shapes," much as Stein has, inspiring us to do as she does and test the limits of

language, whether to discover what has long been inside a signifier or signified, or else to

invent existential realities to live and be alive by (Lecercle 1990, 99).[8]

Returning to our master metaphor of the event horizon, although Stein exposes

the hitherto unobserved, or creates the uncreated to be partially observed, she is herself at

times a kind of unobservable, irreducible singularity—an event beyond the horizon. As

we approach concreteness in her texts, concreteness withdraws, as if approaching the

text, approaching the event, more critically deconstructs our assumptions of concreteness.

Yet "[w]hat withdraws from us," Heidegger (1976, 9) writes, "draws us along by its very

withdrawal." Withdrawing from us, Stein attracts us by her withdrawal. Still, we must

remember that even an event horizon can be traversed in proper time. While some

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[8] The perpetual motion machine, dating back to the Middle Ages, is a hypothetical machine
that works indefinitely without an energy source, thereby violating the second law of
thermodynamics which necessitates a source to prevent entropy, or gradual energy loss over
time, and thus to perform continuous work. See Stanley Angrist, "Perpetual Motion
Machines," *Scientific American* 218 (1968): 114–22.

horizons "never have been nor will be observable," others "either have or will be observable," meaning that we could arrive at Gertrude Stein, that we could apprehend her absolute singularity, being so drawn into her unrelenting, all-encompassing gravity, and maybe even understand her perpetually departing totality.

To conclude, we might draw toward Heidegger (1971, 165) in considering Stein's search for the noumenon, and for the full potential of words, ending with our epigraph: "All distances in space and time are shrinking . . . Yet the frantic abolition of all distances brings no nearness."[9] "We are in the epoch of juxtaposition," Foucault (1984, 1) agrees, "the epoch of the near and far, of the side-by-side, of the dispersed," such that, in one sense, despite all of our particle colliders and technologies of self, thought, and language, it often seems that we are no closer to the thing-in-itself, no nearer to the thing *as* thing. In fact, we've given up on the thing altogether. It is a horizon we have dreamed of and let go of. But Stein has not, for "[t]he thing things," Heidegger (1971, 177) writes. "In thinging, it stays earth and sky, divinities and mortals" (1971, 177). It is thus the *thinging*—in the progressive, as Stein well knew—that the thing is *qua* thing. "If we let the thing be present"—be present in its "being living," Stein might add—"in its thinging

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[9] Here, Heidegger (1971, 165) juxtaposes physical nearness and metaphysical nearness: "Man now reaches overnight, by plane, places which formerly took weeks and months of travel. He now receives instant information, by radio, which he formerly learned about only years later, if at all. . . . Yet the frantic abolition of all distances brings no nearness, for nearness does not consist in shortness of distance." Rather, nearness is presence: "The world grants to things their presence. Things bear world. World grants things" (1971, 202). That is, the world and things are intertwined in their presencing to beings. The nearness of presence is not experienced through proximity, but only in relation to being and dwelling. See chapters "Language," "Building, Dwelling, Thinking," and "Poetically Man Dwells" in Martin Heidegger, *Poetry, Language, Thought* (New York: Harper & Row, 1971).

from out of the worlding world, then we are thinking of the thing as thing" (1971, 181). If

we let it be *present* in the moment-to-moment, in its movement through moments, then

we may encounter the thing-in-itself as Stein so aspired. "When and in what way do

things appear as things?" Heidegger (1971, 181) asks. "They do not appear *by means of*

human making. But neither do they appear without the vigilance of mortals. The first step

toward such vigilance is the step back from the thinking that merely represents—that is,

explains—to the thinking that responds and recalls," the thinking that does not name and

reduce to relations, but which ponders and *responds responsibly* (rhetorically) to the

thing in all its thousand names, wresting it "free for that compliancy of simple oneness,"

of irreducibility (1971, 181-82). This is what we must do to close the spacetime gap, to

near that which is far, for "as we preserve the thing *qua* thing we inhabit nearness,"

experiencing words and objects and things, as Stein inspires us to do, in all the full

breadth and breath of their "being living" (1971, 181).

Quantum Rhetoric and the Avant-Garde

Stein's work shows us that we must, in sum, develop and practice "a critical attitude

which is itself produced in face of the other and under his authority," under the authority

and direction of language itself *as* other—that which, before anything else, calls us to

respond (Levinas 2013, 81). In this way, rhetoric is not merely a way to apprehend events

on the horizon. It is not only, via Aristotle, a way to resolve contingency, pinpoint facts

through *logos*, and eradicate complexity through dialectic's plodding and emergent truth.

Yes, rhetoric is an art of speaking. It is also an art of listening, as we learned from

Heidegger and others in chapter 1—an art responsive to alterity.

What Stein makes clear, however, is that rhetoric transcends the art (*tekhnē*) of speaking and listening through *process*. Stein's kairotic process ungrounds technologizing attempts to standardize the rhetorical product. It is precisely for this reason that Stein both develops and models quantum rhetoric's conception of dynamic and contingent lifeworlds. Her work in *Tender Buttons*, moreover, wraps words relatively around objects whose essences and meanings are equally relative, such that it is the entanglement of objects, words, and (non)human relations which spontaneously produces world. The world moves through moments, Stein sees. Just as physicists describe the perpetual motion of atoms in seemingly solid surfaces, Stein notices that even "motionless" parts like the idling engine move in place. Thus Stein becomes a physicist. Yet Stein's work through language makes her a rhetorician. Stein's attention to both matter *and* meaning—and to their entanglement—makes her a quantum rhetorician.

Stein's work is exemplary of quantum rhetoric and the rise of rhetoricity, especially in its attention to remainders and exceptions. Yet her work is in no way *itself* an exception. Stein is a rhetorical-poetic effect of a generation of seers and doers who watched as their stable world lost its classical ground. Writers and thinkers of all stripes, as chapter 1 explored, responded to the quantum mechanical revolution in different ways. Some were influenced indirectly by Bergson and other philosophers who themselves were steeped in conversations and public debates with physicists, including Einstein.[10]

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[10] See Jimena Canales' (2015) *The Physicist and the Philosopher: Einstein, Bergson, and the Debate That Changed Our Understanding of Time*, which discusses Einstein's and Bergson's very public and very consequential debates.

Some, like Carl Jung, were directly impacted.[11] Stein falls at least in the former category, if not in the latter. Others, though they may have not been in conversations with physicists as Bergson and Jung were, nevertheless construed and experienced language and the world quantum mechanically. As Axelrod (2016) has said, even if direct influences are difficult if not impossible to trace, certain ideas and practices are "in the air" at certain moments. It seems to me not a difficult stretch to imagine that quantum mechanics at the time of Stein was, and still is, "in the air."

Euro-American voices such as Djuna Barnes, Elsa von Freytag-Loringhoven, and Kathy Acker, as I mentioned in my introduction, also signal the rise of rhetoricity in the twentieth century, further grounding quantum rhetoric. Jones' (2004, 5, 10) *Irrational Modernism*, in particular, situates Elsa von Freytag-Loringhoven (the Baroness) as a central figure who, much like Stein, "performed an unhinged subjectivity" which burst "threateningly forth across the boundaries of respectable avant-garde behavior" and practice. The Baroness' "*flux*—in its tendency to overflow the bounds of rationalism— was highly threatening to modern masculinity, even, apparently, in its avant-garde guises" (Jones 2004, 13). Furthermore, the Baroness "provides an opening into ethnic,

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[11] Chapter 3 discussed Carl Jung's correspondence with physicist Wolfgang Pauli, documented in C. A. Meier's (2014) *Atom and Archetype: the Pauli/Jung Letters, 1932-1958*. Jung's (2010b, xii) dinners with Einstein are referenced in *Synchronicity*, dinners which influence Jung's approach to the psyche and spacetime: "Professor Einstein was my guest on several occasions at dinner. . . . These were very early days when Einstein was developing his first theory of relativity, [and] it was he who first started me off thinking about a possible relativity of time as well as space, and their psychic conditionality. More than thirty years later, this stimulus led to my relation with the physicist Professor W. Pauli and to my thesis of psychic synchronicity." The original source for this material—a letter from Jung to Dr. Carl Seelig, February 25th, 1953—can be found in *C. G. Jung: Letters*, vol. 2 (1974).

sexual, and class otherness," making her an effective model for encountering difference (Jones 2004, 24).

The Baroness, like Stein, embodies rhetoricity in its ungrounded approach to language and cultural practices. The Baroness "tried on words as she did her own ultramodern fashion designs, challenging the debilitating fiction of essential subjectivity and wholeness by slipping into and through different personas" (Gammel and Zelazo 2011, 7). Identity, for the Baroness, is unstable, contingent, and relative to appearance and motion. Her "transgressive gestures," as well as her attunement to "the language of the body," imbricate modernism's pursuit of the body with the materiality of our lived experience (2011, 8-9). The movement and motion of lived experience leads the Baroness to defamiliarize the quotidian, to fuse, mix, and cross images and subjects in her poetry, to transgress the "boundaries of the human- animal- machine," and to "blur the distinction between machine and body, nature and human, celestial and terrestrial world" (2011, 11). In acknowledging the human as assemblage—as chimera of human and nonhuman parts—in pursuing language to its inventive limits, and in taking pleasure in confusing boundaries, the Baroness' performative poetics performs quantum rhetoric: the entanglement of matter and meaning. "[P]oised for motion" and interpreting language as "constantly in flux," the Baroness shows that Stein is no exception (2011, 14, 16). Rather, Stein, the Baroness, and others represent the rise of rhetoricity on the one hand (the ungroundedness that makes responsivity to alterity possible), and the larger rise of quantum rhetoric on the other—the entanglement of matter and meaning that unites language, body, mind, and matter.

From Theory to Practice

The chapter has explored avant-garde poetics and quantum physics as parallel, coalescing movements which unite in their rhetorical character. This character reinvents classical rhetoric as kairotic—dynamic, shifting, unstable. Yet, as the poets show with their uniquely inventive potential, the kairotic is still the opportune moment. *Kairos* has largely been understood classically as the opportune moment to act, persuade, and manifest directed and desired change. What the poets show is that movement and motion also present opportunities to conceive the world and everything in it differently. All of our words, objects, traditions, and relations contain more than their classical trajectories. While the sampling here from the avant-garde has been slim, I hope its significance is large. For it is here in the (Ein)Steinean rhizome of the early twentieth century that quantum rhetoric, in its ungroundedness, takes root.

Thus far this project has explored the foundations of quantum rhetoric, its origins, contexts, and goals. In the final chapter, I further wrench theory down from the clouds by applying what we have learned from the rhetoricians, physicists, philosophers, and poets to the classrooms—to the very spaces where so many of us begin to think critically, that is to say, *rhetorically*. Chapter 5 is no mere "example" chapter, or one avenue toward quantum rhetoric. Rather, chapter 5 insists that first-year writing and critical thinking classrooms are precisely the places to develop quantum rhetoric, insofar as it is only in ungrounding students—our future citizens—that we can (re)produce a society critical of its own assumptions and practices.

Here, I situate *rhetorical being* at the center of the university and its purpose. Developing these classrooms around quantum rhetoric means attending to our entangled histories, communities, and subjectivities, such that our potential is shown anew. While the university is certainly not the only site of rhetorical being, it may be one of the last places we have to unify our progeny and ourselves around a *responsible response* to difference—to all the shifting but real conditions of existence which challenge our sensemaking structures. Therefore, I detail a quantum rhetorical pedagogy in this direction. Inclusive of specific goals, assignments, and student feedback, chapter 5 hopes to be a useful example of quantum rhetorical practice which is more than an example— but, rather, a paradigm-shift in how we teach composition, rhetoric, and critical thinking. A shift toward quantum rhetoric.

CHAPTER 5

FROM CHAOS TO COSMOS, AND BACK
PLACE-BASED AUTOETHNOGRAPHY IN FIRST-YEAR COMPOSITION

> How do those students' different experiences in the sociospatial world walk in
> with them, and how can exploring this difference become the intellectual work of
> the writing classroom?
>
> —Nedra Reynolds, *Geographies of Writing*

> [A]utoethnographies increased students' sense of self and positionality in the
> world, mediated differences, and fostered compassionate classroom community. .
> . . These activities humanized the classroom space and shaped the students'
> collective identities.
>
> —Patrick Camangian, "Starting with Self"

> [I]f students have been enculturated into an ethic of shouldering responsibility for
> a shared place, into reasoned study and deliberation, and into a propensity to look
> beyond conventional wisdom for solutions to problems, that will certainly
> increase the odds that community will become a primary factor in our economic
> and political reckoning in the future.
>
> —Paul Theobald, *Teaching the Commons*

In the hospital where Julianna's grandfather dies, she, at the age of eight, has her

first vivid encounter with time and death and memory. She looks pensively at the watch

her grandfather gave her, dwelling within a space and place unknown to her, juxtaposed

between this life and the vague promise of another. Here, to the best of her recollection,

she begins to dwell with a consciousness of our materiality and corporeality, a perception

she will take with her into various academic discourses, and into a general philosophy of

existence. Julianna, a previous critical thinking student of mine, writes this to me as part

of her "cultural artifact" assignment, connecting personal reflection to the discursive

concepts we have thus far explored, including conscientization, discourse communities,

and here, most richly, introspection and individualized reality. As she reflects on entering more mature notions of time and space, I inhabit her discourse through words on a page, and through a picture of the watch her grandfather gave her before he died.

I begin with a watch, an ordinary object, because materiality is where quantum rhetoric takes root, where the world is understood to matter. To reify quantum rhetorical theory I will, in this chapter, develop the extent to which "cultural artifacts," as Nedra Reynolds (2007, 43) explores in *Geographies of Writing*, are a "rich source for investigating people's relationships to place," and to consider "how subjectivity is shaped by ordinary and mundane landscapes, by ubiquitous visual images, and by habitual pathways." I view the cultural artifact, a form of autoethnographic writing, as a window into the discursive difference that teachers of writing desire to encounter. In this way, quantum rhetoric avoids being a mere *theory* about the entanglement of matter and meaning by honing in on the particular ways that subjectivity, community, and world are entangled in objects. These objects, as we will see, both constitute and reflect the lifeworlds that students bring in with them to the classroom. As such, cultural artifacts— and the genre of autoethnography they fall into—provide a rich starting point for a quantum rhetorical pedagogy geared toward *rhetoricity* (ungroundedness) and *rhetorical being* (responsible response). For it is only in looking deeply into their lifeworlds that students come to see their affectability, the origins of their commitments, and the duty to respond responsibly to lifeworlds unlike their own. Showing students what motivates their commitments is, after all, one of the most effective ways of generating a rhetoric of responsivity (Young et al. 1970, 7).

In this last chapter I attend to student writing, the classroom, and the university at large not simply as one way to practice quantum rhetoric. That there are multiple ways to practice quantum rhetoric is self-evident. Rather, as my conclusion to chapter 4 expresses, the university is uniquely poised to develop critical thinkers who come to a knowledge of the entanglement of matter and meaning. First-year writing and critical thinking classrooms are not one space among many for this task. In my view, they are *the* place to practice quantum rhetoric, insofar as these courses are one of the few—if not the only—chances for students to deliberately explore themselves, their culture, knowledge, and ways of being.

Therefore, whereas many academics and students alike write off writing courses as general requirements on the way to core courses, quantum rhetoric understands these courses to be absolutely central to the work of the university, to society, and to democracy.[1] If Henry Giroux (2014a, 32, 60, 231) is right that the neoliberalization of higher education, the casualization of academic labor, and the treatment of education as a consumer good threaten the civic origin and capacities of higher education, then these classroom spaces are precisely the places for quantum rhetoric to (re)claim, evolve, and nurture critical thinking, reading, writing, and citizenship.

Claiming these classrooms for the development of democratic capacities not only accomplishes the founding fathers' vision for education, but also the Sophists'—who

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[1] On September 28th, 2017, *The Chronicle of Higher Education* published a special report, "Teaching the Idea of America," which includes a number of articles that index the university to viable, liberal democracy. This report includes an article by Geoffrey Galt Harpham, "The Essential English Department," which links textual analysis to critical citizenship.

were, after all, the architects of higher education to begin with (Theobald 1997, 119). In this way, quantum rhetoric recovers "sophistic rhetoric as a model for contemporary composition teaching" (Jarratt 1991, 117). Combining physics' attunement to materiality and Sophistic rhetoric's attunement to the democratic necessities of listening, reasoning, and communicating effectively, quantum rhetoric joins the sciences and the humanities in pursuit of human wholeness. We are animals, but not merely animals. We are analytical animals, but not merely so. We are political animals, too, Aristotle reminds us. Yet Aristotle's formulation of the human condition gets us no further than animals who symbolically vie for their own interests in contrived forums and assemblies.

Quantum rhetoric revises classrooms beyond politics, argumentation, and persuasion. Quantum rhetoric revises classrooms beyond *listening*, as well (or *entertaining* others' thoughts, as is too often the case). Rather, quantum rhetoric envisions a classroom where students—before jumping into arguments, before picking sides and staking a claim—come to terms with their own affectability, persuadability, and bias (or *angle*, to be discussed later). Quantum rhetoric foregrounds our terministic screens and the ways we see the world, but not principally through argumentation or the logical faculties. Partly through the two assignments discussed in this chapter, quantum rhetoric *shows* students the human condition through material-discursive connections to lifeworlds, connections and relations which ground their being—their attitude, or posture, toward world. What is the old expressivist axiom in composition? "Show, don't tell." Quantum rhetoric does not *tell* students—does not *explain* to students—how they are

affected. Quantum rhetoric gives students the opportunities to *reveal* their own affectability to themselves and for themselves.

In this way, quantum rhetorical pedagogy *guides* more than it instructs. Returning to Heidegger, quantum rhetoric provides the clearing (*lichtung*) which is the condition for the possibility of the event (*ereignis*). But it does not usher in the event. The event, the "conversion of consciousness" wherein students realize their entanglement with world, must come from themselves (Heidegger 1971, 127). As Young, Becker, and Pike (1970, 7-8) write, "the first requirement for changing beliefs," should students choose to change them, "is the elimination of this sense of threat"—the threat we feel when our identity and integrity is under attack. "A strong sense of threat," they continue, "may render a person immune to even the most carefully reasoned and well developed argument. Likewise, attempts to condition him or to explain away his beliefs become very threatening once he discovers what is happening to him" (1970, 8). The goal of rhetoric, as they see it—and as Heidegger saw it—is "not to work one's will on others but to establish and maintain communication as an end in itself" (Young et al., 1970, 8). The goal is to create the free and open conditions for change, which requires that we overcome our defensiveness in the face of perceived threats (Young et al. 1970, 205).

Quantum rhetoric thus takes cues from modern rhetoric in attending to terministic screens and in approaching a rhetoric of both listening and speaking as opposed to mere *persuasion*.[2] But quantum rhetoric is *not a cherry-picking exercise*. It does not pick some

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[2] When I ask students to define rhetoric they often do so not only as *persuasion*, but as *manipulation*. Quantum rhetoric hopes both to correct this misconception and the tendency to focus on speaking over and against listening and attending to difference.

elements from Sophistic rhetoric, merge them with modern and contemporary rhetoric, and merge them still with quantum physics. This is not quantum rhetorical method. Rather, quantum rhetoric incorporates the particular successes of various approaches to rhetoric while, at the same time, reorienting them around the entanglement of matter and meaning. Furthermore, quantum rhetoric corrects anthropocentric tendencies in Sophistic rhetoric by foregrounding the fundamental ways in which humans are a response to living matter, as made evident through quantum physics (discussed in chapter 3).

Quantum rhetoric also corrects the modern rhetoric overreach of positing mastery of rhetoric as the principal goal (Young et al. 1970, 9). One does not *master* rhetoric, typically understood as persuasion. One does not communicate by deploying rhetoric. Instead, humans emerge from a larger rhetorical process of address and response, fundamental to all matter (Davis 2017). Yet these fundamentally rhetorical features grow exponentially in the human assemblage who—endowed with critical and other capacities—advances rhetorical processes to radically more subtle, complex, and consequential levels. Therefore, though quantum rhetoric builds on previous rhetorics, it also—true to its *quantum* heritage—destroys, overturns, and upends previous approaches to rhetorical theory and practice.

Unfortunately it is all too easy to remain in the clouds on matters like these. One could circle endlessly the theoretical clouds on the entanglement of matter and meaning and find all sorts of fascinating and important connections to an infinite array of fields, subjects, and issues. Rhetoric's longstanding commitment to *action*, however, precludes a theoretical hermitage in the heavens. That is why, once again, I turn to real spaces

(classrooms), real people (students and teachers), and real assignments (the cultural artifact and larger autoethnography) to ground quantum rhetoric not only in one particular way, but in what I claim is the *most vital way*. For what is more important than our future generations of citizens and the primary institutions which lay hold of them like no other for "eight hours a day for five or six days out of seven," for sometimes a third of their lives (Althusser 2014, 252). Education is no small task, and not merely one apparatus among others. It is still—despite the rise of mass media as public pedagogy—a key site of development, thinking, reading, writing, reasoning, and responding. What better site, then, to explore our affectability—our *feelings as values* (Jung 2010a, 296). What better place to realize the "impropriety of language and action" that saturates our groping toward mastery, our illusions of perfectibility, than the very place we learn to read, write, communicate, and make sense of the world (Bender and Wellbery 1990, 38).

It is here, I believe—in writing and critical thinking classrooms—where "more and more elements [can be] taken into account, considered simultaneously, side by side (paratactic)," where the significance of the entanglement of matter and meaning can be made evident, and where the "openness and connectivity" necessary for new rhetorics can be not only cultivated, but also be made central in the process of becoming an informed, responsible citizen and individual (Hawk 2011, 90-1). In this way, quantum rhetorical pedagogy in this chapter begins with *objects*, connects them to *lifeworlds*, and concludes on *citizens and individuals* who—in taking more and more elements into account—respond more responsibly to the very lifeworlds they brought with them into the classroom. Consequently, quantum rhetoric does not *change* students. Rather,

quantum rhetoric invites students to change *themselves* and their responses, should their

investigations lead them to do so. And often they do.

Spatializing Writing

By giving students space in the classroom to bring forward their lifeworlds, quantum

rhetoric accomplishes Reynolds' and others' recent objective of inhabiting place and

encountering difference. In addition to this goal, compositionists like Sidney Dobrin

strive to spatialize writing as a geographical site in itself, and not simply a process. While

Reynolds' and Dobrin's concerns here may seem somewhat disparate, I will attempt to

synthesize that inhabiting place and encountering difference has much to do with, and in

fact depends on, our ability as compositionists to spatialize writing beyond recent

metaphors of geography. Quantum rhetoric affords students more space with assignments

like the cultural artifact and autoethnography which, I argue, further "unpack [the] spatial

dimensions" of writing, thereby constelling writing, space, place, and difference into a

productive exchange with unique pedagogical implications (Dobrin 2011, 33).

Quantum rhetoric therefore links the spaces and places of writing with

autoethnography as an avenue toward difference in and beyond the classroom. In doing

so, quantum rhetoric foregrounds the development of rhetorical being in first-year writing

and critical thinking classrooms. I argue that autoethnography, in particular, can be

situated in the tradition of place-based education for the expansive way in which this

tradition attends to the influences of our environments on our ways of being, thinking,

and writing. That is to say that these ways of being—the *difference* our students bring

with them into the classroom—are effectively encountered through an autoethnographic

writing process that engages place. As Heidegger (1971, 200-2) writes, "things, each in its time, literally visit mortals with a world. . . . things carry out world. . . .Things bear world." Given space, time, and our attention, each artifact in our lives presents, or *presences*, a world. Each world is consequential in its own way. Autoethnography—in giving students space and time with which to devote their attention to artifacts— presences these worlds, both engaging their significance and creating significance anew. Worlds and significances, old and new, entangle on the path to rhetorical being which makes evident not only our entanglement with our own lifeworlds, but with those of others. In assigning autoethnography, then, teachers open themselves to these worlds of differences, a pedagogical move which *makes* a difference in students' affective and intellectual lives.

Yet difference is a two-way street. Not only is *place-based autoethnography* a way for teachers to encounter difference, as Reynolds and others desire, but it is also a way for students to open *themselves* to difference: the difference of their peers whose autoethnographies, when shared, demonstrate the ways in which ideology, political positions, religious beliefs, and so forth are shaped. It is my hope that place-based autoethnography can spatialize writing while illustrating and negotiating difference. As we know, writing takes place. Writing occurs somewhere, is informed by place, and bears on place. Autoethnography is only one form of writing. Yet its capacity to critically attend to and navigate place is considerable. It is for this reason that the quantum rhetorical pedagogy in this chapter attends to autoethnography and its potential to cultivate the rhetorical life.

Quantum rhetoric expands the autoethnographic tradition from Carolyn Ellis, Mary Louise Pratt, Linda Brodkey, and others. While the power of autoethnography is particularly useful for analyzing and negotiating colonial influences and power structures, I wish to broaden autoethnography by utilizing it more often in the classroom to analyze and negotiate discourse and ideology at large (much of which is indeed indexed to colonial power structures). Quantum rhetorical autoethnography engages the material ways in which cultural artifacts gain meaning in our lives and shape our perceptions of the most seemingly mundane experiences.

Quantum rhetoric's engagement with place-based education and autoethnography—in conjunction with my students' autoethnographic work—offers one way we might sharpen our pedagogical attention to space, place, and difference. Consequently, writing place-based autoethnography is an *agency endowing process*. That is, it locates, illustrates, and offers pathways for the negotiation and resistance to codes, customs, and ways of being that animate power dynamics, inclusive of students and teachers. More than negotiating power, place-based autoethnography develops students' capacity to take a *fuller account* of their engagement with place—with its influence on their character, learning, and their already rhetorical lives.

Locating Composition's Place

Our moment in composition studies is preceded by the development of complex notions of space, place, and writing, theories developed herein. I would like to take a moment, then, to provide a brief overview of more recent developments in space and place, of how these concepts intertwine with quantum rhetoric, and how the growth of our field in

spatial and geographical directions can be effectively developed through place-based autoethnography. Overall, this section presents some initial connections between these traditions and situates place-based autoethnography as a constellating site for quantum rhetorical theory and pedagogy. The next section explores the autoethnographic tradition which my assignments develop.

Growing out of anthropology, *place* describes "centers of felt value" where biological and other needs are met, where individuals identify safety in surroundings, physical and mental (Tuan 2014, 6). Place is what space becomes once it is "endowed with values," making the two concepts interdependent (Dobrin 2011, 36). Though the street where I grew up, for instance, is in many ways just another a street—a stretch of pavement in the labyrinth of suburbia, more or less identical to thousands around it—as a child I made "the strange space turn into neighborhood," into the place I learned to roller-skate, to befriend neighbors, to interact with the world in the discourse of squirt gun fights and block parties (Tuan 2014, 140). It was safe. It was home. But before it was home, it was space; it was "that which allow[ed] movement," that which could be "transformed into place" with time and memory and thought (Tuan 2014, 6).

Place is value, the formation of cosmos from chaos. It is for this reason that composition studies has taken up space and place theories as avenues toward developing critically conscious citizens capable of recognizing how and where values, discourses, and ideologies take root. Recognition does not guarantee critical analysis or negotiation of difference, but it at least makes such developments possible. "For us," Robert E. Brooke (2015a, 37) writes, "the goal of place-conscious watershed education is to

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develop an understanding of these physical relationships so that young citizens can imagine themselves as belonging to the place and acting productively within it." That is, place situates students as citizens and contributors in their communities. Place reveals and animates the connections that students might otherwise not see, thereby encouraging deeper connections to places, their significance, and their potential.

In composition, we have only recently adapted spatial and place-ial theories to go beyond the more social concerns of postprocess theories (Otto 2005, 143). Such theories have elucidated that space and place are as much a part of composition as they are a part of social anthropology and geography. In *Postcomposition*, Dobrin (2011, 38) connects Tuan's thoughts on space and place to writing, in that if space allows movement, and "place is pause," then in between is *writing*: a technology with which we "take up space and endow it with place-ness." Writing shapes space. It is for this reason that Walter Ong (1986, 31, 28) dubs writing a "consciousness-raising and humanizing technology" that "separates being from time" in a sort of *pause* where writers can reflect and reshape reality. Due to the way that writing shapes, navigates, and makes sense of place, then, and the way it raises our consciousness of our lifeworlds, quantum rhetoric attends to writing as the *essential geography* for the cultivation of rhetorical being.

Because writing is public, interpretive, and situated, writing must be indexed to the environments in which it takes place (Hawk 2011, 75). A place-based theory, ecocomposition continues to be a useful way of "reconceiving writing as part of an ever-changing ecological system that includes textual forms, channels of distribution, interpersonal interactions, cultural norms, and institutional arrangements," thus

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expanding our attention to place (Scott 2005, 349). Autoethnography expands

ecocomposition in this regard, insofar as autoethnography enables writers to examine

"the relationships between [themselves] and their surroundings" (Otto 2005, 143). If

ecocomposition encourages students to "explore how their identities have been composed

by such places and vice versa," autoethnography might join these critical, cultural, and

place-ial aspects of writing around specific assignments (Brooke 2015a, 37). Not only do

students, I will show, connect more deeply and critically with their places through

autoethnography, but the difference of their places is brought to the forefront of their

writing and thinking. First-year writing and critical thinking courses, then, stand to gain

from place-based autoethnography's power to integrate multiple subfields and goals in

composition studies. Consequently, quantum rhetoric makes use of autoethnography's

constellating power to make manifest the entanglement of matter and meaning.

To first conclude our moment in composition, we might recall Reynolds' (2007,

176) and others' desire to tap into the "spatial imagination" of college students in writing

classes, evidenced in the epigraph, in order to explore "the sense of place and space that

readers and writers bring with them to intellectual work of writing, to navigating,

arranging, remembering, and composing." We might ask whether this desire has

something to do with the traditions of composition and critical thinking which conceive

writing architectonically "as a structuring of a space of meaning, a meaningful place that

opens up particular possibilities of thought, feeling, and action while at the same time

foreclosing other possibilities" (Worsham 2005, 31). This chapter explores the spaces of

writing through the places of students, and vice versa—a thoughtful relationality, I argue, effectively developed through place-based autoethnography.

In this analysis, I suggest that a sharper turn towards autoethnographic writing accomplishes current goals in composition studies by enabling students and teachers to inhabit place, encounter difference, and navigate the entanglement of matter and meaning—each of which is a necessary element in the cultivation of *rhetorical being*: the *telos* of quantum rhetoric. *First*, I provide an overview of the autoethnographic tradition in relation to my approach. *Second*, I provide a more specific overview of autoethnography pedagogy that impacts my own. *Third*, I offer specific details on my critical thinking course and the autoethnography assignments. *Fourth*, I make two pedagogical moves in autoethnography: to broaden both autoethnography's *scope* and *foundation*, which I link to *four* key pedagogical effects, including the encountering of difference. *Finally*, I conclude with some remarks on place-based autoethnography, its overall uses and implications, and follow-up work which scaffolds my assignments. Throughout this chapter I draw on students' autoethnographic work with the recognition that much can be realized and spatialized through a "ubiquitous symbol." For, as Bachelard (1994, xix) writes in *The Poetics of Space,* a single image can "react on other minds and in other hearts, despite all the barriers of common sense, all the disciplined schools of thought, content in their immobility."

Theorizing Autoethnography

When I first began utilizing autoethnography in the classroom, including cultural artifacts on student discourse communities, desocialization was my intent.[3] In the context of a critical thinking class, this focus seemed appropriate. Having also been influenced by James Berlin's (2003, 124) work in *Rhetorics, Poetics, and Cultures*, I believed such desocialization might lead students to "negotiate and resist" the cultural codes embedded in "hegemonic discourses." Yet, as time went on, I realized that not only was I encountering identity and discourse in my students' writing, I was encountering, to a greater extent, *difference*.

Reynolds (2007, 163), in examining place, notes that "personal artifacts surround you and that you can tell a story about many of the items," such "clothes, books, photographs," and other items, which "represent a meaningful time and place." If one goal of composition is to encounter difference, perhaps we might do so through student places enmeshed in these items of value. Moreover, if "writing can be inhabited," then perhaps it is *through* writing that we can encounter difference (2007, 163). Thus, in this section I explore autoethnography in relation to *place-based autoethnography*: autoethnography which intertwines culture and ecology, offering avenues toward difference, as well as critical consciousness. Place-based autoethnography, in other

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[3] The concept of "desocialization" I work with stems from Ira Shor's (1992, 129) *Empowering Education,* defined in part as "questioning power and inequality in the status quo; examining socialized value in consciousness and in society which hold back democratic change in individuals and in the larger culture." Note that desocialization is still socialization, but a type of socialization we might call "critical socialization": a socialization critical of itself.

words, is an archaeology of value wherein the entanglement of matter and meaning is both visible and productive for writing and critical thinking pedagogies. By *archaeology of value* I mean that autoethnography excavates the history of value embedded inside artifacts—the material histories of values, ideology, and practices unearthed through self-reflexive writing.

The autoethnographic tradition largely begins with Carolyn Ellis' work which defines autoethnography as "an approach to research and writing that seeks to describe and systematically analyze (graphy) personal experience (auto) in order to understand cultural experience (ethno)" (Ellis et al. 2011, 273). Whereas ethnographers write about the cultures they examine, autoethnographers examine themselves inside their own cultures. In this way, autoethnographic stories "are stories of/about the self told through the lens of culture. Autoethnographic stories are artistic and analytical demonstrations of how we come to know, name, and interpret personal and cultural experience" (Adams et al. 2015, 1). Autoethnographies are ways for cultures and individuals to give accounts of themselves on their own terms—to map the meaning of their lifeworlds through concrete experiences and images.

Since Karl Heider coined "autoethnography" in 1975, the autoethnographic tradition has grown considerably. Ellis, Adams, and others stress autoethnography as a way to tell stories and culturally analyze experiences, merging biography and ethnography (Ellis et al. 2011, 276). That is to say that "when researchers write autoethnographies, they seek to produce aesthetic and evocative thick descriptions of personal and interpersonal experience," while simultaneously using "personal experience

to describe and critique cultural beliefs, practices, and experiences" (Ellis et al. 2011, 277; Adams et al. 2015, 1). For interdisciplinary communications scholars like Ellis and Adams, and especially for anthropologists, autoethnography often involves researchers observing themselves inside the cultures they observe in an effort to take into account their own assumptions and experiences—hence their value for rhetorical being.

My approach to place-based autoethnography owes much to Mary Louise Pratt. In her "Arts of the Contact Zone," Pratt (1991, 35) defines an *autoethnographic text* as one in which "people undertake to describe themselves in ways that engage with representations others have made of them." For Pratt, autoethnography negotiates representation within colonial power dynamics. Consequently, autoethnography is a contact zone—a site of "*cultural mediation*"—not only between cultures, but between students and teachers (1991, 40). Where there is power, there is the potential for autoethnography to negotiate that power. Thus, the primary goal of autoethnography has been to mediate power relationships between cultures and individuals.

Pedagogical Approaches to Autoethnography

Pedagogically, autoethnography has been a tool for helping students become "more conscious of society as a whole, in particular their subjection to an unjust world," which extends into the classroom space with their teachers (Camangian 2010, 199). For Camangian (2010, 201) and others, autoethnography in the literacy classroom means "[p]reparing students to engage one another in humanizing, caring ways," requiring that students be "honest about who they are, what they stand for, and how their behaviors are either empowering or disempowering, both personally and collectively." From

Camangian's (2010, 184) point of view, citing Allen Cary-Webb, autoethnography "inspires [students] to reach out and speak for themselves, to generalize from their own experiences by teaching students to (1) name their hardship, (2) contextualize it, and (3) activate themselves and others." Here, the focus is the hardship of one's own experience, often informed by colonial power dynamics, which can be explored and mediated in the classroom through autoethnography's self-reflexive approach to culture and power. Autoethnography, in this sense, is *therapeutic* in addressing trauma, its effects, and its solutions (Ellis et. al 2009, 280). While Ellis (2009, 376) insists in her "Response to Critics" that autoethnography is not "[j]ust therapy," there is no doubt that much self-reflexive writing, including autoethnography, empowers healing. Healing is not the principal goal of autoethnography, but it can be a productive effect on the way to rhetorical being.

Autoethnography also informs critical pedagogies. Stephen P. Banks and Anna Banks (2000, 236) suggest that autoethnography provides a way "to inculcate and model a critical attitude and self-disclosiveness in our teaching and learning, not just with our students and colleagues but also with our institutional administrators." Autoethnography enables teachers and students to critically attune themselves toward their teaching, learning, and educational interactions. In this way, "[d]oing autoethnography is more than a research method; it is a way of living," a way of navigating and evolving our daily interactions in more effective, ethical ways (Adams et al. 2015, 20). Consequently, ethnography in general has profound implications for the way we narrate and negotiate

discursive practices and their effects (Brodkey 1996, 171). For this mode of writing

shows, as Brodkey (1996, 171) writes via Foucault, how "discourses speak us."

When joined to the principal concerns and methods of Freire, Giroux, McLaren,

hooks, and others' critical pedagogy, I argue that autoethnography manifests the road to

rhetorical being which, in turn, expands composition studies' theoretical and pedagogical

breadth.[4] Autoethnography allows students to become "co-investigators in dialogue with

the teacher," fulfilling a key goal of critical pedagogy (Freire 2000, 263). In my course,

students take up the course vocabulary—drawing mostly from rhetoric, composition, and

critical theory—in mapping the meanings of their artifacts, which they in turn share with

the class and myself. This process puts their places in dialogue, such that each student's

artifacts show me something different about place, something new about how students

map meaning from matter. Consequently, autoethnography allows teachers to study

theory and pedagogy "in relation to student autobiography" (Shor 1992, 128). That is,

autoethnography allows students' stories (autobiography) to come forward within the

cultural and critical lifeworlds (autoethnography) which shape them, furnishing content

by which teachers navigate theory and pedagogy.

In productively meshing with critical pedagogy's concerns, autoethnography

enhances our ability to encounter "students' different experiences in the sociospatial

world" that, as Reynolds' (2007, 162) epigraph states, walk with them into the classroom.

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[4] See especially Henry Giroux's *On Critical Pedagogy* (2011), *Neoliberalism's War on Higher Education* (2014), Peter McLaren's *Pedagogy of Insurrection: From Resurrection to Revolution* (2015), and bell hooks' *Teaching to Transgress: Education as the Practice of Freedom* (1994).

Because these differences are significant to students' experiences in and perceptions of the world—with respect to and beyond power dynamics—the reach of autoethnography's significance is far and wide. Therefore, I would like to take advantage of our current educational platform to further reach students, to listen to *their* stories, *their* narratives, and to invite them to "map places meaningful to them," as Reynolds (2007, 162) encourages us to do, thereby inhabiting their places, their difference. Since we likely cannot, in the composition classroom, travel in person to our students' places like ethnographers do, we might have students bring difference to us as autoethnographers. It is in inhabiting these places, I believe, that we might develop more capacious, productive, and well-rounded theory and praxis. In doing so, I am confident that teachers as well as students can cultivate rhetorical being—that critical, ungrounded, but deeply affected approach to world which questions assumptions but insists on action.

Autoethnography Assignments

Let me briefly discuss the key elements of my critical thinking course, the "cultural artifact" assignment, the final autoethnography essay, and the portfolio before elaborating on the two moves I wish to make in drawing autoethnography toward quantum rhetorical theory and pedagogy. My critical thinking course, the last of three English courses all undergraduates take at my public research university, is entitled "The Construction of Self, Others, and the Future" (Appendix A). There are four broad themes in my course: *rhetoric*, *ideology*, *discourse*, and the *material entanglement*—or material emergence and embeddedness—of the three. The course's main assignments are five cultural artifacts,

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the autoethnography, and a portfolio which gathers these assignments into a larger material artifact on students' lifeworlds (Appendices B-H).

The "cultural artifact," exampled earlier through Julianna's watch, is an autoethnographic assignment which makes meaning from place. Here, I ask students to print an image of an object (the authentic object or its representation) that has played a role in their socialization. Below the half-page image they reflect for a half-page on how the object socialized their identity in some way, tying *two class concepts*, terms, or authors into their analysis (which, in turn, correspond to class themes). *Five artifacts* are assigned across the quarter system, averaging an artifact per two weeks. Students share these artifacts with each other in class, either by exchanging the written artifact or verbally discussing it. They are expected to discuss what material from the course they were able to apply, and what the artifacts and course material on the whole showed them about their socialization, ideology, and so forth. The realization may connect directly to a particular discourse community of which they are a part. In this case the artifacts may be used as a springboard for the final autoethnography on an entire discourse community. Or it may be a more isolated incident, such as a book that had a particular impact.

The *portfolio* at the end of the quarter includes a *cover page*, *"Dear Reader" letter*, *five cultural artifacts* with any revisions (only final drafts receive a grade), one rough draft and one final draft of the 8-10 page *autoethnography* on a discourse community, and *two peer review worksheets* (we do an anonymous, in-class peer workshop one week prior to the due date). Here is a breakdown of the basic components:

- *Cover Page:* displays a self-portrait of the student accompanied by a unique title.[5]

- *Dear Reader Letter:* one page letter which explicates the student's overall growth and change in the course relative to the material and writing assignments, and to the student's writing and critical thinking practices specifically (Appendix C).

- *Cultural Artifact*: half-page image and half-page analytical reflection of how an object has contributed to the student's socialization (Appendices D-E).

- *Autoethnography*: 8-10 page paper narrating and analyzing how a discourse community—with attention to its codes, customs, and ways of being—has contributed to the student's socialization (Appendices F-G).

- *Peer Review Worksheets*: basic review sheets which ask the reader to evaluate the writer's paper, its capacity to engage readers, and its application of course material (Appendix H).

Of these assignments, the 8-10 page autoethnography is the most critical. The assignment begins this way: "To clarify, you are being asked, as would be done within any ethnography, to observe someone (in this case yourself) inside a culture, to record what you see, and to hypothesize about meaning and understanding just as all the researchers and writers whom we have read have done." Here is where we take the student's story, where we take autobiography, and dig deeper into the questions of being, where we rise to our depths, where we not only shape place, but investigate *how* place is shaped through culture, discourse, rhetoric, ideology, and materiality. Although these are the broad

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[5] For the sake of students' anonymity, I have not included an example cover page in the appendix. Appendices B-H detail the portfolio instructions, contents, and examples.

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themes my autoethnography assignment addresses, autoethnography lends itself to any number of frameworks. Because my themes are sufficiently large, however, it is up to students to decide whether their autoethnography hones in on cultural assumptions, for example, or the effects of race, gender, class, and sexuality, or the effects of opposing or clashing discourses, where two or more cultural backgrounds contend for the student's values, practices, and so forth.

Broadening Autoethnography, Broadening Difference

Having surveyed the autoethnographic tradition and summarized my own course's context, I would now like to advance autoethnographic theory and pedagogy in *two main ways*. *First*, in my first-year writing and critical thinking classrooms I *broaden autoethnography* to a reflection and analysis not only on colonial power dynamics (though this is one approach students may take), but also on several key themes in my course which draw out the diversity of students' socio-spatial worlds. *Second,* I argue that situating autoethnography in the tradition of *place-based education* in particular attends to quantum rhetoric's goal of developing a critical citizenry capable of reflecting on and shaping place. That is, place-based education sharpens autoethnography's attention to space, place, and one's bodily, material entanglement with the environment. It is in my critical thinking course where autoethnography takes place—where I broaden both autoethnography's *scope* and *foundation*. In doing so, I hope to extend the uses of autoethnography in the classroom as a tool for engaging difference at large, and as a writing environment within which students' agency and critical thought might be developed and empowered by attending to the effects of place—in all its forms—on their

ways of being. Ultimately, autoethnography's disclosure and navigation of difference clears a path toward rhetorical being which, in principle, opens itself receptively to difference, to alternative futures (or "alternities"), and thus to the contingency and relativity of our sensemaking structures (Bartholomae and Petrosky 1986, 3).

My course themes—discourse, ideology, rhetoric, and materiality—*broaden* autoethnography's scope by attending to themes which are inclusive of, but also transcend, colonial power dynamics. That is, students may address, as many students have, the influence of Western hegemonies over the developing countries from which they and/or their families originate, but many students also have focused on a particular school, religious institution, or community whose discourse has shaped them. Invariably, the effects of these discourse communities are rhetorical, discursive, ideological, and material. Broadening the scope of autoethnography in this way expands students' reflection on and interaction with their discourse communities. At the same time, autoethnography enables students to "move from the margins" to create a place inside the university for themselves (Bartholomae and Petrosky 1986, 41). It is in this movement that students bring their difference to the table as the subject of writing and thinking.

I should clarify, however, that "the goal of critical research," as Brodkey (1987, 71) writes in "Writing Critical Ethnographic Narratives," is not to replace one ideology with another, but "to point out the ideological warranting of history." While Brodkey's (1987, 67) critical ethnography here focuses on the themes of "corporate texts" and "corporate histories," her vision recognizes (auto)ethnography's potential as a tool for transformation, whether that transformation involves institutions or individual lives.

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Ideology, then, becomes warranted through institutional frameworks which reproduce both its ideology and its justification. The difference in my approach is that the investigation of ideology, discourse, and the like transcends institutions and corporate histories, and includes the broad swath of socio-spatial worlds that walk into the classroom with students. These worlds may include corporations or cultural hegemonies, but it is up the students what discourse(s) they will bring to the forefront. Each student has his or her own path to rhetorical being, and it is the teacher's job to clear as many paths as possible while still maintaining the integrity of the course's focus.

One productive effect of broadening autoethnography's pedagogical scope is that autoethnography becomes a window into *difference* for both students and teachers: different places, cultures, values, perspectives, practices, and the like. Returning to Julianna's watch, let us consider part of her reflection on the object itself in its place-ial context, which signifies her "entrance" into time:

> That day in the hospital was my first experience with death. It becomes clear now that my need to always wear a watch with a second hand, to hear that basic ticking, has become equivalent to my heart beating. On that day, I was not counting up to my grandfather's death, or counting up to the moment where I could play. On that day, the 8 year old me began to count the seconds of her life, and began to acknowledge that there is an end to it. The watch that I wear on my wrist does not simply tell time, but it tells me that I am blessed with the gift of still having time.

Even though I have my own socialized conceptions of time, I have never quite experienced time like Julianna has. Her time is different, and so is her place. I have never been in a hospital staring at a watch my grandfather gave me before he died thinking of time and death and memory. But through Julianna, now I have (to the best of my ability). And in this small sense, I have encountered difference through inhabiting her place. In

doing so, I have allowed her experience to walk in with her to the classroom, and to become the content of the classroom itself—content for the application of composition studies, our classroom discussions, and course direction.

In many ways, the difference encountered here harkens back to Linda Brodkey's article, "Writing on the Bias," where she states that we write to make sense of the world, as Julianna makes sense of time. Without bias, without perspective, "language is only words as cloth is only threads" (1994, 546). Julianna's memory and philosophy of time is her perspective, her bias, her contribution to the *conversation*, as we say through Kenneth Burke. "A bias," Brodkey (1994 546, emphasis mine) continues, "may be provided by a theory or an *image* or an experience or an ideology," and here it is an image of something real: a watch that communicates a perspective on time, one different than my own. In my classroom, autoethnography provides a window into bias, a window into difference I might otherwise not encounter. By expanding the scope of autoethnography, we expand the scope of inhabitable difference. The diversity of this difference will be illuminated with further examples in the following sections. These examples and artifacts show, as I.A. Richards (1979, 29) writes, "how far back into the past all our meanings go, how they grow out of one another much as an organism grows, and how inseparable they are from one another." Inseparable, indeed, not only from all of our experiences which meld together into every other, but also from each artifact and place which make experiences what they are.[6]

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[6] Chapter 4 devotes some attention to William James' (1950a, 234, 230) formulation of a similar point: "every given thing is really a resultant of our experience of the whole world

Place-Based Autoethnography

The *second move* I make is to index autoethnography's *foundation* to place-based education. *Place-based education* enables students to more fully engage their places, which in turn makes them more capable of (re)shaping place. Autoethnography is best situated in place-based education due to a shared insistence on the *intradependence* of individuals, communities, and their environments—a dependence which autoethnography invariably unearths (Theobald 1997, 7). Although place-based education and autoethnography stem from somewhat different fields and work towards seemingly different goals, I will illustrate the productivity of their connection in relation to space, place, writing, and thinking. Throughout this section I include examples from student work to demonstrate and confirm the positive effects of place-based autoethnography for the cultivation of rhetorical being. For convenience, these effects are divided into four categories: effects on *awareness*, *learning and engagement*, *encountering difference*, and *critical action and application* of student learning.

First, a clearer, more expansive definition. Felipe de S. Ferreira (2017, 1) provides a useful, recent definition of place-based autoethnography which imbricates socio-cultural and ecological factors, worth quoting at length:

> Place-based autoethnography: this pedagogical intervention merges autoethnography as a narrative that problematizes the situatedness of self in social contexts (Spry, 2001) and place-based pedagogies in an effort to facilitate qualitative inquiries of self and subjectivity (including inner work) in relation to larger socio-cultural *as well* as ecological contexts. Self narrative storytelling can help members of learning communities to come to grips with the dynamic and intersecting qualities of their sociocultural, spiritual, and ecological identities

up to that date"; "*no state once gone can recur and be identical with what it was before*."

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while emphasizing a relational, systemic view of the place where the learning is happening.

This definition emphasizes a wide array of entangled factors—physical, mental, spiritual, and environmental—which weave together relationally. Consequently, place informs how autoethnography is written, and what is written about. Place-based autoethnography narrates and contextualizes subjectivity as a response to the complex intra-action of these and other factors. Without attention to place, the autoethnographer risks muting the places which compose the self.

Place-based education thus affirms, strengthens, and develops autoethnography's location in place, and thus quantum rhetoric's larger attention to materiality. The self (*autos*) cannot write (*graphia*) the culture (*ethnos*) without place (*plateia*). Place-based autoethnography affirms that being, as Heidegger writes, is always being-there. Being is tied to location. Culture, then, is an insufficient context for attending to the fullest scope of influence on each being. Because place-based education indexes place to the public, environment, ethics, and community learning, among other factors, it is a productive place to locate autoethnography. Here, I would like to explore how place-based education provides a rich, fertile foundation for the autoethnographic tradition, one which hones autoethnography's broad capacities in productive ways for first-year writing and critical thinking courses. It is my hope that shaping autoethnography place-ially will be one significant step in cultivating rhetorical being in these classrooms.

Place-based education and autoethnography share a core objective in facilitating student *awareness*. In *Place-Based Education,* David Sobel (2004, 13) writes that "one of the core objectives [of place-based education] is to look at how landscape, community

infrastructure, watersheds, and cultural traditions all interact and shape each other."
Place-based education leads students to become more conscious of their world, and of
how and why they act the way they do (Sunstein and Chiseri-Strater 2011, 1-2). They
attend to the "invisible web of behaviors, patterns, rules, and rituals" that govern
language and behavior and "unpack their own cultural baggage," their subjectivity and
assumptions (Sunstein and Chiseri-Strater 2011, 3-7.) In reflecting on and critiquing their
ways of being, students are to "think differently about the meanings and significance of
space and those related concepts that compose and comprise the inherent spatiality of
human life: place, location, locality, landscape, environment, home, city, region, territory,
and geography" (Soja 1996, 1). In the end, students are guided to realize the "effect and
influence" of their environments (Berry 2014, 3). They become aware of the
"simultaneity and interwoven complexity of the social, the historical, and the spatial,
their inseparability and interdependence" (Soja 1996, 3).

Autoethnography is uniquely suited to this facilitate this awareness. For it is in
"everyday objects" that we learn about our own customs, codes, influences, and traditions
(Sunstein and Chiseri-Strater 2011, 126). The portfolio, as I have said, contains five
cultural artifacts: everyday objects which signify the influence of environment on
students' lives. We can think of the "portfolio as a cultural site," one which—over ten
weeks in my course—symbolizes each student's place, each lifeworld (Sunstein and
Chiseri-Strater 2011, 204). For each artifact, students incorporate at least *two key terms*,
concepts, or ideas from our course material. The goal is to tie the class language on
rhetoric, discourse, ideology, and materiality to their own cultural objects. A student

might use the term "socialization," then, or "ideology" when discussing an influential book or film. They might refer to Bachelard's *The Poetics of Space*, a section of which I teach, in referring to their first home as a space of stability. The cultural artifact—a half-page image of the artifact with a half-page, single-spaced reflection—introduces students to the influence of place, of everyday sites, sounds, smells, and relationships.

The portfolio begins with a "Dear Reader" letter which is useful for showing the effects of these autoethnographic assignments. Here, students reflect for a single-spaced page on their growth in the course. Their feedback demonstrates autoethnography's effectiveness in achieving the *four effects* I mentioned earlier. For convenience, I have outlined feedback here from several students pertaining to the goal of *awareness:*

- ◆ Frank: "I must admit that this [the autoethnography] has been one of the most eye-opening and introspective pieces of work I have written in a very long time. It has allowed me to be completely open, to show who I am and how I think, and convey my thoughts and beliefs to a fellow human being."

- ◆ Jennifer: "Prior to taking this course, I did not think that a single object could influence my life, much less my identity, in such a huge way. . . . These assignments have allowed me to better understand myself. I have evolved from thinking that I have complete control over who I am to understanding that I have been influenced by everyone I have met, my education, and my surroundings."

- ◆ Sarah: "[T]his is perhaps the first time I have ever really given myself an opportunity to delve into and study what I now believe are my deepest layers

and is the first time I truly understand the impact that my social, political, and

familial environment has on me. . . . [This course] made me more aware of the

forces of ideology."

These responses are typical of students at the end of the quarter and representative of the

growth in awareness that can occur over ten weeks, across five artifacts, and the final 8-

10 page autoethnography essay on a discourse community with its own artifacts, codes,

and customs. Each letter confirms the self-reflexivity of the autoethnography

assignments. This "introspective" genre of writing enables students to "better

understand" themselves, as the students write, making them "more aware" of ideology

and the forces around them. Such awareness is the first condition of developing "an

understanding of rhetorical agency," and thus a way to reshape their interactions with

place (Martens 2015, 68). The assignments, in turn, undermine the myth of the liberal

subject, independent and self-contained—a myth which place-based education combats

(Theobald 1997, 31; Hardin 2011, 73). They emphasize that all knowledge and practices

are situated (Martens 2015, 64). In the end, the assignments help students "preserve

teachings and artifacts from the past," to learn from their places, traditions, and effects

(Berry 2014, 35).

The assignments also help to widen "the context of all intellectual work and of

teaching—perhaps to the width of the local landscape," wherein students take notice of

taken-for-granted objects, spaces, schools, institutions, and the like (Berry 2014, 39). And

while attention and awareness is only the first step, it is an unmistakably necessary step.

As Susan Sontag writes, "Pay attention. It's all about paying attention. Attention is

vitality. It connects you with others. It makes you eager. Stay eager" (qtd. in Sunstein and

Chiseri-Strater 2011, 388). Through place-based autoethnography, students attend to their

places and take the first step toward a more conscious interaction with place.

Second, when indexed to place-based education, autoethnography positively

impacts students' *engagement with learning*. Wendell Berry (2014, 34) notes that

"[w]ork must 'take place.'" Learning is no different. It is for this reason that Brooke

(2015b, 2), via Sobel, argues that "children and young adults learn best when they

actively connect their schoolwork to local concerns, when, that is, their schoolwork

matters to them and to the community around them." The local environment serves as an

effective starting point to engage student learning, especially when there is an

"overwhelming feeling of disconnection" between suburban students in particular and

their seemingly "ahistorical" environments (2015b, 26, 13). Like Reynolds, place

theorists look for ways "to bring students' lives into the world of the classroom," thereby

making learning relevant (Christensen 2009, 68). For it is only when students go beyond

their desks that they can break down the "Berlin Wall" between academia and the world

(Sobel 2004, 2, 4, 10).

Among the assignments one could assign to make learning engaging, Linda

Christensen (2009, 68) suggests that "[n]arratives are a good place to start." Christensen

(2009, 61) notes how "students enjoy writing narratives. Telling stories from their lives

opens opportunities to talk about meaningful, important, sometimes life-changing events

with their classmates." Place-based autoethnography combines the personal value of

narrative with the critical value of analysis. In making "students the subject of their own

education," autoethnography engages students in the learning process, despite the difficulty of my course readings and the critical intensity students must employ in engaging deeply and thoughtfully with their places (Christensen 2009, 2).[7] Once again, their feedback in the "Dear Reader" letters illustrates the productive effects:

- Frank: "Initially, I had planned to complete this work in less than three hours. It has since been more than a week and I have realized that although this work was assigned to me due to the constructs of our education and classroom experience, I have never had an assignment as close to my heart and my life as this."

- Jennifer: "In the end, I don't mind that this class and portfolio were difficult to get through. This portfolio is something that I am actually quite proud to showcase because it represents my transformation throughout this course and my ability to become a more critical thinker."

- Mark: "I have learned a variety of new things in this class. I was introduced to the master philosopher Heidegger, which brought me to tears at points. I started off

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[7] Several of the most difficult, critical course readings I assign are Thoreau's (1980) "Walking" from *The Natural History Essays*; Heidegger's (1971) "What Are Poets For?" from *Poetry, Language, Thought*; Althusser's (2014) "Ideology and Ideological State Apparatuses" from *On the Reproduction of Capitalism*; Foucault's (2010) "What is Enlightenment?" from *The Government of Self and Others*; and Diane Davis' (2010) "A Rhetoric of Responsibility" from *Inessential Solidarity*. I have also assigned three traditional dystopian novels—*Brave New World, 1984,* and *Fahrenheit 451*—to illustrate the course themes, in addition to assigning the film *Into the Wild* for the same purpose. With *Into the Wild* I have students outline five opposing or clashing discourses in the film (discourses in conflict, such as minimalism and materialism) to facilitate practical identification of the course themes: rhetoric, discourse, ideology, and materiality. Here, students simply name the clashing discourses however they like and provide a brief explanation of how and why they are in conflict.

this class thinking that it would be a lot of work for minimal reward. I was right about the massive amount of work, but I did gain an immense amount of knowledge from this class. I was allowed to think critically, to actually write with my intellect and not with the ideas of others. . . . [The] autoethnography epitomizes my expansion of perspective."

♦ Sarah: "[The course] required a tremendous amount of hard work. I was challenged beyond belief in this course . . . but it was definitely very rewarding. . . I had enrolled myself into one of the most rewarding classes I had ever taken."

♦ Jenny: Reading and analyzing Thoreau in her artifacts and autoethnography, Jenny writes, "Thoreau actually inspired me to take walks whenever I can. In fact, I've been walking to school more often and have been taking brisk walks around my neighborhood."

♦ Sonia: "I began to write on my own and took great pleasure in doing so."

♦ Terry: "I am starting to appreciate reading and writing, both of which I neglected in high school because of how mundane and structured everything we read and wrote was."

One theme in particular unites these letters: *difficult* yet *engaged, rewarding learning*. Four of these seven responses state that despite the course requiring a "tremendous amount of hard work," as Sarah writes, it became one of the "most rewarding classes," she continues, precisely because the assignments are close to the *hearts* and *lives* of students, as Frank concludes.

These responses are typical of "Dear Reader" letters. As such, autoethnography may function, in addition to narratives, as "one of the few opportunities for students to write or talk about their lives in school," thus engaging students by connecting learning to their lifeworlds (Christensen 2009, 61). The result is a more effective, lasting learning that transcends institutional walls. After connecting learning to life, "the classroom becomes richer," whereupon "learning can begin" (Christensen 2009, 152).

Third, when indexed to place-based education, autoethnography becomes a way for both teachers and students to *encounter difference*, and thus fashion more responsible responses to lifeworlds that exceed our biases and frameworks. Bachelard (1994, 5) writes, "the real beginnings of images, if we study them phenomenologically, will give concrete evidence of the values of inhabited space." Images—images of *artifacts*, in this case—are windows into difference.

We have noted through Sunstein and Chiseri-Strater (2011, 126) how everyday objects tell us something about a person's beliefs and practices. Brooke (2015b, 24) reminds us via Linda Flower that the "process of encountering difference in the multiplicity of urban people . . . is, finally, a model for social action." That is, awareness of difference is an insufficient condition for action. One must *encounter* difference to effectuate awareness. "We are guided," Brooke (2015a, 39) writes, "by Flower's cogent definition of community literacy as a 'rhetorical practice for inquiry and social change' that arises from 'an intercultural dialogue with others on issues that they identify as sites of struggle.'" I suggest that autoethnography is productively situated within place-based education precisely because it is an avenue toward dialogue with difference.

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Because I have discussed autoethnography as an avenue toward difference through Julianna's artifact, let me provide just one additional example. This difference is shared not just with me, but with two additional students in a peer review workshop in class. In addition, students share their five artifacts with one another throughout the quarter, giving each student a chance to encounter the difference of their classmates through images and dialogue. Ultimately, as David Gruenewald (2003b, 5) writes, "For critical pedagogues, the 'texts' students and teachers should 'decode' are the images of their own concrete, situated experiences with the world." Place-based autoethnography, which draws on the critical pedagogy of Freire and others, accomplishes this task; it is an effective platform for sharing, encountering, and decoding students' "texts."

As a white male, I cannot pretend to fully understand many of my students' diverse backgrounds and experiences. Autoethnography draws me closer. In doing so, it allows me to better understand my students' places and become a more attentive, helpful, and broadminded teacher of writing and thinking. In Jennifer's final autoethnography, "The Rise of My Feminist Views," I encountered one student's very different lifeworld. She writes,

> I was thirteen years old when I realized that the reason my mom told stories about growing up in Mexico was not because she wanted me to be a typical Mexican girl like her, but because she did not want that for me. . . . It was acceptable for men to dominate women, it was right for women to do all the housework, it was the men that controlled the women. I did not want any part of it.

Jennifer writes that she chose liberal studies as her major because she wants "to make an impact on people when they are younger," to be able to "influence a whole new generation of people who will be able to question society instead of just accepting it."

She concludes, "I want to be the voice that my mom thought she never had. She deserves that, I deserve that, and all women deserve that." This autoethnography was shared with two students in the peer workshop, and reviewed not principally for grammar, but for *effect*. Students are asked to respond to whether or not the writer clearly conveyed the experience of each discourse community with vivid images, moments, and scenes; to whether the significance of the discourse for the writer is clear; to whether the course material is clearly connected and purposefully applied.

For me, and for at least the two students who read this autoethnography in class, there is no question that the autoethnography was an *opportunity* to encounter difference. I received Jennifer's paper two years ago, yet the difference stays with me and allows me to better understand the sociospatial world that Jennifer walked into the classroom with— that all women walk in with. Jennifer's places became clearer to me and other students, less blurred by distance. Therefore, I support Camangian's (2010, 187) broader conclusion that

> autoethnographies increased students' sense of self and positionality in the world, mediated differences, and fostered compassionate classroom community. Beginning the year with autoethnographies urged students to intellectually analyze their own perceptions and practices while the oral communication cultivated understanding across perceived differences. These activities humanized the classroom space and shaped the students' collective identities.

That autoethnography is a window into difference seems self-evident. What is less evident are the *effects* of encountering difference, which I now turn to.

Fourth, when indexed to place-based education, autoethnography helps develop students into *critical, responsive citizens*. This goal is largely achieved through the self-reflexivity of autoethnography in general, and partly through encountering difference.

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Autoethnography, in turn, ensures that education exceeds job training by attending to critical writing, thinking, and communicating. As Berry (2014, 19) states, "One of the gravest dangers to us now . . . is that we will attempt to go on as before with the corporate program of global 'free trade,' whatever the cost in freedom and civil rights, without self-questioning or self-criticism or public debate." The critical pedagogy of Shor, Giroux, and others is quick to reiterate this concern, stating that educational institutions provide "the spaces and conditions for prioritizing civic values over commercial interests (i.e., they self-consciously educate future citizens capable of participating in and reproducing a democratic society)" (Giroux 2011, 137). Educational institutions are certainly not an ideal space. Neither are they the only space in which effective learning occurs. However, "[i]n spite of its present embattled status and contradictory roles, institutional schooling remains uniquely placed to prepare students to both understand and influence the larger educational forces that shape their lives" (Giroux 2011, 137).

Place-based autoethnography works precisely toward this end with positive effects. For, as Gruenewald (2003a, 640) writes, "Democratic action research begins when children and youth start investigating their own familiar places, identifying issues, analyzing them, and then planning and implementing some sort of action." Yet students need space and time for investigation and analysis. Paul Theobald (1997, 133) critiques our society as "a society with no facility for ethical deliberation, a society with no sense of place or community, a society, therefore, marked by unmatched levels of criminality and violence." I agree with Theobald's general critique, but we should not say that there is "no facility for ethical deliberation" so quickly—as Giroux, Freire, and others remind

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us. Brooke (2015b, 1) agrees that "education needs to help students become more effective citizens." He adds that students ought to have a "vision for the future, that is, a critical, informed idea of what [their] place can become and how it can contribute" (2015b, 31). Educational institutions thus can and should be one key "facility for ethical deliberation," tying critical thinking and writing to space, place, and the future.

There are many approaches to these critical, action-oriented goals. Susan Martens (2015, 43) designs writing marathons to "help suburban students and teachers become more thoughtful and engaged citizen-writers." Flower structures into her classroom "a way to become a diverse, deliberative local public" (qtd. in Brooke 2015a, 40). "As a result of inquiring deeply into our suburban place," Mary Birky Collier (2015, 138) concludes, "my students took many significant steps toward becoming participatory citizens, even advocates for their community." Cathie English's (2015, 199) work ethnographies "brought about [student] awareness of the economic realities and the influence of suburban sprawl on this exurban community." Due to these positive effects, we can situate the classroom as a *thirdspace*, "a space of radical openness" wherein students actively think about and contribute to their worlds (Soja 1996, 14).

Place-based autoethnography contributes to this productive tradition of shaping students into informed, reflective, and participatory citizens who *act* on their learning, as students' "Dear Reader" letters illustrate:

- Jason: "The artifacts and autoethnography assignments in your class allowed me to fully take in the material on critical analysis and apply it to my own

experiences. After the course, I can see a great of deal of development in myself and I really appreciate what it has helped me through."

- Jennifer: "I began to look at society through a different lens and started to analyze every advertisement I saw. . . . This class has promoted me to think more about my socialization and how multiple forces have combined to produce who I am today. Through these assignments, I was able to think critically about these multiple forces."

- Sarah: "[The course] made me more aware of the forces of ideology. . . . I try to limit the time I spend on social media, my laptop and phone, and I try to 'therapize' myself in ways other than retail."

- Jenny: "[The course] opened my eyes to further see the deceiving nature of ads and their ability to manipulate our subconscious desires. . . . By becoming aware of this fact, it actually curbed some of my appetite for wanting new things. . . . Hence, I've been trying to be more grateful for what I have already."

- Terry: "I am planning on studying abroad in Greece this summer (in which I hope to implement some of the Rational Flâneur ideologies that we talked about in his class). . . . [I am] actively trying to see through all the 'fog' that our capitalist and production based world clouds our minds with."

- Mark: "Most classes nowadays, or the education system as a whole, does tend to put an extremely strong emphasis on education simply being a means to obtaining a job and making money. . . . this class reminded me to take advantage of the

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college education I've been blessed to pursue, and to learn not to pass classes for graduate school, but to learn for the sake of knowledge and wisdom."

- Grant: "You exposed me to a perspective outside of engineering and the 'hard' sciences that became too pervasive to ignore. I am now interested in studying international cultural relations, means of production, colonial influences, political economy/ecology, and a whole manner of things that branched out of looking into topics from your class."

- John: "I found that when ignoring technology in general I became happier for the latter parts of the experiment. . . . I ended up starting to read books off of my bookshelf (I've built up quite a collection that I never got around to) and really enjoyed myself."

These responses touch on different outcomes of the course material and assignments. All eight responses indicate the application of the course beyond the classroom, which is evidently responsible for their engagement and enthusiasm.

Jason's response links the assignments to his own experience, and ultimately to personal growth and change. Jennifer writes that the course helped her to think "critically about these multiple forces" that influence her daily life. Sarah and Jenny both reflect on technology and capitalism, showing an attention to their own attention: to where their desires come from—from media, technology, consumerism, and so forth. As we have said through Brodkey, the course ideal is not to replace students' ideology with another ideology, but to increase their awareness and capacity to change (if they so choose). Both Sarah and Jenny show this change. Sarah limits her time with media, and Jenny curbs her

acquisitive desires. After John tries a personal experiment—avoiding all social media for two weeks, and limiting other forms of technology use—he begins to read books on his shelves. Here, he "became happier" and "really enjoyed" himself. Mark learns that education exceeds job training. One must, he writes, learn "for the sake of knowledge and wisdom." And Grant, as he informed me years later, changed his major from engineering to anthropology in part due to the topics and assignments from my class. Each student applies the course material and assignments to their own lives precisely because there is no other way to approach autoethnography. This opportunity for the application of learning, I believe, is ultimately responsible for their engagement and success.

Education, Theobald (1997, 159) writes, should help students to be "enculturated into an ethic of shouldering responsibility for a shared place, into reasoned study and deliberation, and into a propensity to look beyond conventional wisdom for solutions to problems." Place-based autoethnography—by linking students with their places, by affording opportunities to dig into the significance of everyday things, by demanding incisive thought into the structure of our motives, desires, and behaviors—is one effective mode of writing and thinking which enables education to live up to its potential. "There are no radical ideas motivating community-oriented pedagogy such as this," Theobald (1997, 146) continues, "just deep thinking about what education is for and how teachers can best facilitate the construction of significant student understanding." The same is true for autoethnography, which inevitably circles back on the communities from which subjects emerge. If we want schools to be more than "factories for cynicism," if we want

students to both "critique the world" and *act* in the world, my students illustrate that autoethnography effectively shapes awareness into action (Christensen 2009, 259).

Shaping the Rhetorical Life

Recall that *rhetorical being* is composed of *seven key terms* or *attributes* (discussed in chapter 1): uncertainty, relativity, contingency, materiality, being/becoming, responsivity, and attunement. Place-based autoethnography attends to each of these attributes. As students draw near to their discourses, they realize that these discourses depend, and are relative to, the diverse lifeworlds to which they are a response. Students emerge and depend on these lifeworlds often not due to their own choice, but due to the contingency and uncertainty of the circumstances which gave them life. Born in one place rather than another, to certain parents rather than others, students engage lifeworlds which have created them, spoken through them, changed them, and become them. The autoethnography, then, is students' chance both to explore these lifeworlds and to revise them. In doing so, they navigate the entanglement of matter and meaning.

The student feedback herein illustrates how students, in drawing near to their material-discursive roots, recognize and respond effectively to these lifeworlds: engaging them, appreciating them, resisting them, altering them, and communicating responsibly beyond them. In attending to their being, they critically shape their becoming. It is for these reasons, and these effects, that I stress place-based autoethnography not only as one assignment among others for the cultivation of rhetorical being, but as one of the most essential quantum rhetorical assignments one might devise and deploy. Equally critical and personal, material and discursive, autoethnography embodies the affective, intelligent

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approach to the entanglement of matter and meaning that quantum rhetoric deems central to the rhetorical life.

My project on autoethnography evolves something much larger: a critical nexus between rhetoric, writing, the university, students, and theories and practices of space, place, and critical democratic pedagogy—to name a few connections. Orbiting autoethnography, I have discussed, are opportunities to increase student *awareness* of social and material forces, their *engagement with learning*, and their *capacity to enact change*. Place-based autoethnography, in turn, spatializes the writing process by attending to students' geographies. Finally, place-based autoethnography provides both teachers and students with opportunities to *encounter difference* by inhabiting students' places. As such, autoethnography provides an effective and capacious path to rhetorical being—the *telos* of quantum rhetoric.

My intention here was to begin to build a quantum rhetorical pedagogy which embodies and employs the principles of quantum rhetoric toward the purpose of rhetorical being. I have, in turn, worked toward a conception of first-year writing and critical thinking classrooms as central in the cultivation of a critical, differential, and affective attunement toward world—one which democracy cannot do without. In the near future, I hope to detail place-based autoethnography more clearly, scaffold assignments, outcomes, and pedagogy.[8] I will elaborate the portfolio assignment—the collection of

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[8] My future work will elaborate the portfolio, "Dear Reader" letter, cultural artifacts, final autoethnography, peer workshops, and how these assignments are scaffolded with respect to my course design, readings, materials, and outcomes. I will also detail how student interaction and feedback is structured, and will include feedback from students who have contacted me years later, providing insight on long-term effects over six years.

artifacts and the final autoethnography which gathers students' reflections and growth throughout the course. The portfolio, a "meaningful collection of selected artifacts or documents, collected over time and across interests," provides "a more thorough and authentic picture of a writer's developing skills" (Reynolds and Davis 2014, 1). The portfolio helps students "keep watch" over their work and think about their own thinking (Reynolds and Davis 2014, 26, 7). Ultimately, the portfolio is "a cultural site" wherein students keep track of their education (Sunstein and Chiseri-Strater 2011, 204).

For now, I hope I have marked a way to broaden the uses of autoethnography in first-year writing and thinking courses, a way to productively situate its foundation within place-based education, and a way to engage students (*and* teachers) with their lifeworlds. If we are to embody the principles and practices that quantum rhetoric evinces as essential to the rhetorical (responsibly responsive) life, then we must—as teachers and citizens—facilitate the development of critically conscious student-citizens who will not only embody the rhetorical life themselves, but make that life accessible and productive for others *unlike* themselves. If Michael Kaplan (2010, 276) is right that democracy "is simply the name of the terrain of that undecidability between content and procedures . . . which can never coalesce into any clear-cut blueprint of society," then we need student-citizens capable of sustaining controversy, of keeping questions open, of considering opposing views, of deciding, then deciding again, then reopening the "space of renegotiation" that is democracy itself. We need to develop responsive beings—in other words, *rhetorical* beings.

The University as (Con)Text

Perhaps one glaring question remains: why the *university*? Is it the job of the educational

apparatus to develop student-citizens capable of shaping and reproducing democratic

life? To what extent should the university be vocational? Chapter 2 provided concise

answers to these questions, wherein I linked the university to the Sophistic conception of

education as preparation for democratic life. Students of democracy, entertaining

opposing views and cultivating their critical capacities, learn to reason affectively in their

private and public lives—between which there is no firm boundary. This is the Sophistic

origin of higher education. Whether or not we choose to honor and evolve it is our

choice, as there is no inherent "nature" of higher education to which we must

unquestioningly be true. Rather, we must ask what are the benefits, and for whom? Are

there good reasons to uphold this model of higher education over others? Earlier we read

from Althusser that students spend "eight hours a day for five or six days out of seven" in

some form of the educational apparatus. Based on this fact alone it is of great importance

how we—as teachers, administrators, citizens—decide to shape educational institutions.

It is my contention that *higher education*, imagined Sophistically, is an opportune

space in which to explore and develop rhetorical being for the benefit of the critical-

democratic values that most of us, hopefully, hold so dear. Of course, higher education

must test these values, question them, and evolve them in response to real yet contingent

conditions of existence. But that these values matter enough to warrant a central platform

in higher education is an assumption that has proved to be effective for the generations of

students who—as evidenced in this chapter—gain both the skills and affective attunements necessary to produce effects that are positive for critical-democratic growth.

In other words, is it not advantageous that students become *aware* of the entanglement of matter and meaning, that they become *engaged* with their learning, that they *encounter difference* in people that they must learn to respond ethically to, and that they *critically apply* their learning to the world? These are the effects focused on in this chapter which stem from an attunement to critical-democratic growth. These are the effects, on a larger scale, of cultivating rhetorical being in classrooms. I hope, then, that the Sophistic assumption about what higher education should look like, and what it should do, is a bit more warranted, a bit less obscure, and a bit more adaptable to real classroom spaces.

Here, I would like to briefly explicate why quantum rhetoric envisions higher education Sophistically—that is, why higher education is an opportune space for the cultivation of rhetorical being. Quantum rhetoric insists that higher education is precisely the space in which to both explore our assumptions and create opportunities to revise them. For this task, we need to lay bare the entanglement of matter and meaning—the spaces, communities, and artifacts which originate our ways of being. This is the condition for change and growth, for the (r)evolution in our responsivity. While quantum rhetoric transcends English-specific classrooms such as first-year writing and critical thinking, my experience and research in these spaces suggest that they are ripe for rhetorical growth. Their emphasis on critical thinking, reading, writing, and communicating makes them prime occasions to develop student capacities and responses

discussed herein. Let me discuss several reasons why higher education, and first-year writing and critical thinking courses in particular, are opportune spaces to develop rhetorical being, along with a few general rhetorical principles that have guided my approach to developing rhetorical being beyond autoethnography.

Andrew Stubbs (2007, 7) writes that "the classroom opens to uncertainty" in unique ways. Students from various backgrounds gather together, write and think together, sharing space and time in ways uncommon in other spheres. Here, they are expected to participate, to voice their opinions, weigh them against others, take positions, and communicate effectively. Such an emphasis only sharpens in writing and critical thinking courses, where students cannot "perform" well without some level of participation—without making themselves vulnerable to critique, without putting themselves on the line. The very arrangement, or architectural rhetoric, of the classroom space shapes the occasions. Students side-by-side, often in circles, turn their bodies to each other in discussion, face to face. For Levinas (2013, 70, 212, 195), this "face to face" encounter is the very *origin* of responsibility, and the relation which puts my subjectivity—and everything entangled in it—into question. The face to face, as "first signification," as revelation of the other, exposes the "non-postponable urgency" of response in ways that no other form of interaction can replicate (2013, 218, 212). The classroom opens this space of uncertain relationality which exists in "the surplus" of the Other, the one whom I cannot fully comprehend (2013, 217). In doing so, the classroom is positioned to cultivate rhetorical being—to shape responsible responses.

The historical presence and uses of rhetoric in these courses foregrounds the tenuous occasion for a unique relationality. Here, Stubbs (2007, 4) suggests that "we might formulate a kinship between rhetoric and uncertainty" conducive to change and growth. Yet, as I have argued in chapter 2, this kinship is generative of rhetoric itself, historically embedded in Sophistic practice. Therefore, to make use of the classroom's uncertainty and contingency—to seize an opportune time and space—one need not develop a kinship between rhetoric and uncertainty. Rather, one needs to make this always already present kinship productive for the cultivation of rhetorical being by taking uncertainty to task.

Quantum rhetoric treats classroom uncertainty and contingency as "opportunities for inquiry rather than as weaknesses to be cut" (Jung 2007, 45). We need only to index *inquiry* to the larger project of *rhetorical being* to align Jung's statement with quantum rhetoric. "Despite posing some obstacles to growth," Jacqueline McLeod Rogers (2007, 184) adds, "uncertainty can be viewed as a positive student characteristic—as an attitude constructive of learning." Uncertainty—or *ungroundedness* in quantum rhetoric's parlance—grounds the possibility of learning precisely because "a stance of self-consciousness rather than confidence is often intellectually [and affectively] appropriate to the process of sorting out old assumptions from fresh understandings" (Rogers 2007, 185). To unground that which cements seemingly intransigent confidence is the only route to asking questions to which one does not already assume the answers. *Ungroundedness*, in other words, rhetorically (re)configures learning.

To unground students, to "*actively work to discover and analyze hidden assumptions*," is the goal of rhetoric Sophistically understood (Jung 2007, 47). Quantum rhetoric—by inquiring into the material-discursive lifeworlds which give rise to assumptions—enables students to engage their assumptions not only intellectually, but also *affectively* through autoethnography: a process of bringing worlds to bear on interpretive frameworks. Yet how do teachers approach this work? Effective teachers, Robert S. Vuckovich (2007, 195) argues, do not "convey information to students but only helps students situate themselves in relation to knowledge." Quantum rhetoric expands this relation beyond knowledge to include the totality, or infinity, of lifeworlds which compose a student's reality, but the general point is sustained. Quantum rhetoric—poised at the juncture between matter and meaning, uncertainty and the necessity of action—is demonstrably prepared to situate students in relation to their worlds effectively, productively, and dynamically. That is, quantum rhetoric does not *tell*—does not explain—to students the effects and significance of their intra-acting lifeworlds. Rather, as I have discussed, quantum rhetoric provides the opportunities for students to show *themselves* the entanglement of their artifacts, stories, cultures, and meanings.

In the classroom, then, the teacher has the unique capacity to craft the already present uncertainty in ways which effectively situate students in relation to their lifeworlds: their assumptions, environments, cultures, and the like. I have argued that rhetoric, "as an uncertainty-generating instrument" that is much more than an instrument, complements and navigates the uncertainty already inherent in the classroom space (Vuckovich 2007, 208). Furthermore, the rhetorical use of autoethnography productively

shapes uncertainty into a critical learning environment that engages students with their ways of being, creating possibilities for growth and change. That is, autoethnography, like narrative (I discussed their differences earlier), helps students to be "responsive to change" (Rogers 2007, 186). It helps students "explore experiences that have influenced their attitudes toward reading and/or writing" (2007, 186). Ultimately, autoethnography facilitates students' understanding of their views and the capacity to change them, should they choose (2007, 186).

I want to stress here that in my view *writing* is central to the development and application of quantum rhetoric—whether autoethnography, narrative, or another form of writing. As I have argued, writing shapes cosmos from chaos. Writing makes sense of experience. But, equally well, writing shapes chaos from cosmos, uncertainty from confidence. The nature of writing is *change*, Stubbs (2007, 15) states. Naturally, a quantum rhetorician stops short of "nature." But, once again, the general point is sustained. Writing invites chaos. Writing sits with tension, undecidability, and conflict. Writing sculpts and hosts the rhetorical life, one "where speakers and listeners, writers and readers, are forever bound in a human struggle to communicate, to connect, and to endure conflicts with patience and nonviolence" (Jung 2007, 47). Writing gathers and presences rhetoric. And rhetoric cannot be present critically and democratically without writing not only as process and as geography, but also as begetter of rhetorical being.

However and wherever one decides to practice quantum rhetoric, I hope this chapter has made it clear that "our role [as teachers], and the larger role of the university, should be to urge students to question assumptions in the pursuit of a better society. This

often means making them uncomfortable and dealing with the concomitant resistance we

should see in their writing" (Thelin and Carse 2007, 170). Autoethnography, in

affectively presencing students' material-discursive worlds, can help turn students'

discomfort into opportunities for rhetorical growth. But it is the *university*—a unique

space of undecidability, difference, and discussion—that must embody the rhetorical life

if our critical-democratic values are to survive the tides of authoritarianism, hegemony,

the pursuit of sameness, and, more recently, the increasingly aggressive encroachment of

neoliberal rationality on the few critical-democratic spaces that remain.

Quantum Rhetoric vs. Neoliberal Rationality

Quantum rhetoric does not stop at an abstract notion of critical consciousness rooted in

rhetoricity and cultivated in the university. Instead, it contextualizes this consciousness in

terms of the neoliberal rationality which threatens its growth. Any present movement

toward critical consciousness comes up against a rationality which understands the world

as the "whole of producible objects" (Heidegger 1971, 11). That is to say that our

"market-driven discourse . . . is more than an economic theory" (Giroux 2011, 134).

Rather, it is a public pedagogy which imposes the market as the overbearing standard of

value. In its path, all things become "producible in the process of production" (Heidegger

1971, 114). The paralyzing market pedagogy, freed from regulation and concern for

social cost, subsumes the diverse capacities and values of its citizens in favor of

numerical growth (Giroux 2014b, 29, 17). The result is a market mechanism so all-

encompassing that even protest, such as the Occupy Wall Street Movement, is often seen

as the outcry of "defective and disqualified consumers" (qtd. in Zizek 2012, 60). From

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this angle, protestors perform "an expression of acquisitive desire violently enacted when unable to realize itself in the 'proper' way (by shopping)" (Zizek 2012, 60). Even protest, deprived of imagination, reproduces the conditions of production.

If neoliberal rationality—via Margaret Thatcher, Ronald Reagan, and company—presses the public to say, "there *is* no alternative" to market-driven life, quantum rhetoric answers with a different vision (qtd. in Brown 2015, 221). This vision is an advance toward a critical citizenry who "prioritizes civic values over commercial interests" (Giroux 2011, 137). Such is Giroux's (2011, 137) idea of the university:

> I am not claiming that public or higher education are free from corporate influence and dominant ideologies, but that such models of education, at best, provide the spaces and conditions for prioritizing civic values over commercial interests (i.e., they self-consciously educate future citizens capable of participating in and reproducing a democratic society). In spite of its present embattled status and contradictory roles, institutional schooling remains uniquely placed to prepare students to both understand and influence the larger educational forces that shape their lives.

This vision recognizes that the university is an ideological state (and corporate) apparatus, and as such is by no means a critical utopia. In fact, one of the reasons the question of the university is so pressing is precisely because of the neoliberal rationality infiltrating university spaces, as much of Giroux's recent work demonstrates. Nevertheless, inherent to the educational apparatus is the capacity to transform the state and the university itself, as Althusser illustrates (2014, 245):

> The class (or class alliance) in power cannot lay down the law in the ISAs as easily as it can in the (repressive) State apparatus, not only because the former ruling classes are able to retain strong positions there for a long time, but also because the resistance of the exploited classes is able to find means and occasions to express itself there, either by the utilization of their contradictions, or by conquering combat positions in them in struggle.

The university is of the state and in some sense for the state. Furthermore, the surrounding corporate and financial interests view "the university not as a place to think but as a place to prepare students to be competitive in the global market place" (Giroux 2014a, 17). Despite this pressure, critical thought can take root in the university, and its public mission, if safeguarded and evolved, can respond otherwise to these very forces which both permit and hold in abeyance its democratic capacity. That is, quantum rhetoric instantiates and replicates a university ecology critical of and responsive to the pressures which impinge upon its possibilities. University students, more than human capital, are the counter-hegemonies through which the state and university—implicated in each other—are rethought.

But if the state by and large is its citizens, which one can at least hope, then it matters a great deal what type of citizenry the university is preparing students for, and against what sociocultural backdrops they become citizens. Now, more than ever, the cries for responsibility beyond critique are clear: "This is the civilizational turning point that neoliberal rationality marks, its postpostmodernism and deep antihumanism, its surrender to a felt and lived condition of human impotence, unknowingness, failure, and irresponsibility" (Brown 2015, 222). This is the backdrop, the context, wherein our students become citizens. They cannot help but come up against a "ruthless market fundamentalism" which—against public space, thought, reason, and response—quite virally chants its mantra, "privatize or perish" (Giroux 2008, 84, 87). Coupled with a celebrity culture—which Donald Trump is epiphenomenal to—that "works in tandem with neoliberal values to represent extreme forms of solipsism and a cultivated

ignorance," the cry for critical deconstruction and reconstruction is deafening (Giroux 2017, 23). But this call lands on ears already deafened by an echo chamber of "paranoia, racism, and apocalyptic fantasies," to mention only a few of the misplaced and damaging responses to the "predatory neoliberalism that has decimated the welfare state, expanded the punishing state, and put into place an ethos in which everybody has to provide for themselves" (Giroux 2017, 150, 61). In other words, citizens are responding to the growing oppression of neoliberal hegemony. It's just that these responses escalate rather than ameliorate the problem.

Quantum rhetoric, therefore, does not approach critical citizenry from a purported distance—a view from nowhere. It strives for rhetorical being against a backdrop of deep-seeded dissatisfaction where "boundless beliefs in markets and deregulation" nevertheless continue to thwart the many attempts to live otherwise (Stedman Jones 2012, 6). Although cultivating rhetorical being would be no less essential without the neoliberal problem, it is all the more exigent because of it.

The same goes for cultivating rhetorical being in the university. In some way, universities and academies since the Sophists have always developed citizens capable of participating in and shaping democracy (as chapter 2 discusses in greater depth). In this sense, it is not the university's job to "endlessly chas[e] theory for its own sake" (Giroux 2014a, 17). Rather, the university must seek to reproduce the democratic enterprise from which it stems. The rise of neoliberalism necessitates this call now more than ever. What we need is "a Ministry of Disturbance, a regulated source of annoyance; a destroyer of routine; an underminer of complacency" (qtd. in Dewey 2004, 10). Quantum rhetoric is

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this disturbance. It can disturb and unground neoliberalism through cultivating rhetorical being in the university to the greatest extent possible. This form of being constitutes the response to the neoliberal regime, its dispossession of human worth, and its militant occupation of civic sites, institutions, and relationships. Through rhetorical being, quantum rhetoric protects against the dissolution of "the humanness of man and the thingness of things [into] the calculated market value of a market which not only spans the whole earth as a world market but also, as the will to will, trades in the nature of Being and thus subjects all beings to the trade of a calculation that dominates most tenaciously in those areas where there is no need of numbers" (Heidegger 1971, 114). Though the university cannot escape numbers, quantum rhetoric insists that their nature be incidental to and not constitutive of the university's mission and scope.

Place-based autoethnography is one small way to make numbers less essential. Ultimately, however, each teacher, administrator, citizen, and student must find their own ways to prioritize rhetorical being and the civic values it embodies over commercial interests. Each person must ask, *What is the university for?* Is its primary task to develop the next generation of producers and consumers? Is the university a career-generator, an oversized vocational school measured by students' job placement, income, and prestige? There is no doubt that these factors are here to stay. There is no doubt that an engineering student should be prepared to be an engineer. I am not making a radical claim. I am simply claiming that the university, Sophistically created, is still the most beneficial for its citizens when Sophistically perpetuated. I am only claiming that *rhetorical being* has always been, and should still be, its primary mission, its primary vocation.

CONCLUSION

REASON, RESONANCE, RHETORIC

In *Synchronicity,* Carl Jung (2010b, 69) writes, "We must remember that the rationalistic attitude of the West is not the only possible one and is not all-embracing, but is in many ways a prejudice and a bias that ought perhaps to be corrected." In *Dreams*, Jung (2010a, 164) writes that "[h]umanity, huddling behind the walls of its culture, believes it has escaped this experience [of the primordial psyche], until it succeeds in letting loose another orgy of bloodshed." Where has this primordial psyche gone? Was there a pre-rationality, or a supra-rationality, once in place of an epitomized, intellectualized Western subject? Jung (2010b, 73) cites 4th century BC Daoist philosopher Zhuang Zhou, who writes, "Outward hearing should not penetrate further than the ear; the intellect should not seek to lead a separate existence." Jung feels that the modern Western mind has done just this: separated body and mind, matter and spirit. And yet Wolfgang Pauli (2014, 95) reminds us in his letter to Jung, "as the alchemists correctly surmised, matter goes just as deep as the spirit." Cartesian rationality officially split body and mind, such that Foucault (2005, 309) finds in Descartes a moment—the "Cartesian moment"—wherein the *intellectualization of knowledge* occurs. Here, the intellect seeks to "lead a separate existence," to split the intellect entirely off from the ear, from listening, from spirit, affect, and resonance—from *rhetoric*.

Merleau-Ponty saw in this break between body and mind the break between body and science, as well. "By excluding our actually perceived environment," he thought, "modern science had lost touch with reality. What would science look like," he

wondered, "if it reintroduced the world as seen, heard, and felt?" (Canales 2015, 49). Yet long before Merleau-Ponty voiced his objections to modern scientific practice, Thoreau saw in science the devastation of living matter in favor of "objective" facts. Science books, he writes, portray animals as "dead matter," and fail to capture the "living creature" as the ancients did through fables (2009, 606). "In the modern account," he continues, "the fabulous part will be omitted, it is true, but the portrait of the real and living creature also" (2009, 607). "What sort of science," he asked years earlier, "is that which enriches the understanding, but robs the imagination?" (2009, 101). "The true man of science," Thoreau concludes, "will know nature better by his finer organization; he will smell, taste, see, hear, feel, better than other men. His will be a deeper and finer experience. We do not learn by inference and deduction and the application of mathematics to philosophy, but by direct intercourse and sympathy" (qtd. in Walls 1999, 6). Direct *intercourse* and *sympathy*. Therefore, when he claims that "[t]he highest that we can attain to is not Knowledge, but Sympathy with Intelligence," he does not mean that our highest virtue is Socratic irony: the acknowledgment of the *limit* of our intelligence (Thoreau 1980, 128). This is not principally what Thoreau means. Rather, we must have sympathy (affectability) *alongside* intelligence, growing congruently with it. Science, in turn, ought to reflect this highest virtue.

Thoreau saw modern science veering toward the inert, the stable, and the static over and against humankind's dynamic experience of the world. Science, to Thoreau, began "to study sound divorced from the ear which heard it. But to him the sound was only meaningful to the hearing ear, which must therefore be included in a description of

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the sound" (Baym 1965, 232). Emerson, Thoreau's friend and mentor, had tried to

"[bridge] the Cartesian dualism by returning to a pre-Newtonian vocabulary, thus

insisting that nature is designed for human perception and action, and that its only

meaningful description is in terms of human perception of it and responses to it" (Baym

1965, 231-2). Perception and response, listening and communicating, are the two halves

of rhetoric intimated here—two halves split no less in Cartesian, or we might say

Newtonian, rationality. Though Veit Erlmann (2014), in *Reason and Resonance*, shows

resonance (hearing, listening, aurality) to be essential to a more capacious rationality, as

Thoreau and others recognize, science veered toward reason as *vision*, as *reflection* of

facts through our retinas—the camera lenses which objectively record the world.

Except that this is not the case. The eye sees, yes. But through screens and filters,

as Burke observed. The ear hears, but only because it is shaken, vibrating with the

movement of world. Our senses, more than representing world, represent a *relation* to

world, one which Heidegger might be comfortable calling an *attitude*—from Latin *aptus*

(fit) and Italian *attitudine* (fitness, or posture), as in the placement of a piece of art.

Seeing and hearing, reason and resonance, are included in our posturing toward world—

our reflection, selection, and deflection of reality (Burke 1966, 45). The attitude attempts

to represent: "all attitudes, including the ways in which they shift, remain committed to

the precincts of representational thinking" (Heidegger 1971, 181). As William James

(1950a, 290) writes, "Each of us dichotomizes the Kosmos in a different place."

Attitudes, long engaged in the representational thinking of Newtonian science, classify

and divide, taxonomize and categorize, gradually tracing reality.

Except we have learned from Heidegger in chapter 4 that representational thinking does not bring us into the world, or bring the world to us in its presencing—in the fullness of its sights, sounds, facts, and relations. The presencing of world requires that we "step back from the thinking that merely represents—that is, explains—to the thinking that responds and recalls" (1971, 181). The shift from *explaining* (speaking) to *responding* and *recalling* (feeling, listening) is a rhetorical one. The addressivity and responsivity of rhetoric, intimated here, remind us of Heidegger's definition of rhetoric as "the art of listening" (Gross and Kemmann 2006, 3). Heidegger walked rightly toward a rhetoric more capacious than persuasion.

To read the yearnings of Thoreau, Erlmann, Heidegger, and others in the direction of resonance, one wonders how much effort it will take, how much more time it will take, to recover, renew, or produce anew the recognition of humankind's affectability. Were we to acknowledge the fact that "the power of a body to affect other bodies includes a 'corresponding and inseparable capacity' to be affected," as Deleuze well knew, how quickly would we unify reason and resonance—science and rhetoric (Bennett 2010, 21). Of course, one need not say that science is always already resonating, vibrating with human passions, biases, and commitments. As Paul Davies (2011, ix) writes,

> There is a popular misconception that science is an impersonal, dispassionate, and thoroughly objective enterprise. Whereas most other human activities are dominated by fashions, fads, and personalities, science is supposed to be constrained by agreed rules of procedure and rigorous tests. It is the results that count, not the people who produce them. This is, of course, manifest nonsense. Science is a people-driven activity like all human endeavor, and just as subject to fashion and whim. In this case fashion is set not so much by choice of subject matter, but the way scientists think about the world.

Science is always entangled in the human drama, driven by our terministic screens. This does not mean that our reports about the world are fiction. It means, Burke reminds us, that they are *selective* (Richard McKeon would say *architectonic*). Like art, science shows us something, but in a particular way, and from certain angles rather than others. Science has tried to move beyond the human through its instruments, standardization, and symbolic logic. Yet it has only brought the gravity of the human factor into focus. *We* are how we relate to world, and our apparatuses and technologies are extensions of that relation, effective as such, but poorly suited for transcendence.

To move beyond the false dichotomy of reason and resonance, to cease perceiving our affectability as *liability*, is to respond to Thoreau's call to (re)unite the body, mind, and science. It is to unify reason and resonance. And it is to, in doing so, reclaim the primordial psyche, the spirit in touch with (affected by), as Heidegger (1971, 149) writes, "a *primal* oneness [of] the four—earth and sky, divinities and mortals," which "belong together in one" as the most capacious relation to world. In some way, matter (earth and sky) unites with spirit or the sense of the sacred (divinities), and converges in mortals—ourselves. To move "beyond the life-matter binary"—which in many ways begins with the Cartesian moment—to attune ourselves to the world as *relation* between, among, and within (non)human assemblages, is not to cripple science and our other relations to world (Bennett 2010, 20). Rather, it is to both acknowledge and embody the fact that the *self*—no less than "*a heterogeneous assemblage*" of "memories, intentions, contentions, intestinal bacteria, eyeglasses, and blood sugar," no less than the "fundamental features of atomicity" which sustain difference in the same, no less than the "gift of language" and

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the "gift of interiority" which in part give meaning to matter—is not, nor should be, a detached and exact measure of the Real (Bennett 2010, 23; Bohr 2010, 63; Blanchot 2015, 110). "[A] self, every moment it exists, is in a process of becoming" (Kierkegaard 2004, 60). In this process of becoming, each being is "subject to the element of chance or contingency intrinsic to any encounter" (Bennett 2010, 22). Singularity, community, becoming, contingency, relationality—*this is subjectivity*.

Questions remain. What theory and practice best accounts for this becoming, given over to chance and contingency, yet navigated through reason and resonance? How do we best draw together earth, sky, divinities, and mortals into that "compliancy of simple oneness," wherein humans act but are also acted upon, sharing a "*distributive agency*" across dynamic lifeworlds (Heidegger 1971, 182; Bennett 2010, ix)? How do we "conceive of materiality in a relational, emergent, and contingent sense," and in so doing apprehend our own materiality and its consequence (Gries 2015, 61)? How do we fulfill Rilke's (2009, 222) poetic task to "imprint this temporary, perishable earth into ourselves so deeply, so painfully and passionately, that its essence can rise again, 'invisibly,' inside us?" That is, how do we give lasting meaning to material facts?

In venturing quantum rhetoric, I do not venture definitive answers to these questions. Like James Crosswhite (2013, 14), I wish "to prevent theory, to stay with philosophy in order to expand the question and deepen the sense of what is at stake." This does not mean, however, that quantum rhetoric has no response. All answers are responses, but not all responses are answers. In venturing quantum rhetoric, my response is provisional. It seeks to "deepen the sense of what is at stake," but in no stipulated, rigid

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decree. What is at stake is our relation to ourselves, each other, and the world. What is at stake is how we raise our next generation of students. Will we develop efficient consumers of texts, information, media, and procedures, thereby reproducing whatever the status quo may be? Or will we facilitate the development of free but deeply affected thinkers, feelers, and responders capable of generating and reproducing a substantive, participatory democracy inclusive of resonance *as* reason—as part of our rational, cultivated relation to world? To feel, listen, and speak well from an acknowledged affectability—this is the rhetor's life. To feel too much or think too slowly is allowed in the case of the rhetor, who brings the cosmos to bear on each occasion. Must the physicist and rhetor remain apart—one dwelling in worlds, one in words? At which juncture do language and matter fall together?

In deepening our sense of world, and our relation to it, we need not "revert to pre-Newtonian vocabulary" as Emerson did. We need only step forward into post-Newtonian quantum mechanics to see that our minds and bodies are one with world. We need not conceive the body as liability, as an interference with the perfect classical apparatuses mirroring world. We are part and parcel of earth, as Thoreau well knew, and so is science—our *relation* to it. As Jung (2010a, 188) writes, "That we are bound to earth does not mean that we cannot grow; on the contrary it is the *sine qua non* of growth. No noble, well grown tree every disowned its dark roots, for it grows not only upward but downward as well." There is no denying the primordial psyche or the affected mind and body from which we grow.

In this way, quantum rhetoric says, yes, "my global body is open, adrift. It slips, irreversibly, on the slope. Who am I? A vortex. A dispersal that comes undone. Yes, a singularity, singular" (Serres 2000, 37). But that we are adrift and open, slipping through contingencies, and entangled in our lifeworlds and communities does not deprive us of action. For though we cannot control our contingent world and those around us, we can *mediate* world. We can attend to our attention. And while it is true that "[t]he disaster alone holds mastery at a distance," that chaos may foil our intentions at every turn, this does not eradicate volition, but only expands and revises our "response-*ability*"—if and only if we attend to the real conditions of existence (Blanchot 1995, 9; Davis 2010, 2). Rhetoric and physics, appropriating Thomas Rickert's (2013, 90) language, are "mutually involved and evolving vectors of material and discursive force" whose imbrication navigates matter meaningfully.

Quantum rhetoric, in making the conditions of existence evident through physics, and in giving these conditions meaning through rhetoric, hopes to make visible the resonant, symbolic ground that is the inevitable condition of being human. Quantum rhetoric offers not a *way out* (*ausgang*) from our "*self-incurred tutelage*"—our failure to respond effectively to world out of laziness, cowardice, submission to authoritarian forces, or whatever the reason might be (Foucault 2010, 26). Rather, quantum rhetoric offers a *way in* to the rhetorical life. *Nearness* (resonance) trumps the trope of *distance* (reason). The move that quantum rhetoric makes is thus not principally outside, or away from. Quantum rhetoric, instead, *turns toward* the primordial psyche, the ear that hears, and the body that resonates in its fundamental atomicity.

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ENGLISH DEPARTMENT
APPLIED INTERMEDIATE COMPOSITION
THE CONSTRUCTION OF SELF, OTHERS, AND THE FUTURE

AN INTRODUCTION

"I am not claiming that public or higher education are free from corporate influence and dominant ideologies, but that such models of education, at best, provide the spaces and conditions for prioritizing civic values over commercial interests (i.e., they self-consciously educate future citizens capable of participating in and reproducing a democratic society). In spite of its present embattled status and contradictory roles, institutional schooling remains uniquely placed to prepare students to both understand and influence the larger educational forces that shape their lives." —Henry Giroux

Higher education, then, remains a uniquely *public* space to question the social forces that compete for our attention, our time, and, on the whole, our lives. The issue at hand, in this sense, *is* our livelihood in so many ways, as individuals, as citizens in a democratic society, and as human beings. The 20th century French philosopher Louis Althusser demonstrates in "Ideology and Ideological State Apparatuses" that the primary force of public education (or public *pedagogy*) had evolved from the church to the school apparatus. We might wonder if the primary force of public pedagogy today has once again moved from the school to the communications apparatus, to mass media. Accepting this proposal, this course will utilize critical reading, writing, and thinking in order to analyze the consequences and unexamined assumptions at the core of today's Western communications apparatus, involving, but not excluded to, social media, television, internet, and especially advertising and marketing on the whole. We will read and write about articles within this framework, examining what is at stake in this international pedagogical shift. Here we will use *Brave New World* to see where such a future might lie, all with the hope that we *can* and *will* have a significant role in creating an alternate future of our critical choosing.

REQUIRED MATERIALS

- *Signs of Life in the USA,* Maasik & Solomon (7th Edition)
- *Brave New World*, Aldous Huxley (1998: ISBN: 9780060929879)
- *iLearn Materials* assigned throughout the course

MAIN OBJECTIVES

- To engage each other in lively discussions which unearth diverse points of view
- To investigate societies, customs, codes, languages, and ideologies influencing us
- To analyze and evaluate our positions within societies through texts and writing

- To develop a picture of our evolution of literacy, individuality, and socialization
- To deconstruct and reconstruct our social and literate realities with critical minds

COURSE ACTIVITIES

Participation & Attendance: We are here to *discuss* ways of effective communication. Interactivity depends on you! So speak up! And don't hesitate to ask questions of any kind at any time.

Reading Assignments: Let's face it: reading requires motivation, and these short, in-classes quizzes and take-home reading questions will test you on core ideas and prepare you for assignments.

Essays & Final: This class requires you to write **3 essays** of increasing sophistication and length, including a **midterm** and **final**, to be discussed. All essays will be graded on the basis of how well they meet the requirements of the assignment; the final essay is to be turned in via **Safe Assignment** on iLearn. Papers will need to meet the standards of written English and be free of significant grammatical and structural errors. More importantly, they must demonstrate a critical capacity to interact with and contribute to the course material.

Peer Workshops: You will be responding to students' papers anonymously and in peer groups. Any written responses and self-evaluations will be turned in with the final draft of each paper. Not attending a workshop will lower your essay's grade by **5%**. Missing 1 document will result in a **5%** drop in your essay's grade, 2 or more documents in a **10% drop**. Stay organized and be prepared!

Portfolio & Artifacts: The portfolio will be a collection mainly of four **cultural artifacts** (see handout online) and the **autoethnography**, as well as a **cover page** and dear reader **letter**, which will illustrate the evolution of your critical reading, writing, and thinking abilities throughout the course.

Formatting: Follow the MLA System of Documentation found on pages 709-730 of *The St. Martin's Guide*, if you have it. See 731-738 for an example final draft. Failure to meet these requirements will result in grade penalties. Alternatively, the *Purdue Owl MLA* site addresses all formatting needs.

BASIC EXPECTATIONS

- **Participation** – All students, not a mere few, must regularly participate during class discussions for full credit so that our environment remains interactive and elucidating.

- o **Attendance** – Your **4th** and subsequent absences will result in eternal damnation, or 10% off your entire grade *per absence*—your choice. All *emergencies* are included as absences!
- o **Late Arrivals** – Two late arrivals count as *one* absence; being that you only have *three* absences total, be sure to be on time! Lateness also affects performance and participation.
- o **Peer Feedback** – As your professor I will offer every insight, suggestion, and accolade I can muster on your writing. I expect the same from you as a *reader* of others' works.
- o **Materials** – This class requires textbooks as well as other materials you will print out and bring to class. Most importantly, bring a *well-developed draft* to the peer workshop.
- o **Late Work** – Assignments are due at the *beginning* of class. There are *no exceptions* besides documented reasons, like the spontaneous combustion of your house or loved ones.
- o **Academic Honesty** – Plagiarism will result in a *failing grade* on your work or in the course. Plagiarism is quoting or stating someone else's ideas or work without proper citation.
- o **Courtesy** – No gadgets, side-conversations, doing homework, sleeping, drumming, eating or drinking except for water, or planning trips to the Caribbean or other exotic destinations.

GRADE BREAKDOWN

Main Assignments:

Participation (and in class assignments)	10%
Reading Assignments & Quizzes	20%
Midterm	20%
Autoethnography	25%
Final Portfolio	10%
Final Exam	15%

Grading Scale:

94 - 100%	A	70 - 73%	C-
90 - 93%	A-	67 - 69%	D+
87 - 89%	B+	64 - 66%	D
84 - 86%	B	60 - 63%	D-
80 - 83%	B-	< 60%	F
77 - 79%	C+		
74 - 76%	C		

TIPS & RESOURCES

- **Office Hours:** If you struggle at any point or have *particular needs*, contact or visit me during office hours. I am here to help and am more than willing to answer questions and review your writing.
- **E-mail & iLearn:** It is a college-wide policy *to check your school e-mail at least once a day* as you will be notified of changes and messages via e-mail. I will post documents, links, PowerPoints, and readings on iLearn, so check the site for updates and assignments.
- **Conduct:** If you have questions on the conduct expected of you at the university, including matters of personal conduct, professionalism, and behavior, see *http://conduct.ucr.edu*.
- **Special Needs:** If you need an accommodation based on the impact of a physical, psychiatric/emotional, medical, or learning disability, you should contact Student Special Services: *http://specialservices.ucr.edu*.
- **Academic Resource Center**: If you feel you need *additional help* outside of class to overcome any obstacles, please speak with me immediately, make regular use of office hours, and consult with a tutor in the Academic Resource Center: *http://arc.ucr.edu*.
- **Just Start Writing:** If you are stuck on an assignment and do not know what to say, just start writing. Write anything. Sometimes just *freewriting* helps the mind generate ideas.
- **Prewrite First:** Before you begin a paper, *think* about it a lot! Think about it while driving, walking, or doing *anything*. Then draft an outline to ease the writing process and the blinking cursor!

TENTATIVE COURSE SCHEDULE

*Please **check your campus email every day** to remain current.*
This schedule may change based on the needs of the class.

Week 1:   4/3   T   **Introduction**; Syllabus Review

               4/5   R   **Video Due:** *Stanford* (iL)
                                      Reading Due: *SOL* 542-52 (Solomon)
                                      In Class: Response & Discussion

Week 2:   4/10 T   **Reading Due:** *SOL* 227-45 (Corbett)
                                        Reading Due: *Thoreau "Walking"* (iL)
                                      In Class: Response & Discussion

               4/12 R   **Reading Due:** *Thoreau "Walking"* (iL)
                                        Reading Due: *Heidegger* (iL)
                                        In Class: Response & Discussion

Week 3:   4/17 T   **Reading Due:** *Althusser* (iL)
                                        In Class: Discussion & Response

               4/19 R   **Reading Due:** *Althusser* (iL)
                                        Reading Due: *BNW* Chapters 1-6

Week 4:   4/24 T   **Reading Due:** *Zizek* (iL)
                                        Writing Due: Artifact One
                                        In Class: Discussion & Response

               4/26 R   **Reading Due:** *Foucault* (iL)
                                        In Class: *Into the Wild* Intro

Week 5:   5/1   T   **Reading Due:** *BNW* Chapters 7-12
                                        In Class: Response & Discussion
                                        In Class: Midterm Preview

               5/3   R   **Reading Due:** *Kirby* (iL)
                                        Writing Due: Artifact Two

Week 6:	5/8	T	**Reading Due**: *Taleb* (iL)
			Writing Due: *Gee* Questions (iL)
			Writing Due: *Into the Wild* Notes
	5/10	R	**Midterm Essay**

Week 7:	5/15	T	**Reading Due:** *Bachelard* (iL)
			In Class: Autoethnography Intro
			In Class: Prewriting & Drafting
	5/17	R	**Reading Due:** *BNW* Chapters 13-18
			In Class: Response & Discussion

Week 8:	5/22	T	**Reading Due:** *Elbow* (iL)
			In Class: Essay Drafting
			In Class: Styling Sentences
	5/24	R	**Reading Due:** *STEM Article* (iL)
			Writing Due: Artifact Three
			In Class: Science/Philosophy Debate

Week 9:	5/29	T	**Reading Due:** *SOL* 667-71 (Algranati)
			In Class: Discussion & Response
			In Class: Final Preview
	5/31	R	**Reading Due:** *Davis* (iL)
			In Class: Discussion & Response

Week 10:	6/5	T	**Reading Due:** *Shor & Giroux* (iL)
			In Class: Discussion & Response
			Peer Review Autoethnography
	6/7	R	**Writing Due: Everything**
			In Class: Final Exam

| **Finals Week:** | 6/12 | T | **Evaluation Consultations** |

APPENDIX B

A Portfolio of Your (R)evolution

Format

- **A thin, ringless, paper or plastic folder** for all materials to be placed inside
- **An original cover page** that gives a name to your exhibition, has your picture, and includes your name, class name, my name, and date
- **A Dear Reader letter** (not more than 2 single-spaced pages) that explains to the reader what he or she is about to see and read and what it means to you in any format you like
- **A Table of Contents** titling everything included in the folder in order (page numbers unnecessary)
- **Autoethnography** rough & final drafts appearing first after the table of contents
- **Five cultural artifacts** placed after the autoethnography, one page for each artifact constituted of a half-page image of the artifact and a half-page single-spaced reflection on how it has shaped your individuality and/or socialized you while incorporating class concepts and terms into the analysis
- **Organization:** cover—letter—table of contents—autoethnography final draft—first draft—peer review sheet(s)—cultural artifacts (*final* then *first* draft for each, if more than one draft)

Grading Schema

While not at all an exhaustive rubric, this schema will give you an idea of the rather holistic method I use to grade these portfolios so that you can organize your creativity accordingly.

	A	B	C	D-F
Academic Style	Formal, precise, fair-minded, and idea-oriented.	Fairly formal and precise, may be less idea-oriented.	Informal, vague, may not center around the issues.	Highly informal, convoluted, and confusing.
Completeness	Four artifacts with excellent analysis.	Four artifacts with good analysis.	Short of artifacts with perhaps limited analysis.	Few artifacts with short or immature analysis.

Intellectual Depth	Masterfully and critically reflects on one's own socialization and individuality.	Reflects somewhat critically on one's own socialization and individuality.	Lacks critical development of intellectual and personal connections.	Reflects very little on socialization and individuality in analysis and commentary.
Idea Synthesis	Connects class ideas and concepts to personal reflection with impressive critical thought.	Connects class ideas to personal reflection well, but may lack in some critical thought.	Class ideas and personal connections are divided, synthesis being weak or unrecognized.	Class ideas and concepts are not connected to personal reflection and analysis.
Organization	Follows instructions and format, is neat and organized.	Follows most instructions, may need better organization.	Follows some directions, may be disorganized and difficult to follow.	Does not follow directions, is lacking in organization and neatness.

APPENDIX C

Dear Reader Letter

Dear Reader,

In the following pages, you will see my attempt of trying to analyze my socialization. I say *attempt* because it does not do justice in covering all aspects of my socialization. In order to fully do justice to that, I would need a lot more time than I was given in this course. These assignments are only a small slice of my identity; however, even this small slice was hard to write. I did not think it would be difficult for me to write about myself, but it was. This is especially so for the artifacts. Prior to taking this course, I did not think that a single object could influence my life, much less my identity, in such a huge way. Then again, I was exposed to a lot of revolutionizing concepts throughout the course.

My initial response to hearing the class syllabus was "oh boy, this is going to be a lot of work." My initial response was correct. I did not think that the assignments and readings themselves were a lot of work, but it was how much I was required to think that caused the headaches. Some of the concepts presented in this class were hard to grasp, and there were so many concepts that I did not think I was going to be able to remember all of them. However, without me even realizing it, these concepts and terms became etched into my brain, especially Heidegger. I began to look at society through a different lens and started to analyze every advertisement I saw. Even though I was previously aware of some of the issues that were discussed in this course, the course presented these issues through ideas that I had never even considered. This class has promoted me to think more about my socialization and how multiple forces have combined to produce who I am today. Through these assignments, I was able to think critically about these multiple forces, and thus take a more active role in navigating reality and discourse.

These assignments have allowed me to better understand myself. I have evolved from thinking that I have complete control over who I am to understanding that I have been influenced by everyone I have met, my education, and my surroundings. In the end, I don't mind that this class and portfolio were difficult to get through. This portfolio is something that I am actually quite proud to showcase because it represents my transformation throughout this course and my ability to become a more critical thinker, as well as a more critical actor in society.

Sincerely,
Jane Doe

APPENDIX D

The Cultural Artifact

What is it in General?

- A printed *image* of something from your past that has played a role in your socialization.
- Represents a piece of yourself, perhaps relating to your hobbies, career goals, education, etc.
- Allows the viewer of the artifact to know something about you by the image and critical reflection.

What is it Physically?

- Can be a *picture* of a book cover, film, album, toy, game, musical instrument, etc.
- A picture of an *object*, and not a picture of an entire environment, place, or person.
- Can be a whole printed page, or just a *half-page* with the *half-page* reflection below it.

What is the Reflection?

- **Length** – A *half-page* or more summary and reflection of *what* the artifact is, *what* it means to you in terms of your development/socialization, and *how* it ties in with class themes, issues, and terms.
- **Terms** – Should utilize at least *two* class key terms or concepts in each reflection that tie into the object's cultural and developmental meanings to you, thus relating to basic class themes.
- **Format** – Should be *single-spaced*, typical *12-point font*, and in *formal academic writing* that is not so much conversational as it is reflective, sincere, intelligent, and proofread.

What's the Point?

- To get you thinking critically about the composition of yourself, as "critical thinking" is the theme of this class and requires you to understand the factors of individual development.
- To point out some aspects of how you were raised, how you discovered hobbies or interests, how you grew to *internalize* various viewpoints and values, and it will thus be a window into the "self."

What Will it Accomplish?

After each reflection, it should become clearer to you how you were and are socialized, which will help you understand that each individual is composed by a variety of factors which constantly evolve us in terms of our surroundings. With a better understanding of such socialization, we can better place ourselves in the shoes of others to think critically about *their* socialization, viewpoints, and traditions. Essentially, we are, in part, seeking to understand ourselves better to improve interactions with other individuals and societies who will have a variety of conflicting ideologies and come from different material-discursive worlds.

When and How is it Due?

- ◆ **When** – Drafts are due in class, specified on the schedule, and all together in the final portfolio.
- ◆ **How** – In your *portfolio* (see handout), with other documents, as discussed.
- ◆ **Questions** – While I have tried to cover everything, I welcome further questions via email or in class!

Cultural Artifact #2

As a kid, for some odd reason, I had some sort of complexity in my behavior where I would always create a weekly schedule for every single little thing I did (which this behavior did not disappear until the beginning of junior high). Every single week, I would create a schedule that included eating, sleeping, homework, cleaning, free time, chores, and whatever else that was going on that week. Surprisingly, this schedule was insanely complex and detailed as far as a child's mind can go, but because it was so detailed and accurately pinpointed in terms of timing and strictness, I would freak out if the schedule wasn't followed because of some random occurrence or something out of my control would happen. Even though I still don't know what caused this behavior to occur in the first place, I could definitely see the after-effects of being so meticulous and training myself to be clean-cut in everything I did, which was unhealthy and unsustainable.

Referring to Taleb, my ideal day-by-day routine was one that had no random occurrences, no unfortunate events, and predicted cost-and-benefit activities that I could see the end of to its fullest. Even after that whole phase of writing and planning out a weekly schedule ended, the desire to have everything "settled" or predictable in my eyes was straining on my ideals and behavior; if everything wasn't perfect or as organized as I wanted it to be, it wasn't the "best" day I could've had; there was always some day that was going to be better than the last (as an aside, the man I was back then is nothing like

the man I am today thankfully, but I couldn't have been like this without this experience). Striving for ideal days of perfection and no hassles or worries made me fragile; I couldn't adapt to the changes that came my way, and I always tried to predict the unpredictable which as Taleb would put it, isn't possible. If my friends couldn't hang out a certain day, some test completely ruined my self-esteem, or some argument or misfortune came my way, it would make my day bad regardless of all the other positive aspects of the day. I was susceptible to change; and these Black Swans, little or large, would sometimes lead me to worry or stress where I would end up relying on others for comfort, advice, or compensation for the day's misfortunes. As Foucault would say, this condition of tutelage developed due to the fear that those random or misfortunate events in my life would never disappear, where my days wouldn't be great or perfect because of them. If a test came my way that was hard, I would worry to where I would rely on others for knowledge or confirmation of my own knowledge, regardless of if I truly knew it or not. If I liked a girl, I wouldn't go with my own initial thoughts or actions but rather would go to my friends or classmates for their advice simply because I developed a fragile attitude; my own knowledge or actions weren't good enough to make my life great, so relying on others to do that for me became my go-to. But even with my paraskeue (equipment), nothing could've helped me prepare for these events.

Through college and simply experiencing life, I've learned to become antifragile to random events, learning from experiences (positive or negative) and getting back up from the ground. Rather than trying to prevent or soak up events or occurrences out of my control, I learned to accept them and see the best that can come out of them. I can't predict random events, and I can't see into the future; but I definitely can get back up. If I fail a test, that's unfortunate, but being antifragile means I can recover from that test, study harder, and do better next time. For my life, there's always going to be good and bad days, but I can see the positives and rejoice in them rather than focusing on the negatives and wallowing in the imperfection of life. Life's not fun with perfection, but rather imperfection. I don't have to be perfect or knowledgeable for me to benefit from random events, and there's always positives in a day that doesn't seem like it has much to offer. And I have to say, I'm much more content with my life regardless of what has come my way and what will come my way.

APPENDIX F

The Autoethnography: Reflections on Self & Reality

Overview

Select a discourse community that has its own culture, customs, rituals, expectations, and perhaps its own language or dialect. *Create* this discourse for the reader with vivid images. Show us what this discourse is all about perhaps with a narrative-like structure. But more than a simple narrative, the autoethnography selects and illustrates scenes that clarify and portray *larger issues* beyond the narrative itself, issues like *individuality* and *socialization*. You will also *describe and analyze* how this discourse has really shaped you. How has it contributed to your identity, your character, and even your goals and aspirations? Dig deep. Then dig deeper. Meditate, introspect, transcend a narrow lens and unearth how this discourse community has played a significant role in your individual and cultural evolution. The format you use to create and reflect on this discourse is a choice you will make on your own.

To clarify, you are being asked, as would be done within any ethnography, to observe someone (in this case yourself) inside a culture, to record what you see, and to hypothesize about meaning and understanding just as all the researchers and writers whom we have read have done. What does it all mean, so to speak? Be honest, detailed, expressive, and intellectual. You are establishing your own identity in the discourse community and sharing this identity with your reader.

You are Evaluated On

- o Your creation of this discourse community and personal reality through attention to important artifacts, rituals, customs, traditions, languages, and respective realities.
- o The depth of your critical analysis in how this discourse has shaped you, *incorporating key class themes, terms, and perspectives* that relate to your own experience, or relate to how you have re-experienced this community.
- o Your honesty and vulnerability with the reader. In other words, your attempt to be personal, divulging, and expressive with your inner thoughts, feelings, and realizations.
- o Your formal and academic writing style. Connect with your voice, but with professionalism, taking class readings as samples.
- o Your careful organization of the aforementioned through development of points, ideas, emotions, experiences, and the like, so that your paper is a thoughtful and well-structured account of this discourse community and its effect on you, thus flowing from one idea to the next in a sequence which effectively guides the reader through your evolution.

- o Your basic **MLA** style formatting, grammar, and mechanics, at least **8-10 pages**. **No works cited page** is necessary, but you must refer in detail to **4-5 course readings**, utilizing **5-8 key terms or concepts** from course material/discussions to fully develop your paper.

Helpful Suggestions

- o Think about your paper A LOT before writing anything down, *while driving, showering, walking to class*, etc. Get ideas flowing so that you come to the screen prepared.
- o Prewrite for at least 20 minutes on what this paper is going to be, what it's supposed to be doing. Outline, freewrite, list points, and finally begin your physical draft.
- o Do not worry about grammar and mechanics until the end, and do not attempt to organize everything perfectly at the beginning. Simply begin developing your ideas.

Jane Doe

Professor Leack

Critical Thinking

10 March 2016

Autoethnography: The Rise of My Feminist Views

While most children were sleeping in on Saturday mornings or watching early morning cartoons – Rugrats, Tom and Jerry, Recess – I was waking up at 7 in the morning to the sound of banda music and the smell of Pine-Sol. My mom, singing to the top of her lungs, would be my alarm clock. My older sister and I would stomp out of our room and peep into the living room where my mom would have buckets and rags lined up for us. We didn't even have to argue over who was going to clean what, we just grabbed a rag and bucket and dispersed around the house. A few hours later, drenched in dirty water and Windex, my mom, sister, and I would get cleaned up and start making breakfast for my dad and brothers. While mixing eggs with chorizo, my mom would sit me down on the countertop and tell me stories about her growing up in Mexico. It would always start with my grandma teaching her how to cook classic Mexican dishes like arroz con pollo and posole when she was a little girl and transition to how she got married to my dad at the age of fourteen. She looked down at me said she had always been a typical Mexican girl: learning domestic duties as a child, marrying young, moving to the United States, and being a housewife summed up her life.

The combination of these Saturday morning cleaning routines and my mom's stories about a "normal" Mexican girl began to make me feel as if my future was already determined. Thinking that it was expected of me to grow up to be a good housewife, I became obsessed with anything that glorified the domestic life. I glued myself to the television as advertisements for toy kitchens and doll houses came on. There was even one Christmas where all I wanted was a Kitchen Littles toy. The toy refrigerator dispersed fake ice cubes, the oven light actually turned on, and the little girls in the commercial looked so happy while playing with it. It was always girls using the toy kitchens and doll houses in the commercials, so I thought that my mom was right: it is a woman's job to clean. Seeing it so much, I didn't even bother questioning it. I was what Ira Shor would call an intransitive thinker. I did not question why women were the ones who had to do the housework or think I should question it. I just thought that was the way things were and left it at that. The main reason I did not question it is because I looked up to my mom. Like many young girls, I wanted to grow up and be just like her. I loved everything about her: her curly hair, the way she held me when I cried, how she was always happy and smiling.

It was not until I was nine years old that my original image of my mom began to change. It began one night when I woke up around midnight. All I could hear was shouting coming from my parents' room. I looked next to me to see if my older sister was awake too, but I couldn't tell since she had the comforter over her head. The paper walls that separated their room from ours were not enough to isolate their arguing. They were talking too fast for me to catch everything they were saying, but I could hear my mom

repeating the words "cheater," "cabron," and "te voy dejar" over and over again. An hour later I was drifting back to sleep and jumped awake to the sound of slamming and things being thrown around. The next morning my mom was wearing sunglasses that were not big enough to conceal her swollen eye and bruised cheek. It was at that moment that I began to realize the world was not as simple as my mom had depicted; it was more complicated than getting married, having kids, and living happily ever after.

I admit that I was never close with my dad. I desperately wished to be the daddy's girl that would run into her dad's arms when he came from work. This, unfortunately, was not the case. My dad would just come home from work, tell me hi, grab a beer from the fridge, and then go to his room and lock the door behind him. This kind of relationship with my dad went on for years. It was years of him forgetting my birthday, years of him never coming to any of my school award ceremonies, years of him barely saying a word to me. I automatically clung more to my mom as a result. So when I saw my mom with a huge bruise on her eye, the image automatically scarred me. What scarred me even more was that the bruise on her eye was not a one-time thing. There were countless nights where I would wake up to their shouting. Soon enough, their arguing escalated and began to happen multiple times throughout the day.

My dad never cared about who was around when he yelled at my mom. He's the stubborn and dramatic type that likes to make a statement in front of other relatives, in front of his kids, and in front of strangers. I repeatedly had to watch as he would shout at my mom and call her stupid. After a while, my mom stopped arguing back and let him say whatever he wanted. She didn't cry or defend herself, she just sat there silent. One

night after my parents had gotten into another argument, my mom said she was going for a drive. She asked me if I wanted to go with her and I automatically jumped into her white Dodge Durango. I was in the back seat and occasionally tried to get a glimpse of my mom's face through the rear view mirror. We just drove in circles around our neighborhood. We passed by my aunt's house, my school, my friend's house, my aunt's house again, and my school again. She didn't say anything to me the entire time, not even when I asked her questions. I looked at the clock and saw it was eleven thirty; we had been driving for forty minutes. We had just passed my school again when she pulled over and started frantically crying. I felt like she had forgotten I was even there because I had never seen her cry like that before. She kept wailing and asking God, "why?"

I did not know what to say and I did not think there was anything that I could have said to make the situation better. Seeing her crying like that made a whole series of questions run through my head: Why was my dad always mad? Why didn't anyone stop him when he yelled at her? Why did he hit her? At the time, I didn't have the answers to any of these questions, but I did know that my mom didn't deserve to be treated that way. The abuse and violence happened over and over again as I was growing up. I thought it would get better after a certain period of time, but it seemed to only get worse. My mom always threatened to leave my dad; however, she never did. In the beginning, I thought the reason she didn't was because she was scared and still loved him. After a few more years, I thought about how leaving might not have been an option for her. She never finished middle school and knew limited English, so it would have been difficult for her to find a good enough job that would support her. Or perhaps she just threatened to leave

in the attempt that it would scare him enough to change his habits, which did not happen. Either way, she stayed and put up with the verbal, physical, and emotional abuse that now summed up her life.

I was about thirteen years old when I realized that the reason my mom told me her stories about growing up in Mexico was not because she wanted me to be a typical Mexican girl like her, but because it was what she did not want for me. It was with this realization that I further questioned everything that was going on at home. I began thinking about why things were the way they were. What other forces were involved? As a little girl, I had to just accept everything that was happening to my mom. I accepted it in the sense that I thought that there was not anything that I could do to make it better. Now that I was getting older, I knew that I wanted to do something to help. Every little experience that involved my parents was slowly shaping me to realize that there was something wrong with their relationship and society. It was shaping me to develop a critical discourse for the way people view different binaries: male vs. female, right vs. wrong, acceptable vs. unacceptable. Ever since I was a little girl waking up to the smell of Pine-Sol while the guys in my family slept in and relaxed, I was being socialized into this grand narrative of male supremacy. It was acceptable for men to dominate women, it was right for women to do all the housework, it was the men that controlled the women. I did not want any part of it.

When I realized the true intentions behind my mom's Mexico stories is also around the same time that my dad decided to open up his own bar business. It had always been his dream to open up his own bar. He basically wanted to be a consumerist in a

capitalist world. He thought he would be living the American Dream by owning his own

business and making a lot of money. My mom would always try dragging my sister and

me with her to clean up the bar. I would whine about not wanting to go. I wasn't being

lazy or rude, I was just against the idea of the girls having to be the ones to clean. I

eventually decided to go because my mom was pregnant and I did not want her crouching

around and cleaning like a slave. We got to the bar and entered through the front door

instead of through the back door like we usually do. When we entered, we saw my dad

sitting down at a table with another woman and her son. My dad had a Corona beer next

to him and was playing Hot Wheels with the woman's son. The woman was sitting beside

my dad and had one hand on his lap. My mom's face did not look so much surprised as it

did disappointed. It dawned on me that all those fights when I was a child were about

things just like this. My mom had never done anything wrong to deserve being treated so

badly and seeing my dad with this other woman proved it.

     As I was waiting in the bar parking lot, I tried not to cry as my dad yelled and my

mom held back tears. Once again, my dad was the one in charge and it was my "mom's

fault." Seeing my mom in this state (pregnant and defenseless) made me come to another

realization: that I no longer wanted to grow up and be like my mom. I mean this in the

sense that I did not want to accept the patriarchal ideologies that have frame our society.

Ever since I was little, these ideologies were all I was exposed to. It is the women who

clean the house and cook for the men, it is the women who stay home and take care of the

kids while the men go out and provide for the family, it is the women who must listen to

the men. Women are always placed inferior to men and something about it did not feel

right to me. If all these things were "right," then why did they make my mom feel worthless? I witnessed how these patriarchal ideologies negatively influenced my mom to the point where she felt like she no longer had a voice. She just accepted her inferior position in silence. Watching this, I learned from an early age that there was something wrong with the way that society is organized.

The older I got, the more my experiences at home were persuading me to want to combat patriarchy and the gender roles that came with it. It was from my family discourse that I gained my feminist views. When most people think of feminism, they automatically think anti-male. This is not what feminism is about; it is about gaining the critical discourse required to be able to look at deeper issues in our society. I am not anti-male; I just think men are players in a larger system. I don't hate my dad either. Although I do resent some of the things that he has done, I know deep down that he is not a bad guy. Once I was in high school, my mom actually vented to me and told me stories different from the ones she told me as a child. These stories were about how different my dad used to be. She said that he was once caring and made her feel loved every day. It was not only some time after moving to the United States that he began to change. I asked her what it was that made him change but she couldn't give me a response beyond "I don't know." My mom venting to me gave me a better sense of how she was truly feeling. She told me how she hated feeling abused, worthless, and trapped. However, I knew she would never tell my dad how she was feeling. Seeing my mom hurt over and over was sealed into my mind. In the article "The House from Cellar to Garret," Bachelard states, "For our house is our corner of the world. As has often been said, it is

our first universe, a real cosmos in every sense of the world" (4). My house was my first

universe and in this universe, I was exposed to violence and socially accepted ideas of

patriarchy and gender roles. From the beginning, I saw the negative effects of these

socially accepted deceptions. My feminist views began in the home and these views

shaped not only how I see my "corner of the world," but how I see the whole world. I

saw my mom get abused, stay silent, and get yelled at. My corner of the world influenced

me to want to make more people aware of women's inferior position in society and to

justify why it is wrong. The gender roles that are prevalent today categorize gender,

where men are put higher than women. As a result, women get abused and degraded. I

don't want to stay silent like my mom. Instead, I want to use my desocialized thinking to

change society's perception of gender.

From my primary discourse, I have learned about multiple problems in our

society. I identified and thought about these problems at an age where most kids do not

even want to think beyond what they were going to eat that evening. My home did not

socialize me into feminism in the same way that a person who is born into a sports-

centered family is socialized into loving sports. Rather it is from my family that I was

exposed to issues that lead to me becoming a feminist. By being a feminist, I have also

become more of a critically conscious person. My feminist views towards the world can

be summarized by the following quote:

Society is a human creation, which we can know and transform, not a mysterious

whirl of events beyond understanding or intervention. The various parts of society

affect each other, even though not all people have the same power to make laws,

policies, trends, mass media, and income. Elite groups wield dominant power and

wealth, but nonelite sectors can organize to change power relations. (Shor 128)

I am not part of the elite that has control over large political issues. However, that does

not mean that I cannot do something to change society's view of gender and all the other

topics that intersect with it such as politics, race, etc. Because my feminist views started

from an early age, I have become very passionate about feminism and want to use it to

reshape society. Some might question why I chose liberal studies as my major when

applying to college when I could have chosen something more "feminist-oriented" like

women's studies or sustainability studies. It was actually a hard choice since I have

always been drawn to teaching, but I also have strong feminist views. I ended up

choosing liberal studies because I wanted to make an impact on people when they are

younger. It is harder for people to become exposed to these kinds of radical ideas when

they are older because they've been socialized into accepting patriarchy and gender roles.

By reaching a younger audience, I will be able to influence a whole new generation of

people who will be able to question society instead of just accepting it.

Looking back at my childhood and family, it goes without saying that my home

was not a nest of solitude. There was too much negativity, which has caused all my bad

memories to cloud all the good ones. However, at some level, I am glad that I

experienced everything that I did. It revealed things to me about society that other people

do not get exposed to until they are older. Even though I decided that the age of thirteen

that I did not want to be like my mom, I cannot deny the fact that I am like her. I am

strong like she is. Like her, I am aware that there are problems in this world. While

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stayed silent about these problems, I will not. With these feminist views, I want to be the

voice that my mom thought she never had. She deserves that, I deserve that, and all

women deserve that.

APPENDIX H

Autoethnography First Draft Response

Writer's Nickname:
Reader's Nickname:

Directions:

Read the draft completely before responding. Respond honestly and critically but with courtesy. This exercise will help you become a more informed critic of your own writing and writing in general.

1. How would you describe your initial response to this essay? Begin, "As a reader, I . . ."

2. What was interesting and effective about this paper? What needs development?

3. Are there enough details and descriptions to illustrate the writer's discourse community effectively, and where might the writer add further details?

4. How well does the writer tie in class concepts and terms into the paper? Where might more of this content be needed to make the class connections?