MADE UP MINDS: RHETORICAL INVENTION AND THE THINKING SELF IN PUBLIC CULTURE

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As an abstraction that identifies the inner thinking self, the mind is a powerful resource for rhetorical invention, enabling both the generation of discourse and epistemic sense-making. This dissertation provides insight into the discursive life of "the mind," examining how different instantiations of the concept were put to rhetorical use in three specific historical cases. In each case study, I examine a conception of the mind that originated in the realm of institutional science and that made its way into public culture, often circuitously, and frequently transformed in the process. The first case study analyzes a nineteenth-century phrenology handbook, which reveals how the phrenological mind enabled pre-existing cultural beliefs to be resourced, or respoken as if the objective results of science. The second case study examines Benjamin Spock's use of Freudian ideas to generate child-rearing advice in his classic *Baby and Child Care* manual. My analysis of Spock's Freudianism leads me to propose that beliefs about the mind constitute a uniquely generative class of doxa that I label "psychodoxa." The final case study focuses on the contemporary cerebral self, which asserts the isomorphism of mind, brain, and self. This conception of mind generated considerable interest in Terri Schiavo's brain in the end-of-life case that dominated news media in the early 2000s, and I suggest that much of the discourse concerning Schiavo's brain relied on recalcitrance to channel invention. The dissertation concludes by considering the mind's utility as an inventional resource for rhetoric itself.

TABLE OF CONTENTS

LIST OF FIGURES

PREFACE

I would like to thank those people who helped to make completion of this project possible, starting with my fellow University of Pittsburgh graduate students, who provided both great insight and tremendous support over the last several years. In particular, I would like to thank the members of my cohort; I could not have asked for a better group of people with whom to take seminars and become lifelong colleagues and friends.

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I owe more thanks than I can possibly ever express to my parents, Michael and Teresa Gibbons. From all the books they bought me as a wee girl to their visits to Poughkeepsie, South Bend, and Pittsburgh, they have been unwavering in their support of my academic pursuits, and I am forever grateful to them both. Finally, I'd like to thank Shawn Brown, my husband and confidant. We met on my first day of graduate school and he stood beside me every step of the way, from first seminar paper to defended dissertation.

1.0 CHAPTER ONE – INTRODUCTION

What is mind?

No matter.

What is matter?

Never Mind.[1]

1.1 INTRODUCING THE MIND

In 1972 the United Negro College Fund teamed up with the Ad Council to produce a series of public service announcements that would encourage support for the organization's scholarship programs. They settled on "A Mind is a Terrible Thing to Waste" as the catchphrase, and today, more than thirty years later, it remains the UNCF's slogan and one of the most recognized advertising slogans of all time.[2] One ad from the historic campaign featured parents of a young African-American man regretfully informing him that although he is the first member of the family to be accepted to college, they cannot afford to pay for him to attend. The college-hopeful's young brother then approaches his older sibling and offers him a jar of coins,

[1] Attributed to T.H. Key, once headmaster of University College School. See John Bartlett, *Familiar Quotations*, 10th rev. ed. (New York: Blue Ribbon Books, 1919), 560.
[2] The United Negro College Fund, "Who We Are," http://www.uncf.org/aboutus/branding.asp [accessed December 5, 2010].

wondering if that will help. The ad ends as a voice-over solicits donations to the UNCF intoning, "Because a Mind is a Terrible Thing to Waste."[3]

The UNCF ad campaign was remarkable for a number of reasons, not least of which was the catchphrase that served as a mainstay in advertisements. As a result of it, the entire campaign plays upon a certain conception of "mind." The slogan presumes first of all that we "have" things called minds, which are responsible for academic achievement and acceptance into college. This reflects one of our culture's most salient understandings of the mind, that it is our cognitive organ, the part of us that thinks.[4] We reason with our mind, remember with it, and use it in our pursuit of knowledge and understanding of the world. In observing that minds can be wasted, the slogan also suggests that they are capable of flourishing, but may not be able to do so because of social conditions. In the context of the ad, this construal further suggests that African Americans may not have access to some of the conditions necessary to realize a mind's full potential. As a strategy, this is quite effective for encouraging contributions to a fund that aims to provide African Americans with educational opportunities. Yet because its depiction of the mind is familiar to contemporary Americans, the fact that the advertising campaign hinges upon a certain way of understanding the self is likely to escape notice.

While the UNCF ad intimates that the mind is the organ of thought and subject both to cultivation and neglect, two key dimensions of our understanding of the term, these are not its only contemporary meanings, and a Google news search offers further insight into the mind's construal in everyday discourse, as epitomized by common uses of the term. The first story that

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[3] The ad was called "Little Brother." For a copy of the video file, see Ad Council, "United Negro College Fund (1972-Present)," http://www.adcouncil.org/default.aspx?id=134 [accessed July 5, 2010].

[4] In this dissertation, I use the terms "we" and "our" to loosely refer to constituents of contemporary American mainstream culture. My aim in this project is to identify common inventional patterns, and I use such terms while acknowledging that contemporary American culture is not monolithic and that there exist exceptions and alternatives to what I describe herein. Moreover, my study does not address cross-cultural differences, focusing as it does on the American context.

appeared when I typed "mind" into the Google news search engine described a gathering of "great minds" at a summit on technological innovation in Philadelphia.[5] This phrase, frequently found in the cliché "great minds think alike," shares the same assumption as the one found in the UNCF slogan: the mind is a thinking thing that can demonstrate great prowess. Other stories that cropped up in the same google news search reflect additional meanings that often attend the concept of mind.

In a lighthearted, tongue-in-cheek article featured on *The Huffington Post*, an author identified a "condition" she called Restless Mind Syndrome. She explained that with this syndrome the mind "wanders and twitches from one topic to another, buzzing and gurgling with things to do, people to see, wisps of possibilities for the future and images of the past."[6] Though entirely whimsical, this essay discloses an important aspect of our culture's understanding of the mind. The mind is widely viewed as the seat of our constantly moving consciousness, the source of our cognizance of ourselves as persons and actors in the world. Some say that the mind is the voice inside our head that offers commentary on our experiences. A similar sense of mind is suggested, albeit more indirectly, by another story that appeared in the same google search. This article describes how a politician "changed his mind" about a proposed investigation.[7] This common expression similarly implies that the mind is the command center of judgment, and thereby responsible for shifting between beliefs.

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[5] Christopher K. Hepp, "At Newseum, Great Minds Gather to Discuss Innovation," *The Philadelphia Inquirer*, June 28, 2009, http://www.philly.com/inquirer/business/20090628_At_Newseum__great_minds_gather_to_explore_innovation.html [accessed June 29, 2009].

[6] Jasmine Boussem, "7 Ways to Get Rid of the Restless Mind Syndrome," *The Huffington Post*, June 29, 2009, http://www.huffingtonpost.com/jasmine-boussem/7-ways-to-get-rid-of-the_b_221923.html [accessed June 29, 2010].

[7] Bret Baier, "Democrat Changes Mind Over Investigation," *FoxNews,* June 26, 2009, under "Special Report with Bret Baier," http://www.foxnews.com/story/0,2933,529206,00.html [accessed June 29, 2009].

Finally, the results page of my Google search included a story with the somewhat unnerving headline, "How Technology May Soon 'Read' Your Mind." Posted to the CBS News website, this story reported on the development of brain imaging technologies that enable "scientists [to] get a glimpse at your thoughts."[8] Such reports of brain imaging technologies have proliferated in recent years and have become a familiar part of the popular media landscape. This report, and others like it, point to a key feature of contemporary scientific conceptions of the mind: its isomorphism with the brain. Today, many accept matter-of-factly that the mind has its physical instantiation in the brain and that examining the brain can further our understanding of the mind. Though most people would likely have little to say about the details of this relationship, they accept as unproblematic the idea that brain-imaging technologies are a means to learn about the mind.

In sum, one quick Google news search disclosed several prevalent beliefs about the mind: that it is the thinking self, the site of consciousness and identity, the seat of judgments, and is a manifestation of the brain. But the stories that appeared in the search results do not just provide insight into how people conceive of the mind. They also reveal some of the ways in which "mind" can be used as a discursive resource. The mind can be used as a way to categorize types of persons, as in "great minds." It accounts for the experience of finding one's attention wandering, which can be explained as the result of a restless mind. It can also give meaning to technological data, which is what happens when images of the brain are interpreted for what they can tell us about the mind. In addition, as the UNCF advertisements demonstrated, a conception of mind can be the crux of a campaign to persuade people to donate to a worthy cause. These are only a few of many possible examples of how the notion of mind is routinely used in public

[8] "How Technology May Soon Read Your Mind," *CBSNews*, June 26, 2009, http://www.cbsnews.com/stories/2008/12/31/60minutes/main4694713.shtml [accessed June 29, 2009].

discourse. Conceptions of mind concern our very identity, and thus provide a way of thinking about almost anything involving people. The "mind," therefore, does important cultural work, and as an everyday concept, it often does so beyond our notice.

"Made Up Minds: Rhetorical Invention and the Thinking Self in Public Culture" is an examination of the mind in American public culture. More specifically, it is a study in rhetorical invention that investigates how the mind serves as a discursive resource in everyday contexts. It does so through a series of case studies, each of which examines an artifact or set of artifacts that draws upon a particular conception of mind. Each case study ultimately provides a distinct perspective on how we use the mind in a generative manner. But before detailing this project's contribution to the study of rhetorical invention, I will discuss what it means to take the mind, a particular type of abstract concept, as a site of academic study. I will outline some of the philosophical and historical conceptual work that provides a context for this specifically rhetorical examination and then explain this project's approach to the study of the mind in public/popular culture.

1.2 PHILOSOPHICAL AND HISTORICAL CONTEXTS

Just what sort of a thing is the mind? As complex as they are, brains are easily accounted for as concrete material objects. Given the right circumstances, we can put our hands on them, slice into them, weigh them, and represent them in a detailed and empirically verifiable manner. The mind, on the other hand, is an entirely different matter. One cannot put one's hands on the mind and cut it open to discover its varied components. If it is poked, prodded or pickled, it is so only in a metaphorical sense. The mind eludes efforts to take hold of it for the obvious reason that

unlike the human brain, it is not tangible. Yet it is this very intangibility that has motivated much philosophical inquiry, the terrain of which we will now very briefly traverse. After all, it is philosophers and not rhetoricians who have thus far taken the mind as a serious and sustained subject of humanistic inquiry, and their mapping of some of the major issues offers an invaluable orientation for rhetorical analysis. For one, philosophical speculation has characterized the mind in many useful ways, including as a theoretical entity and an ontological metaphor.

Because they are inferred rather than encountered empirically, entities such as gravity, love, magnetic force and God are classified as theoretical - likewise the mind. Non-theoretical entities, in contrast, are those that are empirically present, such as tables, trees, or brains, for instance. Because we cannot directly observe them, we develop our understanding of theoretical entities through inference, testimony, or by observing their manifestations and/or effects.[9] We know about gravity by watching objects fall, and we learn about the mind, it would seem, by introspection, psychological experiments, or by observing other people and drawing conclusions about how their minds work. The process of learning about theoretical entities can also occur through less direct means; many of us learn about entities such as gravity, minds, love, and God through shared understandings that are passed down as a form of cultural knowledge. Indeed, one might argue that most of our knowledge is produced that way.

Another way to think of the mind is as a process or, more specifically, as the brain's processes, an understanding of the mind that dominates among academic circles. As Stephen Pinker explains in a statement that epitomizes this view, "The mind is what the brain does."[10] Yet even when one believes that the mind is a process rather than a "thing," it is difficult to avoid

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[9] Other examples include magnetic fields and gravity. On the origin of the distinction between empirical and theoretical terms, see Craig Dilworth, "On Theoretical Terms," *Erkenntnis* 21 (1984): 405-421.
[10] Steven Pinker, *How The Mind Works* (New York: W.W. Norton, 1997), 21.

speaking of it as if it were the latter. As David Rumelhart describes, when we talk about the mind, we tend to use a spatial model: "We have things 'in' our minds, 'on' our minds, 'in the back corners of' our minds. We 'put things out' of our minds, things 'pass through' our minds, we 'call things to mind,' and so on."[11] Rumelhart suggests that this way of speaking about the mind results from a general tendency to understand non-sensory concepts by means of analogy with concrete ones. In *Metaphors We Live By*, George Lakoff and Mark Johnson refer to the act of talking about something non-physical as if it were a substance as an "ontological metaphor," and they point to "mind as entity" as an example of one. Indeed, it is difficult to think or talk about the mind without resorting to spatial language, and thereby turning toward the ontological metaphor.[12]

An important set of philosophical debates concerns whether the mind actually exists or is merely a fiction. In his landmark work, *The Discovery of the Mind*, Bruno Snell argued that the Greeks discovered the mind. He grappled, however, with what it means to conceive of the mind as being discovered at all, writing that it

> cannot be compared with the discovery of, let us say, a new continent. America had existed long before Columbus discovered the New World, but the European way of thinking did not come into being until it was discovered; it exists by the grace of man's cognizance of himself. All the same, our use of the word 'discovery' can, I think, be defended. The intellect was not 'invented' as a man would invent a tool to improve the operation of his physical functions, or a method to master a certain type of problem.[13]

Snell has been read as suggesting that the mind exists in part through our conception of it, that we bring it into being in some ways, and that it does not exist independently of us, waiting out

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[11] David E. Rumelhart, "Some Problems with the Notion of Literal Meanings," in *Metaphor and Thought*, ed. A. Ortony (Cambridge: Cambridge University Press, 1979), 81.
[12] George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980), 25-32.
[13] Bruno Snell, *The Discovery of the Mind: The Greek Origins of European Thought*, trans. T.G. Rosenmeyer (New York: Harper & Row, 1960), viii.

there for us to happen upon it. However, Snell did not go so far as to suggest that the mind is a wholescale social construction, a position some others take very seriously.

Some theoretical entities ultimately prove to be erroneously derived, the fabricated product of faulty reasoning, misleading testimony, or flawed cultural assumptions. For example, scientists once believed that flammable materials contain an intangible substance called phlogiston, which is emitted during burning. They later discovered that no such substance exists; in other words, "phlogiston" had no referent in the material world. Some philosophers suggest that the mind might be similarly contrived, an artifact made up out of bad inferences just as phlogiston was – or as ghosts and unicorns appear to be.[14] Others disagree. It is worth noting that philosophers hold many different positions regarding the ontological status of the mind. Commonly recognized schools of thought include these:[15]

Dualists: Believe that the mind and the brain are distinct and incommensurable categories, either in substance or in kind.

Monists: Believe that the mind and brain are of the same type and belong to the same ontological category; there exist many forms of monism, three of which are outlined below.

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[14] The validity of the distinction between theoretical and observational terms has been the subject of considerable philosophical dispute. See Michael Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (Chicago: University of Chicago Press, 1964); Norwood Russell Hanson, *Patterns of Discovery: An Inquiry into the Conceptual Foundations of Science* (Cambridge: Cambridge University Press, 1958). With his distinction between positive and dialectical terms, Kenneth Burke offers a related and possibly alternative rhetorical vocabulary. Burke calls positive terms those that refer to the world's tangible, sensible entities. Dialectical terms, on the other hand, have no material referent, referring to ideas, actions, and attitudes. However, calling the mind dialectical, in Burke's categorization, seems to presuppose a certain ontological position given that Burke makes a point of equating dialectical entities with fictitious entities. See his *A Rhetoric of Motives* (Berkeley: University of California Press, 1974), 183-197.

[15] For an overview, see John Heil, ed., *Philosophy of Mind: A Guide and Anthology* (Oxford: Oxford University Press, 2004); Jaegwon Kim, *Philosophy of Mind* (Boulder, CO: Westview Press, 2006).

Eliminitivists: Are those who believe that the mind is a fiction, a fallacious construct that should be abandoned entirely and replaced by explanations based in terms of the brain. Buddhist monks make the same case on religious grounds.[16]

Instrumentalists: An alternative position is that though the mind is indeed an artifact, it is a useful one that helps to provide explanations and make predictions. This may be what Snell had in mind.

Idealists: Believe that everything is mental and that the physical world is merely a product of our minds.

And the list is not exhaustive. Furthermore, each of these positions is summarized in only the barest outline, eliding complexities and nuances. It does, however, give some indication of how contested the concept of mind has been in philosophical circles. Ultimately, however, this project is rhetorical, and it does not attempt to enter that fray, examining instead how "mind" may serve as a discursive resource, as a set of cultural tools and way of mapping content, focusing not on questions of ontology, but on the mind-in-use in the realm of human interaction.

As a fungible abstraction, a theoretical entity that we know about only indirectly, the mind has been represented in many different ways, with significant differences across time and between cultures. It is for this reason that it serves as a discursive resource in such a wide range of contexts and is put toward such diverse purposes. Just as a brief (and admittedly superficial) orientation to philosophical characterizations of the mind serves as a useful backdrop to this project's rhetorical analysis, a sense of its historical trajectory does so as well. There exist a

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[16] See Thomas Hardy Leahey "Mind as a Scientific Object: A Historical, Philosophical Exploration," in *The Mind as a Scientific Object: Between Brain and Culture*, eds. Christina Erneling and David Johnson (Oxford: Oxford University Press, 2005), 36.

number of accounts that detail the history of our conceptions of mind, either in full or in part, and while recapitulating this vast and complex history in full is outside of the scope of this dissertation, some context will give a better picture of the varied forms the mind has taken across time.[17] Because he is afforded such a prominent place in historical accounts, the seventeenth-century philosopher René Descartes serves as an entry point for this purpose, and as a focal point around which to organize some of the history of the mind's envisionings.

Descartes is often credited with transforming the West's understanding of the mind and bringing about its modern conception.[18] His views on the mind are even afforded their own "ism" in Cartesianism. Descartes advanced core beliefs about the mind that remain influential today, two of which are exemplified in a well-known passage from the *Second Meditation* in which he wrote, "I am therefore precisely nothing but a thinking thing; that is, a mind, or intellect, or understanding, or reason."[19] The view that the mind is *sui generis* a thinking thing remains pervasive today: thought is generally regarded as the mind's defining activity. The same is true of his suggestion that the mind is constitutive of self. This latter point is perhaps even more clearly expressed in Descartes' famous phrase, "I think therefore I am," which could well be rephrased as "I have a mind therefore I am." In Descartes' formulation, the mind is the locus of the "I," or our sense of ourselves as persons. Descartes also emphasized the centrality of consciousness explaining, "By the word 'thought' I include everything that is in us in such a way

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[17] See Paul S. MacDonald, *History of the Concept of Mind*, 2 vols. (Burlington: Ashgate, 2003, 2007).
[18] See, for example, MacDonald, *History of the Concept of Mind*, 1: 279; Leahey "Mind as Scientific Object," 43; Nancy Scheper-Hughes and Margaret M. Lock, "The Mindful Body: A Prolegomenon to Future Work in Medical Anthropology," *Medical Anthropology Quarterly* 1.1 (1987): 9.
[19] René Descartes, *Meditations, Objections and Replies*, ed. and trans. Roger Ariew and Donald Cress (Indianapolis: Hackett Publishing, 2006), 15.

that we are immediately aware of it."[20] Descartes thereby suggests that consciousness is the basis of thought and ultimately underpins both mind and self.

Though his views about the relationship between mind and body changed significantly throughout his career, Descartes is often associated with his early arguments in support of substance dualism. At one time, Descartes proposed that *res cogitans* and *res extensa* are substantially distinct, that is, that the mind is composed of matter that differs in kind from the stuff of the physical world. While his mature philosophy shifted away from strong property dualism, Descartes nonetheless continued to argue for the distinction between mind and body in some form.[21] Therefore, throughout his philosophical development Descartes always bore the burden of accounting for the nature of interactions between mind and body. Though the details of his position are not always clear, Descartes suggested that the brain serves as the site of the mind's engagement with the body, with the pineal gland holding a place of particular importance.[22] Descartes was not the first to associate mind and brain. The two had been linked long before him, and the precise nature of this relationship has been the subject of much discussion. However, the two are not invariably coupled and the mind can be and has been envisioned independently of the brain. From the 5th century B.C.E. until the Renaissance cardiocentrism, or the belief that the heart is the source of thought, stood in opposition to encephalocentrism, which held that mental operations took place in the brain.[23] Even today,

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[20] Ibid., 94.
[21] Peter Machamer and J.E. McGuire trace these changes in some detail in *Descartes's Changing Mind* (Princeton: Princeton University Press, 2009). They conclude the book by suggesting that "perhaps, at the end of his life, Descartes was not much a dualist after all," ibid., 241. They suggest that "Descartes's mature position can be called epistemic dualism, which . . . fails even to entail a strong form of property dualism," ibid.,198.
[22] Ibid., 211-215.
[23] Enrico Crivellato and Domenico Ribatti, "Soul, Mind, Brain: Greek Philosophy and the Birth of Neuroscience," *Brain Research Bulletin* 71 (2007): 3. Perhaps vestiges of this issue remain in the medical ethics debate about whether the heart or brain should determine if someone is essentially dead. See J. McMahon, "The Metaphysics of

some argue that mental operations are embodied in the whole physical organism and we sometimes falsely isolate the brain as the sole source of such acts as good decision making.[24]

Though to suggest that the mind is a special type of immaterial substance may now seem quaint and old-fashioned, the mind-body split remains influential. The idea that mental states exist as something distinct from physical events persists in subtle form. In his influential work, *The Concept of Mind*, Gilbert Ryle described how people commonly believe

> a person . . . lives through two collateral histories, one consisting of what happens in and to his body, the other consisting of what happens in and to his mind. The first is public, the second private. The events in the first history are events in the physical world, those in the second are events in the mental world.[25]

Ryle famously characterized this view, of a separate inner mental world that looks out on the outer world as "the dogma of the Ghost in the machine." Even those who believe in mind-as-brain cannot always avoid invoking this ghost.[26]

Descartes was instrumental in the formulation of a conception of an internal self that has its locus in the mind and creates representations of the outer world.[27] In *Sources of the Self*, Charles Taylor argues that this Cartesian version of self-understanding is a particular historical inflection. Taylor suggests when the modern person praises an object she believes that her evaluation of it exists exclusively as a representation within her mind, but that for ancient persons the praise might exist elsewhere: in the object itself, emanating from it, or in the very act of praising the object. In the ancient world, people believed that valuations, or ideas more

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Brain Death," *Bioethics* 9.2 (1995): 91-126; B.A. Rich, "Postmodern Personhood: A Matter of Consciousness," *Bioethics* 11 (1997): 206-216.

[24] See Antonio Damasio, *Descartes Error: Emotion, Reason, and the Human Brain* (New York: Avon, 1994); Drew Leder, *The Absent Body* (Chicago: University of Chicago Press, 1990).

[25] Gilbert Ryle, *The Concept of Mind* (Chicago: University of Chicago Press, 1949), 11-12. Though Ryle wrote his work in the 1950s, it remains applicable today.

[26] Charles Taylor, *Sources of the Self: The Making of Modern Identity* (Cambridge: Harvard University Press, 1989), 189.

[27] Ibid. See also MacDonald, *History of the Concept of Mind*; Ryle, *The Concept of Mind*.

generally, could exist outside the subject.[28] We have become so accustomed to the modern perspective, however, "that we find the older localization rather weird and hard to understand . . . it rather appears to us as a fuzzy lack of localization . . . show[ing] how much we are now within the new self-understanding, defined by this new, exclusive localization [to the mind]."[29] It seems almost inevitable to us that "I" am in here, while the world is out there.

Descartes is just one figure in the history of the mind's envisionings, albeit a profoundly influential one, and he has certainly not had the intellectual terrain to himself. For instance, some scholars have proposed theoretical formulations that complicate the distinction between inner and outer self in interesting ways. George H. Mead argued that both mind and self emerge out of the process of communication, constituting a "social self." In this case, since the mind arises out of interactions with others, it cannot be reduced to individual neuropsychology.[30] Gregory Bateson similarly stated that "the mind does not stop with the skin," suggesting that instead of residing in the head, the mind exists in the network of relations between a person, others, and even nature.[31] Some also speak of the existence of a mind that emerges out of a collective of individuals, a mind that is bigger than any given person and located somewhere other than inside his or her head, though here there may be a recreation of a new and different inner versus outer dynamic. Yet these theories do not seem to have dislodged dualism and

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[28] In *Sources of the Self*, Charles Taylor contrasts the Cartesian vision with a Platonic one, in which ideas are the basis of reality rather than the contents of one's mind. Taylor provides a sweeping account, illustrated with many examples, which also addresses the social consequences of these views, for example, for how government is organized.
[29] Taylor, *Sources of the Self*, 188.
[30] George Herbert Mead, *Mind, Self, and Society* (Chicago: University of Chicago Press, 1934), 133, 223-224.
[31] Gregory Bateson, *Steps To an Ecology of Mind* (Chicago: University of Chicago Press, 1972).

however intriguing, they exist in subsidiary relation to the still-dominant belief that the mind is singular, individual, and internal.[32]

Throughout the concept's history, the mind has been represented visually as well as verbally, a point of importance for the case studies that follow. Because the mind is an abstraction, it affords no empirical guide to visual representation. One does not create an image of the mind by looking at one and then replicating its outlines as faithfully as possible, as one might do when creating a picture of a leaf, hand, brain, or any other tangible entity. As a result, in a very strong sense, images can be central to the conceptualization of the mind and an integral part of how it comes to be understood. Sigmund Freud, for one, used images in his theorizations of the mind's organization, including pictures showing how the regions of id, ego, and superego are laid out in relation to one another.[33]

When looking back in history in order to contextualize this study of the mind, a significant and as-yet-unmentioned concern emerges. Our contemporary conception of mind belongs to a long history of attempts to identify and describe a person's inner dimension. However, the relationship between earlier efforts to characterize the self and our modern notions about the mind are far from clear. As Paul MacDonald observes,

> One of the principal problems is to sort out exactly which issue is being addressed when one holds up for scrutiny any one of the numerous terms involved in the ancestry of the modern concept of mind or soul. The obverse side of this same problem is to think that, in starting one's inquiry with the concept of *mind*, for example, instead of *soul* or *spirit*, and then making an effort to discern its earliest lineaments, one has a sure grasp of a clearly defined, well-marked out concept. In other words, if there is no consensus on what the concept of *mind* picks out or what it makes reference to, if the historian cannot appeal to a readily identifiable

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[32] See Patrick Bracken and Philip Thomas, "Time to Move Beyond the Mind-Body Split," editorial, *British Medical Journal* 325 (2002): 1433-1434.

[33] For an article in which images of the mind, some obscure, are considered as "maps," see Rolf von Eckartsberg, "Maps of the Mind," in *The Metaphors of Consciousness*, eds. R. Valle and R. von Eckartsberg (New York: Plenum Press, 1981).

> conceptual item, then how can any effort to trace its ancestry ever be confident that discussions of an earlier version are indeed versions of the same thing.[34]

In other words, concepts such as soul and spirit are in some respects precedents of the modern conception of mind, though the relationship between these theoretical entities is difficult to cleanly untangle, either diachronically or synchronically.

The relationship between soul and mind, for example, is complex and even convoluted. The ancient Greek conception of the psyche, which is significant in the trajectory of concepts that identify our inner dimension, is sometimes translated into English as 'mind,' and sometimes as 'soul.'[35] Though the psyche's relationship to both is readily apparent, it does not unproblematically correspond to modern views of either mind or soul. Moreover, despite Descartes' status as progenitor of the modern conception of mind, scholars disagree on whether he distinguished between mind and soul or merely used two terms to refer to the same thing.[36] One scholar claims, "Quite simply 'soul' and 'mind' are synonymous in Descartes. Both are merely convenient labels for *res cogitans* – that which thinks."[37] Another suggests, however, that Descartes forged a "cautious separation" between the two and claims that he "marks a decisive turning-point in the good fortune of mind's career, at the expense of soul's place in the scheme of things."[38] Since Descartes, the soul has certainly lost ground to the mind. As a philosophy professor recently remarked in the *Chronicle of Higher Education*, "No self-respecting professor of philosophy wants to discuss the soul in class. It reeks of old-time

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[34] MacDonald, *History of the Concept of Mind*, 1: 1.
[35] On ancient Greek conceptions of our inner dimension, see, for example, Jan N. Bremmer, *The Early Greek Concept of the Soul* (Princeton: Princeton University Press, 1983); Ruth Padel, *In and Out of the Mind: Greek Images of the Tragic Self* (Princeton: Princeton University Press, 1992). On the soul's history, see Raymond Martin and John Barresi, *The Rise and Fall of Soul and Self: An Intellectual History of Personal Identity* (New York: Columbia University Press, 2006).
[36] On this debate, see ibid., 281-282.
[37] John Cottingham, *Descartes* (Oxford: Basil Blackwell, 1986), 111.
[38] MacDonald, *History of the Concept of Mind*, 1: 284, 279. See also, Machamer and McGuire, *Descartes's Changing Mind*, 233+.

theology, or, worse, New Age quantum treacle."[39] In academic circles, it would appear that the soul has slipped into irrelevance. However, despite its now diminished status, the soul has been an important concept during much of Western history and its historical course is inseparable from that of the mind.

Toward the end of historical contextualization, it deserves note that additional vocabularies for the inner dimension even less familiar than the relatively well-known "soul," "spirit," and "psyche" have also existed. For example, Ancient Hebrew contained three terms that were used to refer to distinctive aspects of the inner 'I,' each of which we might today consider an aspect of the mind: *nepesh*, *rauch*, and *leb*. Each of these terms originally referred to some concrete, outward part of the body, but eventually came to have meaning in relation to our inward and abstract subjectivity.[40] *Nepesh* referred to the throat, or the body that ingests food and takes in air; it could also indicate hunger, the need to breathe, thirst, or longing more generally. Then, by extension, it came to identify the individual's seat of action and emotion, life itself, and even man as an individual being.[41] *Rauch* referred to wind or breath, and also to the vital power of life, a person's internal driving force. This breath/vital power was often viewed as connected to and even inseparable from the *rauch* of Yahweh.[42] *Leb* most concretely meant the heart, and could also refer to the seat of emotions and longing. Most often, however, it

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[39] Stephen T. Asma, "Soul Talk," *The Chronicle of High Education*, May 2, 2010, under "The Chronicle Review," http://chronicle.com/article/Soul-Talk/65278 [accessed August 3, 2010].
[40] MacDonald, *History of the Concept of Mind*, 1: 2-3.
[41] Hans Walter Wolff, *Anthropology of the Old Testament* (Philadelphia: Fortress Press, 1974), 10-31; Ernst Jenni and Claus Westermann, eds., *Theological Lexicon of the Old Testament*, 3 vols., Mark E. Biddle, trans., (Peabody, MA: Hendrickson, 1997), 2: 743-759.
[42] Wolff, *Anthropology of the Old Testament*, 32-39.

referred to intellectual functions, the seat of consciousness, knowledge, understanding, and memory.[43]

During the twentieth century alone a dizzying array of visions of the thinking self have made their appearance. As the century began, bump-feeling phrenologists were riding out the last days of their long decline into obsolescence. Behaviorists made their move to push aside questions of the mind, characterizing it as a black box, the contents of which remain hidden from sight. Freud, of course, exerted a dominant influence throughout the century, and a number of his theoretical terms gained a place in the popular lexicon. But the effect of new technologies has also seen the mind viewed as a computer, as the software to the brain's hardware, and as a network. Artificial intelligence researchers have made bold attempts to build non-human minds with varying degrees of success. And mental illness has become the focus of an unprecedented degree of attention, perhaps best represented by the institution of a formal manual, periodically updated, that details all of the varieties of abnormal minds, the Diagnostic and Statistical Manual of Mental Disorders (DSM).[44] The century came to a close with the decade of the brain, and the growing influence of fields such as cognitive science and neuroscience. The twenty-first century moreover began in this manner, with the brain in a place of preeminence and the mind's position with respect to it in question.

Given its cultural and historical contingency, the mind is a slippery concept to work with, often changing form just as one thinks one has identified its contours and sometimes seeming to

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[43] Hans Wolff's analysis of these terms in the Old Testament refers to *nepesh* as needy man, *rauch* as empowered man, and *leb* as reasonable man. Though *leb* appears to be the Hebrew term most similar to the modern mind, *rauch* is often translated as spirit, and *nepesh* can be translated as soul, these translations are again far from exact as the Hebrew concepts do not map directly onto our modern ones, Wolff, *Anthropology of the Old Testament*, 11, 39, 40-58. See also Jenni and Westermann, *Theological Lexicon of the Old Testament*, 2: 638-642; MacDonald, *History of the Concept of Mind*, 1: 9.

[44] For an interesting nonacademic discussion of the global spread of a Western conception of mental illness see Ethan Watters, *Crazy Like Us: The Globalization of the American Psyche* (New York: Free Press, 2010).

disappear entirely. Though already noted, it bears repeating that "Made Up Minds," does not put its stakes in questions about the true nature of the mind.[45] It leaves such questions for those best qualified to address them, psychologists, cognitive scientists, philosophers of mind, and so forth. Each chapter of "Made Up Minds" instead regards the mind as a cultural construct, examining how it does cultural and rhetorical work, and its insights pertain to considerations of use in practical affairs.

So what conception of mind then does this project take as its subject? This project defines "mind" as a collection of associated ideas which, I assert, minimally include these: (1) The mind is the locus of an inward self that is the seat of conscious awareness, (2) It is the part of us that thinks for us and (3) It is the control center for processes that include allocating attention, decision-making, remembering, and to some degree, managing the emotions. It is precisely because this project focuses on a loose collection of ideas that it is best described as a study of the mind and not psychology in public culture; psychology typically designates a more rigorously detailed and systematic set of beliefs, and one that has its place as part of an academic field.

For the purposes of this project, I maintain that as long as the aforementioned associated concepts are present, conceptions of the mind can exist under different names. The collection of ideas we know as the mind can circulate and do cultural and rhetorical work without the appearance of the moniker "mind." In other words, while this dissertation concerns discursive expressions of the mind, its focus here is not narrowly on the term. It is not a terminological

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[45] In doing so it adopts something similar to the sociology symmetry principle, which allows one to treat true and false beliefs in the same way as a methodological tool. This does not mean that the chapter on phrenology, for example, does not acknowledge the falsity of the pseudoscience, but merely that it does not assume responsibility for questions of truth or falsity. On the sociology symmetry principle, see David Bloor, *Knowledge and Social Imagery* (London: University of Chicago Press, 1991), 7, 175-179.

analysis, nor I might add, is it an ideographic one. It does not track the use of a particular word across contexts.[46] By defining the mind as a collection of ideas, in "Made Up Minds" I approach the mind as a social category, such as gender or childhood, which can similarly be envisioned in innumerably different ways and also consist of collections of beliefs that can penetrate and inform discourse without an identifying moniker; for example, we see the influence of conceptions of gender in all sorts of spaces where the word "gender" does not appear.[47] That said, this dissertation focuses on cases that manifestly concern conceptions of the mind. From the vast scope of the history of the mind's envisionings, the case studies that comprise "Made Up Minds" focus on phrenology, Freudianism, and the mind-as-brain respectively.

1.3 CONTRIBUTION TO THE FIELD: RHETORIC, SCIENCE, AND THE PUBLIC MIND

"Made Up Minds: Rhetorical Invention and the Thinking Self in Public Culture" is a rhetorical examination of conceptions of mind that originated within the institutions of science, but that made their way, in a possibly circuitous manner, into mainstream culture. In other words, it is a study of the rhetoric of science in public culture. Chapter Two – Phrenological Invention and the Mind as Ouija Board discusses the nineteenth-century pseudoscience of phrenology, focusing particular attention on a popular phrenology manual, Orson and Lorenzo Fowlers' *Illustrated*

[46] Celeste Condit and John Lucaites engage in terminological analysis, tracking the changing definitions of the word equality, in their book *Crafting Equality: America's Anglo-African Word* (Chicago: University of Chicago Press, 1993). Michael Calvin McGee defines an ideograph as "an ordinary language term found in political discourse. It is a high-order abstraction representing collective commitment to a particular but equivocal and ill-defined normative goal. It warrants the use of power," "'The Ideograph': A Link Between Rhetoric and Ideology," *Quarterly Journal of Speech* 66 (1980): 1-16. McGee's examples of ideographs include liberty, equality, and slavery. One might be able to make a case for the mind as an ideograph.

[47] Like mind, these concepts are also abstract categories that are grounded by/located in the physical body.

Self-Instructor in Phrenology and Physiognomy. Phrenologists proposed that the mind consists of a set of faculties, each of which is responsible for a particular function, and each of which is located in a different area of the brain. They believed, moreover, that a faculty's size was a measure of its strength and that the external skull reflected dimensions of the brain regions within. Therefore, phrenologists believed that head shape indicated the character of one's mind. For instance, phrenologists claimed that a high forehead signals great intelligence while a prominent bump at a certain region of the back of the head means that one has great parenting skills. While phrenology began as an institutionally-recognized scientific theory, most scientists abandoned it fairly quickly and it ultimately became a commercial folk movement.

In Chapter Three – Insidious Minds: Freud as Psychodoxa in Spock's *Baby and Child Care*, I focus on Benjamin Spock's use of Freudian theory in child-rearing advice. Freud proposed a complex and multi-layered conception of mind, which was perhaps the most widely-known theory of mind during the last century. Perhaps most famously, Freud emphasized the unconscious nature of our mental processes and the role repressed sexuality plays in our cognitive system. Freud, of course, proposed a range of different concepts to account for the dynamics of our mental life, including id, ego, and superego. Benjamin Spock's child-rearing advice reached millions of parents in the form of his popular child-rearing manual, *Baby and Child Care*. It was presented as accessible, colloquial commonsense, yet it drew upon these complex Freudian ideas, which were for a time taken quite seriously within the scientific establishment.

Finally, Chapter Four – Is Anyone in There? Terri Schiavo and the Brain-Begotten Mind considers a conception of the mind and selfhood that prevails in American culture today, examining it in relation to a widely circulated picture of Terri Schiavo's brain together with a

discussion of that image that unfolded on a blog. The 1990s was called the decade of the brain, reflecting the increased funding and wider cultural presence for disciplines such as cognitive science, psychobiology, and neuroscience. These disciplines utilize a variety of sophisticated technologies to examine the brain and thereby understand cognition. In contemporary America, newspapers, magazines, televisions shows and other media regularly include reports detailing developments in the field of cognitive neuroscience. Brain scans, in particular, are a surprisingly frequent part of the popular media landscape. The idea that the mind is what the brain does has become so widespread that some say a new popular understanding of the self has emerged, the "cerebral self," which sees the human subject as reducible to the brain.

As an examination of the rhetoric of science in mainstream culture, this project can be distinguished from some of the early work in the field. Much of the foundational work in the rhetoric of science was concerned with justifying the endeavor, and it addressed the "hard case" of science as practiced by scientists. As the discipline took shape, practitioners focused on demonstrating that science has rhetorical dimensions, or more boldly, by suggesting that it is an inherently rhetorical activity. Take, for example, some of the landmark texts published during the 1970s and 1980s: Charles Bazerman's *Shaping Written Knowledge* analyzed the persuasive strategies that characterize the genre of scientific research article; Greg Myers' *Writing Biology: Texts in the Social Construction of Scientific Knowledge* examined how two scientists revised their grant proposals in order to win funding; John Angus Campbell published a series of articles that characterized Charles Darwin as a rhetorician and detailed the rhetorical dimensions of his writings on evolution; and Lawrence Prelli's *A Rhetoric of Science: Inventing Scientific Discourse* examined the rhetorical principles that scientists rely on in order to generate and

evaluate scientific discourse.[48] In other words, as they laid the field's foundations, many rhetoricians prioritized exposing a scientist's writings as rhetorical over discussing the rhetorical dimensions of science as it exists beyond esteemed institutions and out of the hands of skilled practitioners.[49]

Scientific discourses do not remain in the halls of the scientific establishment, however, and a robust rhetoric of science must account for the rhetorical dimensions of science beyond the official spaces of labs, grants, conferences, published articles, and such. Once one begins to consider science that has been loosed into public spaces, a tricky definitional question arises. Given the fact that it exists in different context, with a different audience, and has often changed considerably, it is not unreasonable to ask whether popularized science can even be considered science at all. Defined in a certain way, science would rarely appear in public, existing only in the rarefied environments that scientists inhabit. As popularization occurs, science – by some definitions – disappears from sight.[50] Articulating criteria that define science and definitively demarcate it from other non-scientific activities is surprisingly difficult, however. As Max

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[48] Charles Bazerman, *Shaping Written Knowledge: The Genre and Activity of the Experimental Article in Science* (Madison: University of Wisconsin Press, 1988); Greg Myers, *Writing Biology: Texts in the Social Construction of Scientific Knowledge* (Madison: University of Wisconsin Press, 1990); John Angus Campbell, "The Polemical Mr. Darwin," *Quarterly Journal of Speech* 61 (1975): 375-390; John Angus Campbell, "The Invisible Rhetorician: Charles Darwin's 'Third Party' Strategy," *Rhetorica* 7 (1989): 55-85; Lawrence Prelli, *A Rhetoric of Science: Inventing Scientific Discourse* (Columbia: University of South Carolina Press, 1989).

[49] Leah Ceccarelli makes this point in *Shaping Science With Rhetoric: The Cases of Dobzhansky; Schrödinger; and Wilson* (Chicago: University of Chicago Press, 2001), 3-4. Charles Alan Taylor also makes this case in "Science as Cultural Practice: A Rhetorical Perspective," *Technical Communication Quarterly* 3 (1994): 67-81. For overviews of the rhetoric of science literature, see Randy Allen Harris, "Rhetoric of Science," *College English* 53 (1991): 282-307; Randy Allen Harris, "Introduction" in *Landmark Essays on the Rhetoric of Science: Case Studies*, ed. Randy Allen Harris (Mahwah, NJ: Lawrence Erlbaum, 1997), xi-xxxiv; John Angus Campbell and Keith R. Benson, "The Rhetorical Turn in Science Studies," *Quarterly Journal of Speech* 82 (1996): 74-109; Jeanne Fahnestock, "The Rhetoric of the Natural Sciences," in *The SAGE Handbook of Rhetorical Studies*, ed. Andrea Lunsford, Kirt Wilson, and Rosa Eberly (Thousand Oaks, CA: SAGE Publications, 2009), 175-195; Philip C. Wander, "The Rhetoric of Science," *Western Journal of Communication* 40 (1976): 226-235. For an influential critique of the rhetoric of science project, see Dilip Gaonkar, "The Idea of Rhetoric in the Rhetoric of Science," *Rhetorical Hermeneutics: Invention and Interpretation in the Age of Science*, ed. Alan Gross and William M. Keith (Albany: State University of New York Press, 1997), 25-85.

[50] Jeanne Fahnestock, "Accommodating Science: The Rhetorical Life of Scientific Facts," *Written Communication* 3.3 (1986): 275-296.

Charlesworth astutely observed, "What then is science? If no one asks me, I know; but if I want to explain it to a questioner, I do not know."[51] Philosophers have long struggled with the so-called demarcation question, leading some to pronounce it an intractable problem.[52] But while it may elude answer on philosophical or ontological principles, rhetoric can provide a compelling response to the question "what is science?"

From a rhetorical perspective, science is what it is represented to be in various contexts.[53] That is to say that science is that which scientists and others rhetorically construct as such, which does not, however, mean that it cannot be interrogated, corroborated, corrected and so forth. Thomas Gieryn recommends that we think of science in terms of a cartographic metaphor.[54] As he describes, "'science' becomes a space on maps of culture, bounded off from other territories, labeled with landmarks showing travelers how and why it is different from regions of common sense, politics, or mysticism."[55] Furthermore, Gieryn suggests that though scientists play an important role in the designation of certain activities as scientific, they are not the only ones and fights over what is or is not scientific often take place away from scientists and scientific labs. They often occur "downstream," as he calls it, in the media, in courtrooms, and so forth. In "Made Up Minds" I consider artifacts that circulate "downstream" and that have, at least in some contexts, been marked as science.

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[51] As quoted in Charles Alan Taylor, *Defining Science: A Rhetoric of Demarcation* (Madison: University of Wisconsin Press, 1996), 3.
[52] For a discussion of philosophical attempts to demarcate science in an essentializing way, see ibid, 21-57.
[53] Charles Alan Taylor has argued that science can be best understood as a "set of social practices . . . constructed in and through the discourses of scientists . . . [who] consciously or otherwise, discursively construct working definitions of science that function, for example, to exclude various non- or pseudosciences so as to sustain their (perhaps well-earned) position of epistemic authority," ibid, 5.
[54] See Thomas Gieryn, *Cultural Boundaries of Science: Credibility on the Line* (Chicago: University of Chicago Press, 1999).
[55] Ibid., x.

Rhetorical studies of science that circulates "downstream" draw upon two distinct scholarly traditions: popular culture and public culture studies. In some ways, "Made Up Minds" stands at the intersection of both traditions, and its subtitle might well have read "Rhetorical Invention and the Thinking Self in Popular Culture." Given its examination of mainstream cultural artifacts that reached a wide audience, each case study considers what can be described as popular science.[56] Popular culture studies emerged as a response to mass culture theory, which derided mainstream cultural products as debased, frivolous and inferior. From the perspective of mass culture theory, scientific knowledge is inevitably diluted and distorted as it is filtered through the culture industry to reach the lowest common denominator.[57] However, as critics of mass culture theory have pointed out, in now familiar arguments, it is difficult to establish a definitive set of values with which to judge something as debased. Furthermore, rejecting mainstream culture as inferior does not negate the intractable fact of its influence. Rather than ascribe a value to mainstream science, as has much work in the popular culture tradition, this project instead aims to account for the important cultural work it performs.

In *The Meanings of the Gene*, her analysis of scientific discourses about genetics that occur "downstream," Celeste Condit suggested that public culture rather than popular culture is native to rhetorical studies.[58] The public culture tradition takes the distinction between public and private as its starting point, and rhetoric's orientation toward this tradition stems at least in part from the influence of Jürgen Habermas's theorization of the public sphere. Though his original formulation has been emended and extended in numerous ways, it continues to exert an

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[56] Jane Gregory and Steve Miller, *Science in Public: Communication, Culture, and Credibility* (Cambridge: Perseus Publishing, 1998).
[57] On this point, see ibid., 19. See also Dominic Strinati, *An Introduction to Theories of Popular Culture* (New York: Routledge, 1995).
[58] Celeste Condit, *The Meanings of the Gene: Public Debates about Human Heredity* (Madison: University of Wisconsin Press, 1999), 10.

influence, both directly and indirectly, on a good deal of scholarship in the field. While Habermas envisioned the public sphere as a place where strangers meet to engage in rational-critical debate with one another, many contemporary scholars prefer the term "publics," with its terminological orientation toward multiplicity, allowing that there exist many different co-existing publics.[59] Others relax the notion of rational-critical debate to include less rigorous or explicit forms of communicative interaction. Regardless of the form it is imagined to take, an exchange of ideas or, we might say, communication, is central to Habermasian public culture. As a result of being situated as one of public culture's defining activities, rhetoric has a particular kinship with this tradition as, therefore, does this project. [60]

Thomas G. Goodnight argued that the public sphere of argument can be distinguished from the technical and personal spheres in that each is characterized by different argument practices. Personal argument is grounded in consubstantiality, technical argument in professional identity, and public argument on partisanship. That said, the discourse that arises from any one of these spheres can exert a significant influence on the others.[61] Science, for instance, enters into deliberations in the public sphere, and a number of scholars have examined what happens when scientific discourses enter into public deliberation in specific cases, such as ballistic missile defense projects, environmental causes, and AIDS in South Africa.[62] But the movement happens in the alternative direction as well. As John Lyne describes, discourses in

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[59] Michael Warner uses the term publics. He also shows how the public/private distinction is easy to make on the surface, but difficult to sustain upon reflection. See his *Publics and Counterpublics* (New York: Zone Books, 2002).
[60] Note that Gerald Hauser's account of the public sphere underlines the centrality of rhetoric yet further. See Gerald Hauser, *Vernacular Voices: The Rhetoric of Publics and Public Spheres* (Columbia: University of South Carolina Press, 1999).
[61] G.Thomas Goodnight, "The Personal, Technical, and Public Spheres of Argument: A Speculative Inquiry into the Art of Public Deliberation," *Journal of the American Forensic Association* 18 (1982): 214-227.
[62] Gordon Mitchell, *Strategic Deception: Rhetoric Science and Politics in Missile Defense Advocacy* (Lansing, MI: Michigan State University Press, 2000); Robert Cox, *Environmental Communication and the Public Sphere* (Thousand Oaks, CA: Sage, 2006); Marcus Paroske, "Deliberating International Science Policy Controversies: Uncertainty and AIDS in South Africa," *Quarterly Journal of Speech* 95.2 (2009): 148-170.

biology are sometimes invented and organized "in such a way that they mesh with the discourses about social, political, or moral life."[63] In other words, resources from the scientific domain are put to use in public spaces and, conversely, public discourses affect discussions within science.

Discourse in the public sphere can gain persuasive strength through its association with or sometimes even basis in science. As Gordon Mitchell has observed, "Advocates who can claim the mantle of scientific objectivity successfully gain the upper hand in public disputes by virtue of their ability to exploit the ethos of scientific research and to tie their arguments to favorable cultural assumptions about scientific practice." [64] When it draws upon the ethos of science, we can infer, discourse about the mind can bring with it considerable rhetorical force. As Mitchell's choice of the term "exploits" suggests, however, power brings with it significant potential for misuse. Thomas Goodnight similarly argues that science's entry into the public sphere does not always bring about desirable results, suggesting that "the public sphere is being steadily eroded by the elevation of the personal and technical."[65]

In "Made Up Minds," I examine artifacts that participate in a dialogical exchange of ideas. Though it does not study debates or arguments in the narrow sense of those terms, nor does it focus on public clashes between scientists or disputes played out in high-profile settings such as courtrooms or congress, this project nonetheless considers sites of contestation and controversy in important ways. As recent work in public culture studies has shown, we should not underestimate the significance of discourse that appears in popular books, magazine pages, and general-interest websites. Though it is not directed toward such authoritative persons as scientists, judges, and legislative representatives, popular media participate in shaping opinion in

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[63] John Lyne, "Bio-Rhetorics: Moralizing the Life Sciences," in *The Rhetorical Turn: Invention and Persuasion in the Conduct of Inquiry*, ed. Herbert Simons (Chicago: University of Chicago Press, 1990), 38.
[64] Mitchell, *Strategic Deception*, 15.
[65] Goodnight, "The Personal, Technical, and Public Spheres of Argument," 223.

important, though perhaps diffuse and indirect, ways. Individuals often form opinions, take positions, work out differences, make decisions, and even take action through their engagement with such media. These spaces are important sites for deliberation, though they may not always be recognized as such. This dissertation's title references public culture in part to call attention to this.

The rhetoric of science maintains strong ties to other disciplines in the humanities that study science, and research into science that circulates "downstream" forms part of an expansive class of research into the popularization of science, which includes scholars from disciplines that include the history of science, sociology, science studies, and media studies. Two areas deserve particular note, public understanding of science and popularization studies. The public understanding of science movement, largely driven by sociologists, has produced a considerable class of work regarding public knowledge of and engagement with science. A good deal of the research stemming from this tradition is quantitative, and it is largely based upon a deficit model that presupposes a knowledgeable scientist against whom we test and compare the failings of the ignorant lay public.[66] Popularization studies often examine diffusion, or the processes by which people who are not scientists learn about science.[67] Popular media, of course, play an important role in conveying scientific ideas to the public through a range of different forms: pamphlets,

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[66] Gregory and Miller, *Science in Public*, 17. This approach has met with much criticism, out of which an alternative has emerged, the so-called contextualist model. For criticisms of the deficit model, see Alan Irwin and Brian Wynne, "Introduction," in *Misunderstanding Science*, eds., Alan Irwin and Brian Wynne (Cambridge: Cambridge University Press, 1996). For a rhetorical perspective, see Alan G. Gross, "The Roles of Rhetoric in the Public Understanding of Science," *Public Understanding of Science* 3 (1994): 3-23. See also Simon Locke's rhetorical alternative to standard research in public understanding of science, "The Public Understanding of Science – A Rhetorical Invention," *Science, Technology, & Human Values* 27.1 (2002): 87-111.

[67] Other trajectories are also possible. The popularization of science is a complex phenomenon that encompasses disparate activities. For example, craft organizations can generate scientific knowledge that becomes popularized, and perhaps makes its way into institutions of official science. See R. Cooter and S. Pumpfrey, "Separate Spheres and Public Places: Reflections on the History of Science Popularization and Science in Public Culture," *History of Science* 32 (1994): 237-267.

books, newspapers, other print media, movies, and online blogs, among many others.[68] In "Made Up Minds," I examine popular artifacts that serve as vehicles for the popularization of conceptions of mind, thereby contributing to our knowledge of this process, at least indirectly. Yet this project does not focus on modes or processes of diffusion. Instead, like many other rhetorical studies of science in culture, it is better described as a study of popularization in a second sense, the life of scientific ideas in the public.

It is possible to investigate the rhetorical dimensions of science in public culture in a number of different ways. And before accounting for my own approach, an investigation oriented toward rhetorical invention, I will briefly traverse some of these possibilities, describing both some of the approaches scholars have taken, together with some of the insights they have gleaned. Some rhetorical accounts examine the textual features of popularized works, comparing the strategies found therein with those present in specialized texts. Jeanne Fahnestock, who uses this method, proposes the term "accommodation" to identify the rhetorical adaptation of scientific observations to popular contexts. "Accommodations," she observes, include a shift in rhetorical genres, from the forensic to the epideictic. While scientific reports evaluate evidence, popular accounts of science, such as the articles one finds in newspapers and magazines, are wont to celebrate findings. As Fahnestock explains, popularized science reports emphasize uniqueness, include fewer hedges and qualifications, and exhibit a tendency toward exaggeration.[69] Rhetorical framing can also account for some of the differences between scholarly and popular presentations of scientific material. Frames are patterns of expectation that guide the presentation and reception of discourse in a given context. The features of the text

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[68] There exists a good deal of literature on this subject. For an overview, see ibid.
[69] Jeanne Fahnestock, "Accommodating Science."

thereby constitute only one half of the explanation as frames "exist partly in the text, partly in the head."[70]

One can also examine the public life of scientific discourses through what might be described as a wide-angle lens, considering large-scale patterns and dynamics rather than singular cases. Celeste Condit's *The Meanings of the Gene* is an example of this type of project. Aiming to discover what "gene" meant in twentieth century public discourse, she collected and analyzed more than a thousand artifacts, including magazines, newspapers, and television coverage, from the period from 1900 to 1995. After quantitative analysis, she read these artifacts through the perspective of rhetorical criticism and characterized four "rhetorical formations," or "the relatively co-occurrent sets of discourse – metaphors, narratives, values, and so on . . . located in each time period."[71] These included the classical era of genetics, family genetics, experimental genetics, and medical genetics. "Made Up Minds" does not employ this sort of analysis, though a project that tracks the meaning of the mind across different rhetorical formations would be quite informative.

Some rhetorical analyses of science shift the emphasis away from artifacts, whether taken individually or en masse, and toward the audience that encounters them. As John Lyne and Henry Howe suggest, "One way to begin constructing a rhetoric of science . . . is to follow what happens when specific scientific arguments go before different audiences."[72] Tracking the

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[70] Michelle Gibbons, "Seeing the Mind in the Matter: Functional Brain Imaging as Framed Visual Argument," *Argumentation and Advocacy* 43 (2007): 180.
[71] Celese Condit, *The Meanings of the Gene*, 14. For a very different sort of wide-ranging, though somewhat disjointed account, see David J. Tietge, *Rational Rhetoric: The Role of Science in Popular Discourse* (West Lafayette, IN: Parlor Press, 2008).
[72] John Lyne and Henry Howe, "Punctuated Equilibria: Rhetorical Dynamics of a Scientific Controversy," *Quarterly Journal of Speech* 72 (1986): 132. On scientific texts and audiences, see also Charles Bazerman, "Physicists Reading Physics," *Written Communication* 2.1 (1985): 3-23; Randy Allen Harris, ed. *Rhetoric and Incommensurability* (West Lafayette, IN: Parlor Press, 2005). For the critique that the rhetoric of science spends too

paleontological theory of 'punctuated equilibria' across contexts and audiences, they found that experts do not own their expertise, but that audiences can appropriate it for their own purposes, which may moreover be quite at odds with the original experts' aims. For instance, creationists put Gould's critiques of Darwinian toward their creationist cause, construing Gould as an ally in spite of his firm commitment to evolutionary science.

In *Shaping Science with Rhetoric*, Leah Ceccarelli developed an innovative rhetorical methodology for analyzing how audiences respond to scientific texts, which she called textual-intertextual analysis. Using this method, she looked at scientific texts to discover an authorial strategy and then to audience response in order to determine its success. Ceccarelli was primarily interested in how scientists across different disciplines responded to works that aimed to forge interdisciplinary study. But her textual-intertextual method offers a compelling direction for studies of the rhetoric of science in public/popular culture as well, particularly given the recent and dramatic increase in readily-accessible audience response to scientific discourse that has accompanied new media technology and the appearance of the online comment function.[73] This dissertation's final case study examines some contemporary audience response of this type in its analysis of a blog discussion of an image of Terri Schiavo's brain.

Contemporary work in the rhetoric of science engages increasingly with the concerns of critical theory and draws upon its conceptual repertoire. While the ideological implications of science do not carry the same capital as certain other topics, such as gender, social protest, and so forth, science guides how people think of themselves, other people, and their place in the world

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much time on textual analysis and not enough on audience, see Steve Fuller, "'Rhetoric of Science': A Doubly Vexed Expression," *Southern Communication Journal* 58 (1993): 306-311.

[73] For a call for greater attention to reception in the rhetoric of science, see Danette Paul, Davida Charney, and Aimee Kendall, "Moving Beyond the Moment: Reception Studies in the Rhetoric of Science," *Journal of Business and Technical Communication* 15.3 (2001): 372-399. For a response, see Randy Allen Harris "Reception Studies in the Rhetoric of Science," *Technical Communication Quarterly* 14.3 (2005): 249-255.

in fundamental ways.[74] Darwinism and Newtonianism, for example, both shaped the way the modern person sees his or her position in the natural world. Science, furthermore, can act as an instrument of power that furthers certain ideological interests. Critical rhetoric of science studies often analyze how science creates and/or sustains inequities based on race, gender, and sexuality.[75] Some rhetoricians of science have developed a specifically materialist approach to rhetoric, arguing that it can best account for how the discursive practices of science participate in networks of power.[76] In addition, it deserves note that some critical rhetoric of science studies have taken psychiatry and/or brain scans as their subject.[77] The critical rhetoric of science moreover coincides with science studies work in other disciplines that draws from the same critical tradition, though is not explicitly rhetorical.[78]

Finally, as scholars increasing attend to visual images as a mode of scientific communication, a visual rhetoric of science has begun to emerge. In part, attention to visual representation reflects a growing interest in visuality in the communication field more broadly.[79] Communication scholars have identified a number of key considerations with respect to visual

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[74] On this point, see Cooter and Pumpfrey, "Separate Spheres and Public Places."
[75] Celeste M. Condit, "Race and Genetics from a Modal Materialist Perspective," *Quarterly Journal of Speech* 94.4 (2008): 383-406; Mary Lay, Laura Gurak, Clare Gravon, and Cynthia Myntti, eds., *Body Talk: Rhetoric, Technology, Reproduction* (Madison: University of Wisconsin Press, 2000); Robert Alan Brookey, *Reinventing the Male Homosexual: The Rhetoric and Power of the Gay Gene* (Bloomington: Indiana University Press, 2002).
[76] See John Lynch, "Articulating Scientific Practice: Understanding Dean Hamer's 'Gay Gene' Study as Overlapping Material, Social, and Rhetorical Registers," *Quarterly Journal of Speech* 95.4 (2009): 435-456; Condit, "Race and Genetics from a Modal Materialist Perspective."
[77] Davi Johnson, "Psychiatric Power: The Post-Museum as a Site of Rhetorical Alignment," *Communication and Critical/Cultural Studies* 5.4 (2008): 344-362; Davi Johnson, "How Do You Know Unless You Look?: Brain Imaging, Biopower, and Practical Neuroscience," *Journal of Medical Humanities* 29.3 (2008): 147-161; S. Scott Graham, "Agency and the Rhetoric of Medicine: Biomedical Brain Scans and the Ontology of Fibromyalgia," *Technical Communication Quarterly* 18.4 (2009): 376-404.
[78] For an overview of the critical studies of science literature, see David Hess, "Critical and Cultural Studies of Science and Technology," in *Science Studies: An Advanced Introduction* (New York: New York University Press, 1997), 113-114. Notable examples include Sandra Harding, *The Science Question in Feminism* (Milton Keynes: Open University Press, 1986); N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999).
[79] For an overview of visual rhetoric studies and a selection of key works, see Lester Olson, Cara Finnegan, and Diane Hope, eds., *Visual Rhetoric: A Reader in Communication and American Culture* (Thousand Oaks, CA: Sage, 2008).

representation in science, including visual literacy in science communication, the ethical questions that confront technical communicators who make use of images, and the relationship between images and the 'hardness' of a scientific discipline.[80] Carlos Salinas recommends that we think about scientific images in terms of Aristotle's concept of techné while Cameron Shelley has proposed a distinction between "rhetorical" and "demonstrative" modes of visual argument.[81] Alan Gross has recently written articles about visual representation in science, one of which discusses visual representations of the brain.[82] Furthermore, media and cultural studies scholars have done important research into scientific images as culturally embedded artifacts, examining medical and scientific representations of the body in particular.[83]

In "Made Up Minds," I study the mind's conceptual realization in artifacts that circulate in public culture and can be mapped as scientific. In doing so, I provide some degree of insight into several dimensions of science in public/popular culture: popularization, visualization, accommodation, and audience reception, among others. This project also suggests some of the mechanisms by which science surreptitiously, yet pervasively, shapes beliefs in an everyday context. Therefore it contributes to the critical rhetoric of science project of disclosing the means

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[80] Jean Trumbo, "Visual Literacy and Science Communication," *Science Communication* 20.4 (1999): 409-425; Nancy Allen, "Ethics and Visual Rhetorics: Seeing's Not Believing Anymore," *Technical Communication Quarterly* 5.1 (1996): 87-105; Darin J. Arsenault, Laurence D. Smith, and Edith A. Beauchamp, "Visual Inscriptions in the Scientific Hierarchy," *Science Communication* 27.3 (2006): 376-428.

[81] Carlos Salinas, "Technical Rhetoricians and the Art of Configuring Images," *Technical Communication Quarterly* 11 (2002): 165-83; Cameron Shelley, "Rhetorical and Demonstrative Modes of Visual Argument: Looking at Images of Human Evolution," *Argumentation and Advocacy* 33 (1996): 53-68.

[82] Alan Gross, "The Verbal and the Visual in Science: A Heideggerian Perspective," *Science in Context* 19 (2006): 443-474; Alan Gross, "The Brains in *Brain*: The Co-Evolution of Localization and Its Images." *Journal of the History of the Neurosciences* 17.3 (2008): 380-392. Other work on images of the mind/brain includes Joe Dumit, *Picturing Personhood: Brain Scans and Biomedical Identity* (Princeton: Princeton University Press, 2004).

[83] See, for example, Carol Stabile, "Shooting the Mother: Fetal Photography and the Politics of Disappearance," *Camera Obscura* 28 (1992): 178-205; José van Dijck, *The Transparent Body: A Cultural Analysis of Medical Imaging* (Seattle: University of Washington Press, 2005). Philosophers have also done important work on the relationship between visuality and the scientific production of truth claims, while art history has a long tradition of research into scientific images. Much of the early research concerned aesthetically-pleasing images, such as Leonardo DaVinci's drawings and the anatomical images from Vesalius's *De Humani Corporis Fabrica*. However, there has been a recent turn in art history toward everyday scientific images.

by which science acts as an instrument of power. But this project is uniquely focused on rhetorical invention, and as such its key contribution to the rhetoric of science is its illumination of how ordinary people make use of popular sciences, particularly those of the mind, in a generative manner. In the next and final section of this introduction, I will outline this project's approach to the study of rhetorical invention, and I will conclude by detailing the principles that guided its selection of cases.

1.4 THEORETICAL ORIENTATION AND CASE STUDY SELECTION

There exist many possible ways to think about conceptions of the mind in public culture from a rhetorical perspective. For example, the UNCF slogan, "A Mind is a Terrible Thing to Waste," might be described as a synecdoche in which a part (the mind) is used to represent the person as a whole. One might say that referencing the mind gives presence, in Chaim Perelman and Lucie Olbrechts-Tyteca's sense of that term, to the thinking part of a person such that today's frequent invocation of the mind (and avoidance of soul or spirit) has consequences for our understanding of a person as a largely cognitive being. The mind might be a theme that pervades culture, a bearer of ideology, or many other things. The dissertation's title includes the phrase "Made Up Minds" for two reasons. For one, people make up minds; they create contingent discursive conceptions of what the mind is and what it does. Furthermore, they also use these conceptions of the mind to make up their minds about other things. As this project demonstrates, one of the mind's most important roles is as an inventional resource.

Cicero identified invention as one of the five fundamental divisions of rhetoric, together with arrangement, style, memory, and delivery. He defined it as the discovery of arguments,

though what that means is debatable, and moreover it is tied to how one conceives of rhetoric more broadly. If one believes in an epistemic rhetoric, invention is a sense-making activity by which one arrives at new insights. If, on the other hand, one's rhetoric is managerial, invention involves tracking down content to support a position one already holds. Therefore, depending on one's perspective, rhetorical invention might involve moving toward the unknown or setting forth on the basis of the already known. Arguments in support of each of these positions played out in a number of places and leave us with some compelling reasons to acknowledge that we understand the world by and through language.[84] Even a simple act of naming has epistemic implications. I see an unfamiliar object and my recognition of it as a discrete entity is irrevocably tied to giving it a name, even if only to myself, and even if it is as vague as "that thing." Our discursive activities are inherently sense-making activities and our exchanges with others move us to certain understandings of the world, regardless of any persuasive intent. It is not always, or perhaps not even often, that we figure things out and then proceed to put our determinations into words. Instead, language is part of our working out of the world. Yet, it is also important to recognize that rhetoric is not solely epistemic, it is also persuasive, poetic, constitutive, and many other things besides.

This project regards rhetorical invention as a versatile process that includes epistemic movements toward understanding, the generation of content to support a position one already holds, or even simply coming up with things to say in order to fill up allotted space, as in an undergraduate's quest to produce a required ten pages of text. G.P. Quackenbos used a phrase that nicely allows for the co-existence of these multiple senses of the term, describing invention

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[84] On this issue see, Robert L. Scott, "On Viewing Rhetoric as Epistemic," *Central States Speech Journal* 18 (1967): 9-16; Barry Brummett, "A Eulogy for Epistemic Rhetoric," *Quarterly Journal of Speech* 76.1 (1990): 69-72.

as "the process of evolving thoughts in connection with any particular subject."[85] His definition expresses the principle that unites various understandings of invention, the sense of movement toward something, which can either be proscribed in advance, as in the generation of content, or can emerge organically out of the process, as in sense-making. As a fungible abstraction the mind is a fruitful inventional resource in both senses of the term, enabling one to produce content and to make sense of the world in all manner of ways.

In *Rhetorical Hermeneutics*, Dilip Gaonkar described the inventional approach to the rhetoric of science as one that "focuses on the discursive dimension of knowledge production in science."[86] Gaonkar's description characterizes much of the work on invention in the rhetoric of science. For instance, Iowa's Project on Rhetoric of Inquiry (POROI), with its study of the processes of professional inquiry, might be described in this manner. This dissertation's approach to the study of science and invention is notably different, however. As a study of the rhetoric of science in public culture, it looks not at knowledge production in science, but at how scientific ideas become resources beyond the institutions that generated them. In other words, in "Made Up Minds" I examine how science serves as what Kenneth Burke would call equipment for living. According to Burke, equipment for living consists of the resources that help us to deal with the challenges of everyday life. It provides comfort by giving us tools with which to "size

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[85] G.P. Quackenbos, *Advanced Course of Composition and Rhetoric: A Series of Practical Lessons* (New York: American Book Company, 1854), 325. Whether Quackenbos, a minor figure in rhetoric, intended multiplicity is another question entirely.

[86] Dilip Gaonkar, "The Idea of Rhetoric in the Rhetoric of Science," 42. For examples of this type of analysis see Herbert W. Simons, ed., *The Rhetorical Turn: Invention and Persuasion in the Conduct of Inquiry* (Chicago: University of Chicago Press, 1990); Lawrence Prelli, *A Rhetoric of Science: Inventing Scientific Discourse*. See also, Carolyn R. Miller, "Invention in Technical and Scientific Discourse: A Prospective Study," in *Research in Technical Communication: A Bibliographic Sourcebook*, ed., Michael G. Moran and Debra Journet (Westport, CT: Greenwood, 1985), 117-162.

up situations in various ways" and by "arming us to confront perplexities and risks."[87] Burke specifically identifies literature and myth as equipment for living, but science can be put toward the very same purpose, and is perhaps increasingly so in contemporary society. We use science, and more specifically its ideas about the mind, as a resource with which to navigate through all manner of circumstances and situations.[88]

The mind is a powerful inventional resource in part because it provides a way of understanding external behaviors as emanating from a person's inner self; it also acts as a core concept that organizes inner-causes-outer accounts of behavior. To take a simple example, imagine that a man is exhibiting some very strange behaviors; he walks out into the middle of the road, bangs on cars and mumbles about an impending alien invasion. To make sense of those behaviors we might describe that person as mentally ill, an explanation that rests on the presumption that people's minds direct their behavior and that these minds can either be sick or well. One might alternately suggest that the man is out of his mind on drugs, that his mind is not functioning as usual. The precise nature of one's conception of the mind would have important consequences. If one believes that the man is mentally ill, and that minds are most often made such by early childhood experiences, then the man may be helped by psychotherapy. If the mind is the physical stuff of the brain then psychiatric medication would appear to be the best way to improve his condition. If the man is out of his mind on some sort of substance, one would merely have to wait until it returns to normal.

Predecessors of today's mind of course served as explanatory resources in a similar manner. In the *Phaedrus*, Socrates describes the psyche as the "source and first principle of

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[87] Kenneth Burke, *The Philosophy of Literary Form: Studies in Symbolic Action* (Berkeley: University of California Press, 1973), 304; ibid., 61.

[88] Scholars from the public understanding of science movement have addressed the issue of the everyday uses of science from a sociological perspective. See, for example, Irwin and Wynne, *Misunderstanding Science*.

movement for the other things which move."[89] In other words, the psyche is an internal causal principle that can be used to account for external worldly happenings.[90] Even the Hebrew concepts described earlier in this chapter, *nepesh*, *rauch*, and *leb* served as discursive resources in a like manner. For example, consider the Old Testament proverb, "A worker's *nepesh* works for him; his mouth urges him on."[91] This proverb illustrates how *nepesh* was a means to account for human motivation; one can point to this inner locale as the causal force for productive labor. Another Old Testament passage remarks, "When you go into your neighbour's vineyard, you may eat your fill of grapes according to your *nepesh*."[92] In this case, *nepesh* is also a way of accounting for consumption, and when a man gorges on grapes, we can say that he does so because of the extent of his *nepesh*. Moreover these are just two examples of how earlier conceptions of a person's inner dimension similarly served as resources for making sense of the world.

Situating the mind in a particular physical location transfers some explanatory power to the material stuff of the body, making it part of the inventional process. Phrenologists believed that the contours of the brain indicate the nature of the mind. As a result, if a person spoke eloquently, they could account for it by pointing to her large forehead; she has a large organ of language, they might say, so she speaks well. Though the explanations given by today's scientists differ from those of phrenologists, the same principle holds; explanatory power is given to the physical stuff of the brain. Examples of contemporary brain-based explanations abound, and they are invoked to explain all manner of behaviors. To give just a single example,

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[89] Plato, *Phaedrus*, trans. Christopher Rowe (London: Penguin Books, 2005), 245c10-d1.
[90] See Elizabeth S. Kinion and Katharine Y. Kolcaba, "Plato's Model of the Psyche: A Holistic Model for Nursing Interventions," *Journal of Holistic Nursing* 10.3 (1992): 218-230.
[91] As qtd. in Wolff, *Anthropology of the Old Testament*, 16.
[92] Ibid.

a *New York Times* article recently gave an account of research regarding the tendency for lost hikers to inadvertently walk in circles on a cloudy day. Scientists performing the research explained that this occurs because "the brain appears to be lacking a fundamental visual cue to help make sense of the jumble of other data it is receiving."[93] This principle, furthermore, does not only apply in the case of the brain, but to any imagined physical instantiation. Let us imagine that someone locates the mind in the heart and thereby transfers explanatory power to it. That person might suppose that one hikes in circles when lost on a cloudy day because anxiety causes the heart to flutter and lose its directional bearing.

It is important to observe that in "Made Up Minds," I do not limit my analysis to the verbal modality. Like verbal discourse, images constitute a means by which we "evolve thoughts in relation to an subject." Image-making is a way to generate content, and one of the paths we can take in order to persuade others to adopt a particular position; indeed, images make for highly effective arguments. Images also serve epistemic purposes and participate in the process of sense-making. An architect, for instance, might sketch out the contours of a building's design as a way to figure out the details of its structure. Images of the mind similarly serve multiple inventional ends. During the nineteenth century, I might persuade someone that Mr. Swearengen is a dangerous man by displaying a phrenological diagram of the mind's organization and explaining how Swearengen's head displays a pattern of bumps indicative of a tendency toward crime. Images of the mind might also play a role in sense making in a manner comparable to the architect's sketch. As the third case study will discuss, today's technologies for producing images of brain function can be part of a process of figuring out answers to questions, such as whether a person should be removed from life support or not.

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[93] Henry Fountain, "Hiking around in Circles? Probably, Study Says," *New York Times*, August 21, 2009, http://www.nytimes.com/2009/08/21/science/21circles.html [accessed July 9, 2010].

This project draws from the classical study of rhetorical invention, for which three particular terms are key: *topoi*, *kairos*, and *stasis*. These concepts formed the core of ancient thought regarding invention and serve as touchstones for discussions of the subject today. *Topoi* are places to go for argument; they are inferential patterns that one can turn to as aids to evolving thoughts.[94] Aristotle wrote a good deal about the topics, as did Cicero in his *De Oratore*. *Kairos* is closely associated with the Sophists. The term can be translated as "the opportune time" and has to do with the originating impetus for discourse. According to the sophists, discourse begins with a productive moment of conflict, a kairotic circumstance. *Stasis* identifies a strategy for devising material by asking certain types of questions. When confronted with a subject, one asks a series of questions of quality, for example: is it good or bad? is it advantageous? moral? Posing such questions allows one to find and develop the major issues surrounding a subject.[95]

Though classical ideas about invention, together with other work on invention from the rhetorical tradition, inform this project in meaningful ways, "Made Up Minds" is not an application of given concepts to the case of the mind. Instead, its method of rhetorical criticism is best described as generative. Though it begins with an overarching question regarding the mind's utility as an inventional resource in public culture, it does not predetermine the mode of criticism with which to approach each artifact. Instead, close analysis of the artifact and its discursive patterns generates the explanatory schema. As S.K. Foss explains, generative criticism allows you to "generate units of analysis or an explanation from your artifact rather

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[94] See Karl Wallace, "Topoi and the Problem of Invention," *Quarterly Journal of Speech* 58 (1972): 387-395; Michael Leff, "Up from Theory: Or I Fought the Topoi and the Topoi Won," *Rhetoric Society Quarterly* 36 (2006): 203-211.

[95] See Michael Carter, "*Stasis* and *Kairos*: Principles of Social Construction in Classical Rhetoric," *Rhetoric Review* 7.1 (1988): 97-112; James L. Kinneavy and Catherine R. Eskin, "*Kairos* in Aristotle's *Rhetoric*," *Written Communication* (1994): 131-142; Carolyn Miller, "The Aristotelian *Topos*: Hunting for Novelty," in *Rereading Aristotle's Rhetoric*, ed. Alan Gross and Arthur Walzer (Carbondale: Southern Illinois Press, 2000), 130-146. For an overview of rhetorical invention, see Janice Lauer, *Invention in Rhetoric and Composition* (West Lafayette, IN: Parlor Press, 2004).

than from previously developed, formal methods of criticism."[96] Though one does not approach an artifact with a preconceived conceptual schema when using the generative method, one still might ultimately discover that an established mode of criticism provides the best account of it. Alternatively, one might devise a unit of analysis that works in conjunction with or acts as a supplement to an established mode of criticism. But sometimes one finds that developing a new explanatory schema best accounts for the artifact. This dissertation, it turns out, does all three.

Chapter Two – Phrenological Invention and the Mind as Ouija Board introduces a concept called "resourcing" to identify one of the means by which phrenology enabled rhetorical invention, or "the evolution of thoughts in connection with a subject." Resourcing accounts for how preexisting beliefs could be channeled through the phrenological system and thereby reproduced as new and seemingly objective. For example, if I believe that someone is a terrible person, I can make this claim by pointing to their criminal phrenological organization rather than my gut instinct. During the nineteenth century, resourcing often allowed racist beliefs to be falsely construed as the unbiased findings of objective system of knowledge.

In Chapter Three – Insidious Minds: Freud as Psychodoxa in Spock's *Baby and Child Care*, I examine Benjamin Spock's use of Freudian ideas about the mind in his generation of child-rearing advice. As a result of doing so, I suggest that ideas about the mind serve inventive ends as doxa. Freudian theories about the mind became so widely popularized as to became doxastic "common sense" that people used not only to figure out how to raise children, but to make sense of much else in their lives besides. I argue that there are compelling reasons to consider beliefs about the mind as constituting a distinctive category of doxa, which I term

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[96] Sonja K. Foss, "Generative Criticism," in *Rhetorical Criticism*, ed. Sonja K. Foss (Long Grove, IL: Waveland Press, 2004), 411.

"psychodoxa." My analysis details precisely how – as doxa - Freudian beliefs about the mind were used as discursive resources in Benjamin Spock's *Baby and Child Care*.

Finally, Chapter Four – Is Anyone in There? Terri Schiavo and the Brain-Begotten Mind focuses on a conception of the mind that predominates in the U.S. today, the cerebral self, or the idea that mind is brain. It considers this way of thinking about the mind in relation to the case of Terri Schiavo, the brain-injured Florida woman at the center of what became a nationwide end-of-life debate. In this chapter, I argue that the cerebral self motivates the generation of a particular form of visual discourse - brain images - and that the creation of these images constitutes an act of rhetorical invention. "Is Anyone In There?" explains how one produces brain images by making strategic use of recalcitrance. The chapter ends with an account of how recalcitrance factors into the public discussion of the image of Terri Schiavo's brain.

As a series of case studies, this dissertation is structured in a similar manner to a good deal of other work in the field. Case studies have been a productive approach to the study of the rhetoric of science, and many notable works in the field employ this methodology.[97] Case studies are widely used for good reason. At their best, they provide insight into a particular historical site, perhaps in the form of an event, controversy, or text while at the same time inviting generalization to cases beyond. "Made Up Minds" certainly provides insight into its particular sites of analysis. In order to analyze the mind in public culture, each case study engages in historical contextualization, and situates its key artifact(s) within its historical and cultural context. Each of these historically grounded case studies therefore provides a novel perspective on a specific episode in the history of science. More specifically, through its

[97] Dilip Gaonkar acknowledges the prevalence of this approach, "The Idea of Rhetoric in the Rhetoric of Science," 41.

examination of specific episodes, "Made Up Minds" furthers our knowledge of the history of popular science, or the life of scientific ideas in public culture.

Given that this project examines how a certain concept has done rhetorical work in different periods in history, we might even describe "Made Up Minds" as a historical study of rhetorical use.[98] In other words, this dissertation furthers our understanding of rhetorical history by enabling us to appreciate the role a certain concept has played in that history. In *Crafting Equality*, Celeste Condit and John Lucaites similarly engaged in a historical study of rhetorical use by tracing the rhetorical history of the term "equality." As David Zarefsky explains, "By studying important historical events from a rhetorical perspective, one can see significant aspects about those events that other perspectives miss."[99] While agreeing with that remark, I would add that rhetoric's potential contribution to rhetorical history does not only pertain to a major event driven history, but the history of the everyday and the popular text as well.

This dissertation's case studies also invite generalization. Given the ubiquity and utility of the concept of mind, this dissertation's insights into how the mind serves as an inventional resource are of considerable consequence. However its implications reach even beyond this particular subject matter. As David Zarefsky describes,

> Individual cases, however, also contribute to theory. They suggest models, norms, or exemplars; they offer perspective by incongruity on the ordinary cases; they yield insights that may apply by analogy either to ordinary cases or to other extraordinary cases; and they sometimes yield a 'theory of the case': a better understanding of an unusual situation important in its own right.[100]

The mind is not a singular concept, but one of an array of abstractions for making sense of human behavior as originating from a person's inner being. It is a particular type of concept of

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[98] See David Zarefsky, "Four Senses of Rhetorical History," in *Doing Rhetorical History: Concepts and Cases*, ed., Kathleen Turner (Tuscaloosa: University of Alabama Press, 1998), 29.
[99] Ibid., 30.
[100] Ibid., 25.

which there exist other significant examples. This dissertation's insights into how three modern conceptions of the mind serve as inventional resources, therefore, have the potential not only to inform us about other envisionings of the mind, and what it might mean to think of them as resources for rhetorical invention, but about other categories of selfhood as well.

Temperament, for example, is another historically significant theoretical entity that characterizes some facet of a person's identity and serves as a resource for making sense of the social world. In the ancient world, it was believed that the balance of the four humors, blood, black bile, yellow bile, and phlegm, determined temperament. Hippocrates, Galen, and others developed and medicalized the theory, which was related to the theory of humorism. When confronted with a phenomenon such as depression, one might explain it in terms of humors by explaining, "it's because of an excess of black bile." The theory was highly influential for many years and even as it has mostly become dissociated from humorism, the concept of temperament still persists. Phrenologists included temperament as a contributing factor to personality. Benjamin Spock did a study of inborn temperament in 1948 and talked about it in his "The Beginning of Temperament."[101] The issue of temperament even became important during the 2008 election; John McCain faced an onslaught of criticism for his erratic behavior and people doubted whether he had what is regarded as the ideal of all temperaments, sound temperament.

Related to such concepts as mind and temperament are several that do in fact have a concrete material referent, but are nonetheless used to identify abstract aspects of character. For example, blood has been a historically significant way to characterize a dimension of the inner self. The idea of noble or aristocratic blood articulated a particular sort of hereditary self that gave one an exalted, and even more importantly, inimitable social status. In Japan, blood type is

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[101] See Lynn Bloom, *Doctor Spock: Biography of a Conservative Radical* (Indianapolis: Bobbs-Merrill, 1972), 156-157.

still popularly considered an underlying basis of personality and one might account for someone's character traits by explaining that they result from her particular blood type. Some of these notions are reflected, at least colloquially, in our language with phrases such as "it's not in her blood." Modern science has provided a much more precise alternative than blood, however: genetics. Now we can explain someone's depression by explaining that it is in her genes, or in her DNA. As with noble blood, it identifies a sort of hereditary self. Heart is another example of this type, and there are others as well, including some with only minimal explanatory power, such as backbone.

Given that the mind is a particular type of concept, not a peerless discursive phenomenon, this dissertation's insights are potentially generalizable. As a result of its generative approach, moreover, it derives new perspectives for thinking about this particular type of concept as an inventional resource. For example, the idea of "resourcing," introduced in the first chapter, may allow us to explain how other concepts that characterize aspects of our inner identity, such as temperament, serve as sites through which preconceptions can be channeled. We might also consider whether there have been any attempts to use recalcitrance to generate discourse about these other categories of selfhood. Therefore, this project's contributions to rhetorical studies go beyond the insights it provides into how the mind has served as a rhetorical resource at various periods in our rhetorical history, it also tells us something important about rhetorical invention. Therefore, "Made Up Minds" is a study in both rhetorical history and rhetorical theory.

Before turning to the first of this project's case studies, I will briefly explain the rationale that guided the selection of sites for analysis. Each of the case studies that comprise "Made Up Minds" focuses on a conception of mind that was popular in fairly recent U.S. history; the most antiquated view of the mind it will examine will be nineteenth-century phrenology. Primarily,

this is a necessary act of selection. While a more comprehensive study may be possible in cases where the object of study is highly defined and specific, it is practically impossible in the case of a social category that is simultaneously as amorphous and pervasive as the mind.[102] The history of the mind's envisionings is simply too long and varied to permit breadth. The choice of which cases to focus on is also strategically motivated. Choosing case studies from the nineteenth century onward limits the dissertation to a period when the mind was a dominant category for accounting for the inner 'I' that makes us human; it has also been a period in which the brain has largely been regarded as the mind's seat.

Other principles also guided the selection of cases. While some ways of thinking about the mind are shared among members of a community, others are quite idiosyncratic. For example, a famous schizophrenic patient, James Tilly Matthews, believed that a gang of thugs controlled his mind by using a machine he called an airloom, a belief not likely shared by many, if any.[103] Yet other conceptions of the mind are shared primarily within scholarly communities, such as Lacanian psychoanalysis and Penfield diagrams. Because "Made Up Minds" aims to discover how the mind serves as equipment for living in everyday affairs, it focuses on conceptions of the mind that were very widely known in public/popular culture. Therefore it is less concerned with the scholarly and the idiosyncratic than with the ordinary. Phrenology, Freudianism, and the cerebral self are all conceptions of the mind that, in addition to being a product of recent history, were widely known at one time or another (and perhaps still are).

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[102] An example of a very defined and specific study is Tony Bennett and Janet Woollacott's study of the evolving and historically situated construction of James Bond, *Bond and Beyond: The Political Career of a Popular Hero* (New York: Palgrave Macmillan, 1987).

[103] John Haslam wrote about him in 1810. See his *Illustrations of Madness*, ed. Roy Porter (London: Routledge, 1988).

Given their popularity, there exist many artifacts that could feasibly illustrate how each of these conceptions of mind served as a resource. From the numerous possibilities, "Made Up Minds" selected artifacts that are exemplary rather than extraordinary. For example, the phrenology manual it examines was one of many such guides; Spock's book was not the only one to provide child-rearing advice based on a particular conception of mind; and there exist CAT scans of many brains in addition to Terri Schiavo's. Each of the artifacts was also selected because it was popular and found its way into many hands and before many eyes and did so at the time when the particular conception of mind it concerns was at the height of its popularity.

2.0 CHAPTER TWO – PHRENOLOGICAL INVENTION AND THE MIND AS OUIJA BOARD

PHRENOLOGY, n. The science of picking the pocket through the scalp. It consists in locating and exploiting the organ that one is a dupe with - Ambrose Bierce[1]

2.1 INTRODUCTION

Approximately one year after the Civil War began, the *American Phrenological Journal* printed the following question from a reader, "What organs actuate the Northern and Southern people respectively in the present war?"[2] It was a simple question, but one with compelling implications. One could account for the Civil War in any number of ways, historically, politically, or economically, for example; this reader, however, wanted a phrenological explanation of the motivations underlying this bloody, complicated, and ongoing war. More specifically, he or she asked the journal to identify the phrenological organs that drove the participants in the war.

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[1] Ambrose Bierce, *The Devil's Dictionary*, vol. 7 of *The Collected Works of Ambrose Bierce* (New York: The Neale Publishing Company, 1911), 252.
[2] "To Correspondents," *American Phrenological Journal* (February 1862): 44.

According to phrenologists, the mind is comprised of a set of phrenological organs, each of which is located at a distinct cranial location and is responsible for a specific function. For example, they proposed that the organ of calculation, supposed to underlie one's ability with numbers, is situated just above the eye. Organs responsible for pairing instinct, cautiousness, and concentration, among others, were accordingly believed to lie at other cerebral locations. A central tenet of phrenological doctrine was that the size of a phrenological organ is closely related to the power of its function, and that size and power, moreover, vary between individuals. But perhaps most importantly, at least in terms of practical application, phrenologists believed it was possible to use the shape of the skull to determine the size of the organs. In other words, one could look at or touch someone's head in order get a sense of his or her mental characteristics.[3]

Phrenology promised great inventional utility in a way that is not true of all physical manifestations of character. For example, convolutions of the brain's cortical matter, which some phrenologists suggested were also a mark of mental status, could not be harnessed as a resource in the same manner because there existed no means to discern them in a living human brain.[4] The phrenological system, with its need for no equipment other than the sensory organs one was born with, was, in principle, a resource available to all. If we can assess the mind through its material manifestations, we can readily corral it as an explanatory resource. For example, in order to explain why one person masters arithmetic effortlessly while others struggle with the subject, we might look for a large calculation organ protruding above the math whizz's eye. One might also turn to phrenology to address more complex social issues, as in the

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[3] For overviews of the history of phrenology, see Stephen Tomlinson, *Head Masters: Phrenology, Secular Education, and Nineteenth-Century Social Thought* (Tuscaloosa: The University of Alabama Press, 2005); John D. Davies, *Phrenology, Fad and Science: A 19th-Century Crusade* (New Haven: Yale University Press, 1955).
[4] Orson Fowler and Lorenzo Fowler, *New Illustrated Self-Instructor in Phrenology and Physiology* (New York: Fowler and Wells, 1959), 34.

aforementioned question to the *American Phrenological Journal* regarding the Civil War. The *Journal*'s editors responded to the reader's request by offering up an unhesitating phrenological account of the war,

> The dominant sentiment of the North is a regard for justice, national security, liberty, and law, and this requires the best action of the moral and intellectual organs. The South is controlled by leaders who are actuated by a morbid love of power, which revolts at being governed by a friendly honest majority according to the forms of the best government the world ever saw. You will infer Self-Esteem and Combativeness to be larger than Conscientiousness in those leaders.[5]

Given this explanation of the organs rousing the war, it hardly seems surprising that the *American Phrenological Journal* was published by Northerners based in New York.[6]

This chapter investigates how the phrenological mind served as an inventional resource in nineteenth-century American public culture. At that time, phrenology appears have played an explanatory role that in many ways parallels neuroscience in the twenty-first century. For example, it is possible to imagine a contemporary analogue to the question about the organs actuating the North and South during the Civil War. Today, someone might write a letter to a journal asking, "what do brain scans tell us about the terrorist mind?" The twenty-first century has its own wars, and its own means to understand the mind. Yet, the spirit of the question remains the same; in both cases, a science of "the mind" is invoked as a means to evolve thoughts regarding practical affairs. Moreover, as neuroscience is today, phrenology was both an influential and pervasive cultural discourse.

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[5] "To Correspondents," *American Phrenological Journal* (February 1862): 44.

[6] The journal's editors promoted the union cause and were vehemently against slavery. In response to a question posed by a reader asking whether or not slavery was a natural institution, the editor(s) replied "it is just as natural as human selfishness and sinfulness, just as Scriptural as wrong and crime, and just as much a Divine institution as the grog-shop, the brothel, or the gambling hell, and no more so," "Slavery," *American Phrenological Journal* (October 1863): 114. See also "To Correspondents," *American Phrenological Journal* (November 1862): 117.

Because phrenology is now viewed as quackery, it is often ignored or dismissed as an inconsequential nineteenth-century fad. However, phrenology was neither the idiosyncratic interest of a few isolated individuals nor a fringe movement at the outskirts of society. It was instead a mainstream cultural phenomenon with wide scope and significant impact on nineteenth-century American culture.[7] Phrenologists toured, giving lectures, and performing phrenological analyses. As John Davies notes, "During the 1830's and 1840's there was probably not a village in the nation that did not entertain at least one visit from an itinerant practical phrenologist."[8] Phrenology had a significant print presence, not only in numerous publications devoted to the subject, such as the *American Phrenological Journal*, but also in general-interest magazines.[9] Phrenology also had prominent adherents, including Walt Whitman, Ralph Waldo Emerson, Margaret Fuller, Horace Mann, and Louisa May Alcott, as well as vast numbers of everyday individuals who financed the pseudoscience through their purchase of phrenological publications and character analyses.[10] The remnants of phrenological discourse even remain with us today; the terms "highbrow" and "lowbrow," for example, come

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[7] For its influence reflected in the fine arts, see Charles Colbert, *A Measure of Perfection: Phrenology and the Fine Arts in America* (Chapel Hill: University of North Carolina Press, 1997). For studies of phrenology in a specific American locale, see Peter McCandless, "Mesmerism and Phrenology in Antebellum Charleston: 'Enough of the Marvellous,'" *Journal of Southern History* 58.2 (1992): 199-230. For its spread among a particular group, see Davis Bitton and Gary L. Bunker "Phrenology Among the Mormons," *Dialogue* 9.1 (1974): 43-61. Of course phrenology also had numerous skeptics and critics, even at the peak of its popularity.

[8] John D. Davies, *Phrenology, Fad and Science*, 32. For an account of a specific itinerant phrenologist, see Janet Rice McCoy, "Dr. R.C. Rutherford, Phrenologist and Lecturer: His Public Humiliation by Matrimony," *Northwest Ohio Quarterly* 74.3/4 (2002): 152-166.

[9] These include the *New England Magazine*, the *Family Magazine*, Silliman's *Journal of Medicine*, the *Democratic Review*, the *Southern Literary Messenger*, and Arthur's *Ladies' Magazine*. Other magazines, such as the *New York Mirror*, *Burton's Gentleman's*, and the *Knickerbocker* either rejected phrenology or expressed an ambivalent attitude toward it, nonetheless, however, finding it worth discussion, Frank Luther Mott, *A History of American Magazines, 1741-1850*, vol. 1 (Cambridge, Mass.: Harvard University Press, 1966), 449.

[10] See: Madeleine B. Stern, "Emerson and Phrenology," *Studies in the American Renaissance* (1984): 213-228; Madeleine B. Stern and Kent Bicknell, "Louisa May Alcott had her Head Examined," *Studies in the American Renaissance* (1995): 277-289; Madeleine B. Stern, "Margaret Fuller and the Phrenologist-Publishers," *Studies in the American Renaissance* (1980): 229-237.

directly from phrenology.[11] As an influential cultural force in the United States during the nineteenth century, phrenology was therefore widely available as a resource for rhetorical invention.

In order to understand phrenology's utility as an inventional resource, this chapter focuses largely on the work of two of the most prominent American phrenologists, the proprietors of the *American Phrenological Journal*, Orson and Lorenzo Fowler. It will begin by detailing how they, and other phrenologists, conceived of the mind. It will then examine how phrenology enabled the generation of discourse, not just about the Civil War, but regarding many other aspects of social life as well. In one sense, the phrenological system did so by enabling an inferential movement from signifier to signified, or from a body part to the facet of character it indicates. Yet this alone does not account for the generation of phrenological explanations, which were just as importantly fashioned out of a process I call "resourcing." Resourcing occurs when an inference is made to appear to arise from one source in a manner that obscures its prior origins. The case of the phrenological mind as a site for resourcing is instructive, in part, because our distance from the historical and cultural conditions of the nineteenth century enables us to recognize a process that we sometimes have more difficulty appreciating in our own time. The analysis moreover allows us to develop an inventional account of phrenology's (pseudo)scientific racism.

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[11] Lawrence W. Levine, *Highbrow/Lowbrow: The Emergence of Cultural Hierarchy in America* (Cambridge: Harvard University Press, 1988), 219-222.

2.2 PHRENOLOGY, THE FOWLERS, AND THE PHRENOLOGICAL MIND

Phrenology had its origins far from the scene of the American Civil War, on another continent, in fact, and in the prior century. Phrenology's founder was a renowned Austrian neuroanatomist and physiologist by the name of Franz Joseph Gall. As a young man, Gall noticed that his classmates with good memories also had prominent eyes. This observation led him to speculate on the modularity of the mind and its instantiation in the brain, ultimately bringing about his formulation of the fundamental principles of phrenology. It was Gall, for instance, who first suggested that an organ's size corresponds to the power of a mental faculty such that the skull's contours indicate its strength. Gall specifically theorized that the mind consists of twenty-seven different faculties, a number that, along with other details, would vary across the numerous iterations of phrenology that followed.[12]

Gall's system, which has only been given in the broadest of outlines, was highly visual, as were all phrenological systems. This is not surprising given that the pseudoscience takes appearance as its site for analysis; in the most simplistic of terms, phrenology says that how you look indicates who you are. The phrenological system, therefore, is grounded in a principle that many people spontaneously intuit – that one can draw conclusions about a person based on his or her appearance. For example, it takes no specialized theory to tell us that reddened checks are a

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[12] Franz Joseph Gall, *On the Functions of the Brain and of Each of its Parts: with Observations on the Possibility of Determining the Instincts, Propensities, and Talents, or the Moral and Intellectual Dispositions of Men and Animals, by the Configuration of the Brain and Head*, 6 vols., trans. Winslow Lewis, Jr. (Boston: Marsh, Capen and Lyon, 1835). For an account of Gall's phrenological efforts, and his place in the history of science, see Robert M. Young, *Mind, Brain, and Adaptation in the Nineteenth Century* (Oxford: Oxford University Press, 1990); John van Wyhe, "The Authority of Human Nature: The *Schädellehre* of Franz Joseph Gall," *The British Journal for the History of Science* 35 (2002): 17-42.

sign of a person's embarrassment.[13] What is distinctive about phrenology, however, is its particular focus on the head together with its effort to systematize the relationship between appearance and character by breaking the human form into discrete units of analysis. Toward the ends of systematization and analysis, phrenologists produced numerous maps, diagrams, and illustrations of the phrenological organs, which served as visual guides to character.[14]

Gall presented his phrenological ideas in a relatively tentative manner, and a cautious form of phrenology initially wound its way among scientific circles. Eventually a bolder form of phrenology reached popular audiences. While Gall was phrenology's founder, his German assistant and collaborator, Johann Gaspar Spurzheim, became its great initial popularizer. Gall himself referred to his system as "cranioscopy," from the roots "cranium," meaning skull and "scopos," or vision. Spurzheim is usually credited with rebaptizing phrenology with its enduring name, "phren" for mind and "logos" for discourse.[15] Spurzheim traveled widely, promoting phrenological ideas with numerous lectures and publications. After a time, phrenology spread throughout Europe, to Britain, France, Ireland, and beyond. Edinburgh became a particularly influential center for phrenological thought, and the city was home to another of its prominent practitioners, George Combe.[16] In 1932, Spurzheim visited the US and his American tour is

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[13] In early modern England, people commonly believed that you could read passions from someone's exterior, Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago, University of Chicago Press, 1998), 401-407.

[14] For a rhetorical account of phrenology's place in nineteenth-century visual culture, see Cara Finnegan, "Recognizing Lincoln: Image Vernaculars in Nineteenth-Century Visual Culture," *Rhetoric and Public Affairs* 8.1 (2005): 31-57.

[15] Benjamin Rush first used the term "phrenology," but he intended it to refer to psychology more generally. See Patricia S. Noel and Eric T. Carlson, "Origins of the Word 'Phrenology," *The American Journal of Psychiatry* 127 (1970): 694-97

[16] For more on phrenology's history outside the United States, see Tomlinson, *Head Masters*; Enda Leaney. "Phrenology in Nineteenth-Century Ireland." *New Hibernia Review* 10.3 (2006): 24-42; Angus McLaren, "Phrenology: Medium and Message," *Journal of Modern History* 46.1 (1974): 86-97; Steven Shapin, "Phrenological Knowledge and the Social Structure of Early Nineteenth-Century Edinburgh," *Annals of Science* 32 (1975): 219-243.

credited with igniting a widespread popular enthusiasm for the pseudoscience in the United States.[17]

The 1830s saw the rise of practical phrenology in the U.S. Practical phrenology was distinguished by its concern for phrenology's potential application to everyday affairs. In other words, practical phrenologists were concerned with phrenology as a means with which to evolve thoughts in relation to many different matters. The curious reader's question about the organs actuating the Civil War is just one example of the many ways that phrenology was employed to make sense of the social world. Practical phrenologists, such as those associated with the *American Phrenological Journal*, took advantage of phrenology's applicability to areas that include marriage advice, education, and career counseling. Phrenological analysis was a popular form of career guidance in the nineteenth-century, and people used phrenological evaluation of the size of their various phrenological organs as a means to decide upon a suitable career path.[18] Indeed, phrenologists wrote texts applying phrenological ideas to a wide range of human activities. A notable example, illustrating phrenology's application to all manner of affairs, is Sir John Ross's *A Treatise on Naval Discipline; with an Explanation of the Important Advantages which Naval and Military Discipline Might Derive from the Science of Phrenology*.[19]

The Fowler brothers, on whose work this chapter focuses, dominated the practical phrenological enterprise in the United States, and the *American Phrenological Journal* was just one part of their large-scale family business. Orson Fowler discovered phrenology in 1832 while

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[17] For an account of phrenology's arrival in the US, see Robert E. Reigel, "The Introduction of Phrenology to the United States," *American Historical Review* 39.1 (1933): 73-78. See also Anthony A. Walsh, "The American Tour of Dr. Spurzheim," *Journal of the History of Medicine and Allied Sciences* 27.2 (1972): 187-205; Anthony A. Walsh, "Johann Christoph Spurzheim and the Rise and Fall of Scientific Phrenology in Boston, 1832-1842" (Ph.D. diss., University of New Hampshire, 1974).

[18] Alan Horlick, "Phrenology and the Social Education of Young Men," *History of Education Quarterly* 11.1 (1971): 23-38.

[19] John Ross, *Treatise on Naval Discipline* (London: Longman and Co., 1825).

at Amherst College and soon inspired his brother Lorenzo's interest as well. Soon thereafter, the brothers began traveling and lecturing on phrenology, as well as performing public readings of people's heads. Eventually, the Fowlers set up a physical office that housed what they called a "Phrenological Cabinet." This cabinet displayed a vast collection of plaster casts of both human and animal skulls, which served as examples of phrenological principles. The office also provided an alternative to itinerant phrenology; rather than wait for a phrenologist's visit, a person desirous of a reading could go to the Fowlers' office to have his or her head examined. Other members of the Fowler family joined the family business throughout its many years of existence and kept the business alive even after the brothers' deaths; indeed, the *Phrenological Journal* did not cease publication until the beginning of the twentieth century.[20]

In 1836, Orson and Lorenzo Fowler collaborated to publish a phrenological manual entitled *Phrenology Proved, Illustrated, and Applied*, the first of their many publications on the subject. They ultimately started their own publishing company, which had close ties to their phrenological efforts. Their publishing business enabled them to print their own works as well as those of other phrenologists at will, and the prolific brothers took full advantage of their capacity to do so.[21] Out of their many phrenological publications, this chapter focuses on one of the Fowlers' most popular works, the *New Illustrated Self-Instructor*, which the brothers described as a phrenological "manual."[22] The *New Illustrated Self-Instructor* teaches the

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[20] For a comprehensive account of the Fowlers' place in American phrenology, see Madeleine B. Stern, *Heads and Headlines: The Phrenological Fowlers* (Norman: University of Oklahoma Press, 1971).

[21] They also published works on other subjects, and perhaps most notably, were involved in the publication of an early edition of *Leaves of Grass*. Other books authored and published by Lorenzo and Orson Fowler include *Fowler on Memory: or, Phrenology Applied to the Cultivation of Memory*; *Matrimony: or Phrenology and Physiology applied to the selection of Suitable Companions for Life*, *Love and Parentage, applied to the Improvement of Offspring*; *The Principles of Phrenology and Physiology applied to Man's Social Relations; together with an Analysis of the Domestic Feelings*; *Marriage: Its History and Ceremonies; with a Phrenological and Physiological Exposition of the Functions and Qualifications for Happy Marriages*.

[22] *New Illustrated Self-Instructor*, vii.

fundamentals of phrenological analysis, detailing the basic mechanisms through which phrenological accounts of character can be generated, thereby providing an ideal site for this chapter's analysis.

The *Illustrated Self Instructor* was originally published in 1849, and the revised edition, the *New Illustrated Self-Instructor*, appeared in 1859.[23] The title page of the *New Illustrated Self-Instructor* contains the following text, "*New Illustrated Self-Instructor in Phrenology and Physiology; with over one hundred engravings; together with the chart and character of* _____ *as marked by* _____ *by O.S. and L.N. Fowler, practical phrenologists*." A client's name is written in the first blank space while the acting phrenologist's appears in the second. Directly following is a detailed phrenological chart, with empty spaces in which a phrenologist could write down the measurements of a person's various organs, noting their size with a numerical indicator. While the book was sold independently, it was often purchased in conjunction with an expert phrenological reading by one of the Fowlers or their associates. In used editions of the text, one will often find these blank spaces filled with names and numbers, the vestiges of a long-ago analysis. An overview phrenology summarizing and justifying its main principles follows these first few introductory pages. The bulk of the *New Illustrated Self-Instructor*, however, is its illustrated catalogue of the various phrenological organs. For instance, it includes an account of the precise operations of the continuity organ, and the consequences of having one of a particular size. The very last section of the book gives detailed instructions for finding the organs on the head.

Although it provides a thorough account of how to perform a phrenological reading, the *New Illustrated Self Instructor* does not devote much space to the enactment of such principles in

[23] It was then republished again in 1877 and 1890. Alan Gribben, "Mark Twain, Phrenology and 'The Temperaments': A Study of Pseudoscientific Influence," *American Quarterly* 24.1 (1972): 61.

the form of character analyses or to extrapolations of phrenological principles to social concerns, such as the Civil War. One of its few gestures in that direction is a chart that appears toward the end of the book, which details the phrenological organization necessary for certain professions. A merchant, it tells us, should have "Acquisitiveness, to impart a desire and tact for business large Hope, to promote enterprise; [and] full Cautiousness, to render them safe."[24] As a result, while this chapter examines the *New Illustrated Self Instructor* in order to discover the mechanisms of phrenological invention, it looks to the Fowlers' *American Phrenological Journal* in order to illustrate how those mechanisms were applied.[25] Among its content, which included excerpts from other works, health advice, and news, among other things, the Fowlers' monthly periodical devoted considerable attention to the application of phrenological ideas.

I outlined the fundamental tenets of phrenology very briefly at the chapter's outset. Now before turning to an analysis of phrenological invention, I will amplify that description a bit by looking more closely at the ideas about the mind that characterized the Fowlers' phrenological system. The Fowlers believed that the mind is a function of the brain. [26] As they explain, "Head, which located highest of all, fulfills the crowning function of all – MIND: that for which the entire body, as well as universal nature, was created."[27] In other words, for the Fowlers, the mind is what the brain does. Furthermore, they regarded the phrenological organs as the fundamental link between man and matter: "Man, having a material department to his nature, must needs be linked to matter, and possessed of all its properties. He is so. Then might we not expect some department of his nature to inter-relate him to each property of matter? These

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[24] *New Illustrated Self-Instructor*, 176.
[25] This is not the only place in which to find examples of the Fowler's practical application of phrenological principles. For example, some of their books are applications of phrenology to particular practical matters.
[26] They say the relationship between mind and brain is so well known that it does not require proof, *New Illustrated Self-Instructor*, 15, 60. See also Ibid., 34.
[27] Ibid., 71.

phrenological faculties furnish that relation."[28] This passage is striking in that it seems to suggest a vestige of immateriality with the phrenological organs as mediator.

As we have seen, phrenologists did not conceive of the mind as a single monolithic function, but as a collection of functions, such as memory, sense of time, etc… each of which is localized in a specific section of the brain.[29] The Fowlers proposed a total of thirty seven phrenological organs, some of were identical to those proposed by Gall, and some different. They also produced visual maps of the phrenological organs of the type that have become almost synonymous with phrenology.

The Fowlers observed that the brain is two-sided such that the functions exist in duplicate.[30] Furthermore, they suggested that they are organized into regions of related functionality (e.g. those concerning sociality were grouped together) and hierarchically, with the more important functions lying toward the top of the head.[31] For the Fowlers, the doctrine of size applied to particular regions as well as to the brain as a whole, though the brain's total size was difficult to determine because of differences in shape.[32] The Fowlers did not suggest that size simply equals power. Instead, they explained, size is a mark of power when all else is equal.[33] Several factors could play a complicating role, and serve as the source of inequality.

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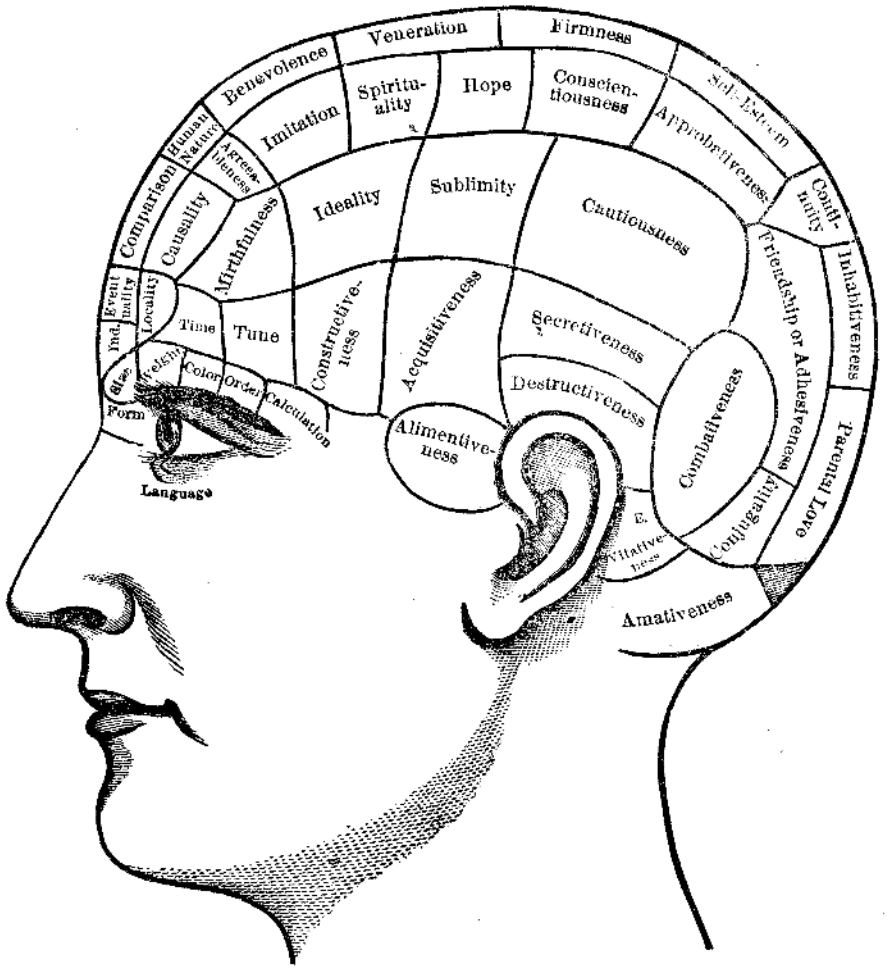
[28] Ibid., 71.
[29] See Ibid., 34, 60-61.
[30] Ibid., 66.
[31] Ibid., 34; Ibid., 71. They also believed that other phrenological organs might exist, and that they would eventually be discovered and identified, Ibid., 175.
[32] Ibid., 39. The *New Illustrated Self-Instructor* does not include any explicit discussion of how the brain presses against and shapes the skull, though it is discussed in other places.
[33] Ibid., 38. They explained this not just as a principle of phrenology, but one common to nature.



NUMBERING AND DEFINITION OF THE ORGANS.

1. AMATIVENESS, Love between the sexes.
A. CONJUGALITY, Matrimony—love of one. [etc.
2. PARENTAL LOVE, Regard for offspring, pets,
3. FRIENDSHIP, Adhesiveness—sociability.
4. INHABITIVENESS, Love of home
5. CONTINUITY, One thing at a time.
E. VITATIVENESS, Love of life.
6. COMBATIVENESS, Resistance—defense.
7. DESTRUCTIVENESS, Executiveness—force.
8. ALIMENTIVENESS, Appetite—hunger.
9. ACQUISITIVENESS, Accumulation.
10. SECRETIVENESS, Policy—management.
11. CAUTIOUSNESS, Prudence—provision.
12. APPROBATIVENESS, Ambition—display.
13. SELF-ESTEEM, Self-respect—dignity.
14. FIRMNESS, Decision—perseverance.
15. CONSCIENTIOUSNESS, Justice, equity.
16. HOPE, Expectation—enterprise.
17. SPIRITUALITY, Intuition—faith—credulity.
18. VENERATION, Devotion—respect.
19. BENEVOLENCE, Kindness—goodness.
20. CONSTRUCTIVENESS, Mechanical ingenuity
21. IDEALITY, Refinement—taste—purity.
B. SUBLIMITY, Love of grandeur—infinitude.
22. IMITATION, Copying—patterning.
23. MIRTHFULNESS, Jocoseness—wit—fun.
24. INDIVIDUALITY, Observation.
25. FORM, Recollection of shape.
26. SIZE, Measuring by the eye.
27. WEIGHT, Balancing—climbing.
28. COLOR, Judgment of colors.
29. ORDER, Method—system—arrangement.
30. CALCULATION, Mental arithmetic.
31. LOCALITY, Recollection of places.
32. EVENTUALITY, Memory of facts.
33. TIME, Cognizance of duration.
34. TUNE, Sense of harmony and melody.
35. LANGUAGE, Expression of ideas.
36. CAUSALITY, Applying causes to effect. [tion.
37. COMPARISON, Inductive reasoning—illustra-
C. HUMAN NATURE, Perception of motives.
D. AGREEABLENESS, Pleasantness—suavity

Figure 1: Phrenology Head, ***New Illustrated Self-Instructor***

Though phrenology was distinguished by its concerted attention to the mind and its proposed methods for assessing it through external manifestations, the Fowlers, like many phrenologists, did not posit the mind as the sole source of character. This is a not insignificant point, as will become clear in the subsequent analysis. In the *New Illustrated Self-Instructor*, other character determinants included health, physiological habits, and activity.[34] The Fowlers considered the body's overall condition so important to the mind that they exclaimed, "Is the body sick, or weak, or exhausted, or inflamed, or sleepy, or exhilarated, is not the mind equally so? . . . And in order to acquire cerebral vigor, must not all the bodily functions be equally vigorous."[35] Given their belief in this strong interdependence, it is perhaps not surprising that the Fowlers took a keen interest in health, diet, and exercise, and published a good bit on these subjects.[36]

In addition to the importance of the body's healthfulness, habits, and activity, phrenologists also emphasized the role played by factors such as hereditary organic quality and temperament. The Fowlers identified the first of these, hereditary organic quality, as the most fundamental determinant of being.[37] They explained hereditary organic quality thusly, "what we call 'bottom' in the horse, 'the breed' in full-blooded animals, and 'blood' in those high and nobly born."[38] The Fowlers' explanation reflects the prominence of animal breeding and inbred nobles in discussions of heritability at this time. The question of hereditary descent held an important place in phrenological writings, and phrenologists did not always agree on the subject. While Gall deterministically argued for the innateness of mental character, many of his

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[34] Ibid., 39.
[35] Ibid., 15.
[36] They suggested that food is converted into thought and emotion, Ibid., 27. They also thought morality depends on health, Ibid., 16.
[37] Ibid., 11-12.
[38] Ibid., 12.

followers, including the Fowlers, were supporters of social causes that aimed at the improvement of mankind and argued for mutability.[39] In 1844, Orson Fowler wrote a book entitled, *Hereditary Descent: Its Laws and Facts Applied to Human Improvement*, which, as the name suggests, argues for the cause of improvement. Yet, Orson Fowler believed in mutability in conjunction with an inherited foundation, which is what is what is vaguely accounted for with "hereditary organic quality."

Though hereditary organic quality only receives brief treatment in the *New Illustrated Self-Instructor*, temperament is the subject of considerably more attention. Spurzheim first incorporated temperament into the phrenological system, explaining that one must account for the relationship between physical constitution and mental character.[40] It became part of many phrenologists' works, including that of George Combe and others.[41] In the *New Illustrated Self-Instructor*, the Fowlers elucidate a tripartite division of the temperaments: vital, motive, and mental.[42] The vital temperament includes breathing, circulation, and alimentation. The motive temperament has a muscular basis, while the mental temperament consists of the brain and nerves.[43] The ideal temperament, they explain, is a balanced one that does not involve "too much mind."[44] As with hereditary organic quality, the Fowlers suggest that temperament operates at a more fundamental level than the mind. They explain that both "exert, as it were,

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[39] R.J. Cooter, "Phrenology: The Provocation of Progress," *History of Science* 14 (1976): 211-234; Charles Rosenberg, "The Bitter Fruit: Heredity, Disease and Social Thought in Nineteenth-Century America." *Perspectives in American History* 8 (1974): 189-235.
[40] Gribben, "Mark Twain, Phrenology, and the 'Temperaments,'" 45-68.
[41] See Johann Gasper Spurzheim, *Outlines of Phrenology* (London: Treuttel, Wurtz & Richter, 1829), 4-5 for Spurzheim's criticisms of the ancient understanding of the temperaments.
[42] The original division involved four parts: sanguine, bilious, nervous, and lymphatic. Some phrenologists condensed these into a 3-part system: "The four temperaments ultimately were telescoped into three divisions: the newer *Motive* temperament corresponded to the bilious; the *Vital* temperament combined the sanguine and the lymphatic; and the *Mental* temperament was formerly called the nervous," Gribben, "Mark Twain, Phrenology, and the 'Temperaments'," 47-48. The *American Phrenological Journal* noted the alteration, "Temperaments," *American Phrenological Journal*, 27 (Feb. 1858): 19-20.
[43] *New Illustrated Self-Instructor*, 34.
[44] Ibid., 37.

the ground-swell as to the direction and action of the phrenological manifestations."[45] Beyond this somewhat vague notion of an undercurrent, the nature of the interactions between hereditary organic quality, temperament, and mind is not entirely clear. The relationship between the mental component of temperament and the mind itself is particularly fuzzy. What is certain, however, is that in the Fowlers' *New Illustrated Self-Instructor*, the mind is one of a few abstract concepts that we can appeal to in order to account for why people are as they are.[46]

Phrenology, the Fowlers believed, existed in close kinship to physiognomy, the study of the body's general outward form as an expression of character. They account for the connection between the two by explaining that "in the forehead, physiognomy becomes partially merged in phrenology."[47] Both, they believed, were a manifestation of the same principle, illustrating this point as follows, "where the nose is sharp, all the bones and phrenological organs, and of course mental characteristics, are equally sharp – the whole person being built on the sharp principle, and of breadth, prominence, length, etc."[48] In addition to the phrenological organs, other features that the Fowlers note as expressive of character include walk, laugh, handshake, mouth and eyes, the color and texture of hair and skin, as well as others.[49] However, as one might expect of professional phrenologists, they believed that while the hand and other such body parts offer clues to character, they do not do so to the same extent as the more important head and face.[50]

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[45] Ibid., 19.
[46] There are also some brief references to the soul. For example, they stated, "The brain is not only the organ of the mind, the dome of thought, the palace of the soul, but is equally the organ of the *body*," Ibid., 66.
[47] "The Forehead," *American Phrenological Journal* (November 1863): 124. On physiognomy, see Simon Swain, ed., *Seeing the Face, Seeing the Soul: Polemon's Physiognomy from Classical Antiquity to Medieval Islam* (Oxford: Oxford University Press, 2007).
[48] *New Illustrated Self-Instructor*, 44.
[49] Ibid., 51-57.
[50] "Physiognomy," *American Phrenological Journal* (April 1863): 75.

2.3 SEMIOTIC AND TOPICAL INVENTION

Phrenologists claimed to have identified a previously under-appreciated and under-systematized source of insight – the head's indications of character. As the Fowlers describe in the *New Illustrated Self-Instructor*,

> Since outline shape indicates outline character, of course all the minute details of shape indicate like peculiarities of character, so that every wrinkle and shade of configuration indicates a like diversity in their mentality.[51]

The term "indicate," which recurs several times in this one sentence alone, suggests that the body is an array of signs; the Fowlers even use the phrase "signs of character."[52] The relationship between body and mind is thus one between signifiers and signifieds. For instance, a large mound at the back of someone's head is a signifier of excellent parenting skills, its signified.

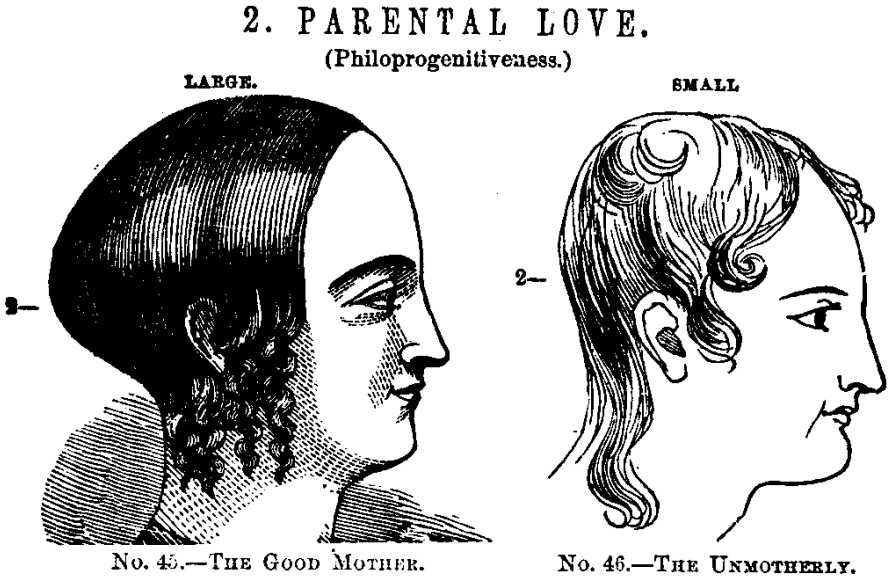

Figure 2: Philoprogenitiveness, *New Illustrated Self-Instructor*

[51] *New Illustrated Self-Instructor*, 42.
[52] Ibid., 66.

In this sense, the *New Illustrated Self-Instructor*'s extensive, numerically listed account of the different areas of the skull together with the mental characteristics they indicate is, essentially, a catalogue of signs.

As a semiotic system, phrenology involves a form of reasoning by sign. Reasoning by sign is most often considered as a mode of justification; one wants to convince someone that there is a fire and points to wafting smoke to prove the point. But the movement can also be understood as inventional, and C.S. Peirce's semiotics offers a particularly useful framework for thinking of it from this perspective. Unlike semiotic systems that focused exclusively on the relationship between signifier and signified, Peirce's semiotics introduced a third term, the interpretant, asserting that the process of semiosis involves all three. Peirce's triadic system therefore situates the process of reasoning as integral to the process of signification. In an essay detailing semiotics' implications for rhetoric, John Lyne explained that for Peirce, "semiosis begins not just in the transmission of information between persons, but rather in the thought process itself." [53] In this remark, we see how it might be possible to consider the move from signifier to signified as a process not merely of proving that, but also of thinking through.

Anne Holmquest drew on C.S. Peirce's work to derive an account of reasoning by sign as a type of inventional strategy. She argued that we can consider reasoning by sign inventional when it leads us to discover a hypothesis that does not necessarily follow. As she explains, Reasoning by sign can be extended as "an invitation to understand a pattern of inference by which . . . [to] generate new hypotheses about what something signifies."[54] For example, we might interpret the signs present in a surrealist painting in order to generate hypotheses about its

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[53] John Lyne, "Rhetoric and Semiotic in C.S. Peirce," *Quarterly Journal of Speech* 66 (1980): 158.
[54] Ann Holmquest, "How We Should Teach Reasoning by Sign, But Don't," *Argumentation and Advocacy* (Fall 2006): 90.

meaning, but our conjectures do not necessarily follow from those signs, and our development of them constitutes an act of rhetorical invention. The movement from signifier to signified would in some respects appear to be a relatively straightforward mode of invention. At least in its general outlines, it lacks the romance of an account based on divine inspiration or individual genius. Yet it would also appear to have a good deal of power to account for the development of discourse.

In phrenology, one might say, there is a movement from observable particulars (e.g. the size of a region of the skull) to a conclusion about an unobserved aspect of character. Whether one believes that the hypotheses one develops about character necessarily follow from physical signs depends on one's perspective on the pseudoscience. If one believes that phrenology is a rigorous science, one is likely to say that they do follow by necessity. If one believes that phrenology was no such thing, however, as we do today, then one is much more inclined to suggest that there was an "art" to the act of phrenological sign interpretation. Therefore, we might analyze the phrenological mind as an inventive resource by considering the movement from signifier to signified as productive of inferences, thereby enabling the evolution of thought in connection with a subject. Phrenology's productive capacity, furthermore, extends almost infinitely given that "every wrinkle and shade" has meaning; the Fowlers note that even additional phrenological organs are likely to be discovered. The nineteenth-century phrenologist could arrive at an account of character by using the *New Illustrated Self-Instructor* to move from signifiers to signifieds. One should not underestimate the inventive utility of phrenology's body of signs. Indeed, the impressively large body of work the Fowlers produced during their careers serves as a powerful testament to it.

While the *New Illustrated Self Instructor* can be described as a handbook of instructions explaining how to make the inferential move from signifier to signified, the *American Phrenological Journal* contains examples of how sign-based reasoning unfolds in specific cases. Many of its articles present the results of phrenological analysis, detailing inferences about character and elaborations upon them. For example, a March 1854 issue of the journal includes an analysis of Ralph Waldo Emerson based on a line-drawn likeness of the man.[55] It points to specific features of his cranial organization, such as the area of comparison: "Comparison is shown in this likeness to be unmistakably predominant, and rarely found as large."[56] It then connects these features to aspects of character, explaining in the case of comparison that it "corresponds with his clear, close, comparative, critical, discriminating style and cast of mind."[57] Similarly, the analysis explains that "ideality and sublimity both stand out fully developed," which "corresponds with his confessed classical elegance and purity of style, and general elevation of sentiment."[58] The reading of Emerson is just a single example. The *American Phrenological Journal* contained many similar analyses of influential, infamous, or remarkable persons, any one of which could serve as an example of the phrenological act of moving from signifier to signified.[59]

A semiotic account of phrenological invention that draws from Peirce, even one that does so as cursorily as this, must necessarily consider the nature of the relationship between signifier and signified, and I will provide a brief sketch of the alternatives. C. S. Peirce suggests that the sign can be grounded in three different ways, iconically, indexically, or symbolically. An icon

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[55] "Ralph Waldo Emerson, Phrenology, Physiology, Biography, and Portrait," *American Phrenological Journal* (March 1854): 53-55.
[56] Ibid., 53.
[57] Ibid.
[58] Ibid., 54.
[59] Not all of the analyses published in the *American Phrenological Journal* were of famous persons, of course, although many were.

resembles what it signifies; for example, the figure of a man or woman on a bathroom door is an icon because it looks like (resembles) the actual men and women it is supposed to represent. An index has a direct relationship with that which it denotes, such as a causal relationship; for example, smoke is an index of fire. The relationship between a symbol and what it signifies is entirely arbitrary and is only maintained through social and cultural conventions; most of the words in the English language are symbolic, for instance.[60]

In some sense, the Fowlers construed the relationship between mind and brain as iconic, or based on a relationship of resemblance. They explained that

> [Nature] . . . always does up similar characteristics in like configurations – apple character in apple shape, fish character in fish configuration, bear nature in bear form, human nature in human shape, and so on throughout all her works. And things alike in character are so in form – all oaks and pines like all. All kernels of wheat, corn, rye, etc., are formed like all others of the same character . . . And since the brain is confessedly the organ of the mind, its special form must of course correspond with the special traits of character. Or thus: since universal shape corresponds with universal character, of course the form of the head is as the special characteristics of the mind. And this involves the doctrines of Phrenology. In short, the correspondence between form and character is absolute and universal – on a scale once the broadest and most minute possible.[61]

In this odd explanation, the shape of the brain is not a visible sign of something unseen, but rather the head "is as" the mind. Both express the same truth of nature; for this reason, the shape of the brain is said to "correspond" with character. The relationship, in other words, is iconic in that it is based on a "correspondence" between brain and mind.

A phrenologist might also explain the relationship between signifier and signified in terms of indexicality. Some of the examples Peirce gives to illustrate indexicality include symptoms as signifiers of an illness and the weathervane's tilting in response to the wind as an

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[60] On Peirce's distinction, see A.W. Burks, "Icon, Index, Symbol," *Philosophy and Phenomenological Research* 9.4 (1949): 673-689.
[61] *New Illustrated Self-Instructor*, 42.

indication of that wind. An indexical relationship of the symptom/illness or weathervane/wind type is based upon connectedness of a physical or natural type. Phrenologists liked to consider their system an objective means to discover character and might prefer to think of the relationship between head shape and character as similar to the aforementioned examples. In phrenology, for example, a supposed causal link could work in either direction. The phrenologist might explain that a strong measure of a particular characteristic, such as critical thought, causes one's head to form a particular shape. Conversely, a particular brain organization could be described as bringing about certain dimensions of character.

If phrenological invention in fact rested upon an iconic or indexical relationship between signifier and signified, then phrenological analysis would have been a valid method for drawing inferences about a person's character. Moreover, if that were the case, phrenology might even warrant respect from the medical-scientific establishment, and would likely have remained a robust part of American culture even today. Phrenology has sunk into obscurity to be remembered mainly as a quirky pseudoscience of the distant past, however, because no such relationship pertains. Iconicity and indexicality cannot account for phrenological invention because of one simple fact: the contours of the skull, in all but exceptional cases, have no resemblance to or causal relationship with mental character.[62] As a result, though its adherents believed it was the case, neither resemblance nor causal connection between signifier and signified explains the process of phrenological invention.

Although the relationship between signifier and signified was not grounded in natural connectedness, either in terms of resemblance or causality, we might still account for phrenological invention as a move from signifier to signified. As we understand it today, the

[62] We must allow that in serious cases of brain damage, for example, there may be a correspondence between the appearance of the skull and a person's disturbed character.

relationship phrenologists construed between body part and mental character was symbolic. In other words, the relationship was arbitrary, but agreed upon. A large forehead was read as a signal of intelligence not because there is any natural relationship between forehead and intelligence, but because a group of people agreed that it did. This does appear to capture something central to the inventive dynamic of phrenology. A phrenological enthusiast might see someone with a large forehead and conclude, as per the conventional and agreed-upon relationship detailed in the *New Illustrated Self-Instructor*, that that person was very intelligent. In this respect, the phrenologist did in fact develop conclusions about character in an inferential movement from signifier to a signified; the inferences, however, were based on an arbitrary connection between body part and dimension of character. The problem with phrenology, however, is that the nineteenth-century phrenology enthusiast who put stock in conclusions drawn in this manner was unaware of the arbitrariness of the relationship and mistakenly believed in a natural and inevitable connection.[63]

An explanation of the movement from signifier to signified provides some insight into the phrenological mode of invention. However, phrenology did not simply involve a straightforward inferential move from signifier to signified. The pseudoscience was messy in ways that inevitably force us beyond an exclusively sign-based account, even a symbolic one. Measurement difficulties are of particular note in this regard. Though the phrenological organs appear clearly differentiated on phrenological charts, the skull does not divide itself into distinct regions nearly so tidily. Moreover, heads vary in shape and size in ways that make matching the areas on a phrenological chart to an actual location on the skull even more difficult. In an

[63] In this explanation, then, we end up with a bifurcation into two distinct acts of invention. There is the professional phrenologist who devises the arbitrary, fabricated relationship between signifier and signified. There is also the enthusiast who makes used of this to invent in a mechanical fashion by moving conventionally from signifier to signified.

attempt to alleviate some such difficulties, several phrenologists built machines that would mechanically determine the size of various regions on the skull.[64] These machines, however, were never widely produced or used, and the vast majority of phrenologists, including the Fowlers, relied on traditional manual and visual analysis.

The difficulties involved in assessing the size of the so-called phrenological organs were compounded when working with a pictorial representation instead of an actual human skull. And doing so, at least for the Fowlers, was relatively standard practice. Not persons to turn away lucrative business, they offered a mail-in phrenological reading service for those who "cannot afford to come to the city to procure at our hands a professional examination, yet . . . are very anxious to obtain a true analysis of their characters."[65] *The American Phrenological Journal* even included an article detailing how one should best take a daguerreotype image so as to facilitate analysis.[66] For obvious reasons, analyses of famous and historical figures were often similarly undertaken on the basis of an image. To appreciate the difficulty of this undertaking, let us return again to the analysis of Emerson's likeness. The analysis refers to specific regions of Emerson's skull, which would be extremely difficult, if not impossible, to discern with any certainty from a two-dimensional line drawing. Therefore, despite the apparent precision of the system, signs "in nature" or "in an image" were quite difficult to delineate. In other words, phrenological analysis involved a good deal of imprecision and improvisation, which was camouflaged by the clear and simple lines of the phrenology chart.

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[64] For a description of one such machine, see George Combe, *Elements of Phrenology*, Rev. ed. (Boston: Marsh, Capen & Lyon, 1835), 203-205.
[65] "Written Descriptions, From Daguerreotypes," *American Phrenological Journal* (July 1856): 1. The service cost four dollars, a considerable sum at that time.
[66] Ibid., 1-2.

Perhaps even more important than imprecise measurement was phrenology's other main source of "messiness:" mediating factors. Although the relationship between the size of a phrenological organ and the power of the associated dimension of character constituted phrenology's core principle, the Fowlers and other phrenologists did not suggest that it was determined in an absolute fashion. As noted, in the Fowlers' phrenological system, other factors, such as health and temperament, were said to exert a mediating influence on character. These complicating dynamics meant that there was no simple movement from signifier to signified; other factors could always potentially intervene in ways that were difficult to discern.[67] These factors also provided phrenologists with alternative modes of explanation, which was particularly useful when size failed as an explanation. In other words, intervening factors effectively served as an "escape clause" for the phrenologist. When presented with the large-headed village idiot, for instance, the phrenologist could explain that although the organs are large, they have little power because of the influence of physiological habits and activity. Such escape clauses effectively shielded phrenology from certain challenges to its explanatory system. The imprecision of head measurement and the availability of "escape clauses" meant that phrenology was slippery and difficult to disprove. Moreover, it appears that while phrenological invention may have involved some sort of movement from signifier to signified, the practice of actually doing so was so messy, imprecise, and underdetermined that phrenologists contributed a great deal of creative input into their analyses. Phrenology was most certainly not merely a matter of linking a clear cut signifier to an obvious signified.

Given what I have described above, another possible way to account for invention via the phrenological mind is to characterize phrenology as a topical system. Topical systems consist of

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[67] For instance, despite its significant influence on all functions, including the mental, the Fowlers observe that it is difficult to evaluate health, *New Illustrated Self-Instructor*, 17

a set of categories – or places - that enable one to evolve thoughts in relation to a subject. Kenneth Burke's pentad, for example, with its act, scene, agent, agency, and purpose allows one to develop an account of any situation. Phrenology offers a comprehensive list of features that describe aspects of someone's character. Categories such as benevolence, secretiveness, cautiousness, self-esteem, and so forth can all be used to develop an account of character. In the actual practice of phrenology, it may have been the case that phrenologists sometimes looked less to the details of the skull as signifiers of particular characteristics, but used the features of the system as jumping off points for elaboration, or places to go in order to develop a character sketch. In fact, even absent belief in phrenological doctrine, if someone desired to generate a comprehensive account of someone's character, the phrenological categories would provide useful points of departure for doing so.

2.4 RESOURCING

While the movement between signifier and signified captures something of phrenology's mode of generativity, as does our characterization of the pseudoscience as a set of topoi, both provide ultimately unsatisfactory accounts of the pseudoscience. They leave us with little to say about some of what was both fascinating and profoundly problematic about phrenology as an inventional system. Phrenology largely offered accounts of character that coincided with what was already believed. According to phrenological analysis, criminals invariably displayed their moral turpitude, female heads demonstrated their femininity, and the skulls of different races could be ordered according to a hierarchy that had as its pinnacle the white Anglo-Saxon man, as befitted nineteenth-century views on race. This was not exclusively the case, and phrenologists

did produce readings that appeared to defy expectations. However, one of phrenology's dominant modes of invention was a rearticulation of the familiar.

The analyses of famous persons that graced many issues of the *American Phrenological Journal* offer a clear demonstration of this principle. A study of Marcus Tullius Cicero's character, for instance, takes as its starting point dimensions of Cicero's skull, which are read as signifiers of what was then widely believed about Cicero. For example, the analysis observes that Cicero's skull is well developed in the area of the crown, as conforms to his reputation as a braggart:

> Approbativeness in particular is more enormous than in any other head I ever saw. Accordingly, he was a perfect brag. Every speech he lugs in and lauds with all his eloquence what 'I Marcus Tullius Cicero did when Consul.' Probably egregious egotism and disgusting self-adulation can nowhere else be found at all to compare with that fulsome vanity which runs through all his orations.[68]

The same correspondence between outer form and known character extends throughout the analysis:

> His domestic organs are large, and his letters to his wife while an exile, are among the most affectionate, tender, and touching connubial epistles ever published . . . Firmness is also large in his bust, and its mental correspondence was fully evinced during his Consulship . . . every sign of immense Language is apparent. Ideality is also large. Thus he has all the conditions of the orator in the highest state of perfection.[69]

Cicero's skull does not proffer surprises about his character, revealing secrets about his nature that were hitherto unknown. Instead, it indicates features of his character we might have readily anticipated.

Phrenological inferences emerge out of a process of rhetorical invention that I refer to as "resourcing." Resourcing is a specific type of rearticulation that occurs when an inference is

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[68] "The Phrenological Organization and Character of Marcus Tullius Cicero; with an Engraving," *American Phrenological Journal* (June 1846): 189.
[69] Ibid., 189.

channeled through an alternate point of origin – or source – in a manner that obscures or obfuscates the prior source. The point of origin is integral to the meaning of any articulation, and changing it alters an inference's meaning. Therefore any rearticulation can be understood as an inventional act. It is the obfuscation of origins that is the crux of resourcing's distinctive mode of generativity. Furthermore, the obfuscation can be either intentional or unintentional. Before detailing the relatively complex case of phrenological resourcing, however, let me first clarify the concept by means of a more straightforward example, the Ouija board, which will serve as our paradigm case of resourcing.

The standard Ouija board consists of an array of all of the letters of the alphabet, together with a pointer, known as a planchette. [70] Imagine that a person called Susan gets together with her friend Kim to use an Ouija board one evening. Susan and Kim jointly grasp the planchette and presume to let the spirits direct their hands to certain letters in order to spell out a message: "Kim, don't marry Tom." Let us assume, however, that no contact with the spirit world occurred and no other-worldy beings directed Susan and Kim's hands to certain letters. In order to illustrate the point, we do not even have to claim that it is impossible for spirits to spell out a message on the Ouija board, just that it did not occur on this particular evening. In this case, it is clear that Susan and Kim are a source of the message; the judgment originated with them in some way. The material process may have played a role; for example, maybe neither woman had previously thought Kim should not marry Tom, but the process of using a Ouija board enabled them to come to that realization. Or both might have been convinced for months that Tom is nothing but a scoundrel. Either way, the judgment does not derive from the spirit world.

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[70] There exist variations on design and rules of operation. Christian Lundberg and Joshua Gunn examine the Ouija board in relation to questions of agency, an issue this chapter will return to later, "Ouija Board, Are There Any Communications? Agency, Ontotheology, and the Death of the Humanist Subject, or, Continuing the ARS Conversation," *Rhetoric Society Quarterly* 35 (Fall 2005): 83-105

Using the Ouija board, however, has been a way to resource that judgment, making it appear to come from an otherworldly source.

For the purposes of this chapter, the productive power of this move is most important. Resourcing involves the generation of meaning. Inferences associated with another source are, in a meaningful sense, changed inferences. The inferred message "Kim, don't marry Tom" is very different when spelled out with an Ouija board than when Susan tells Kim her reasons for thinking Tom would not make a good husband. Similarly, if the words "you will die in fifteen years" appear written in lipstick on your bathroom mirror, they are something quite different than the same words written in an actuary table. Marshall McLuhan pithily noted that "the medium is the message," and this applies not simply to the type of medium, such as written versus oral, but also to the specific instance of that medium, as in which interlocuter speaks a certain set of words. Moreover, as John Durham Peters has argued in *Speaking into the Air*, our desire for pure communication aside, the messy embodiment of meaning is inevitable.[71] It should be clear, therefore, that resourcing relates to the inescapable considerations of embodiment and disembodiment of meaning. The Ouija board involves a shift from a human to a nonhuman source; a judgment that originated with Kim and Susan is resourced to the ethereal spirit world.

Resourcing can also involve a shift between persons. The strategy of presenting an argument by authority can involve a very simple type of resourcing. Imagine a lively discussion about global warming is taking place among a group of politically conservative friends. Jed thinks that global warming is the biggest threat to mankind, but he does not want to incur the

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[71] Marshall McLuhan, *Understanding Media: The Extensions of Man* (Cambridge, MA: MIT Press, 1994), 7; John Durham Peters, *Speaking into the Air: A History of the Idea of Communication* (Chicago: University of Chicago Press, 1999).

scorn of his friends by arguing the point. He makes the case, falsely attributing it to a conservative politician whose name he claims not to remember. In doing so, he obscures the fact that the argument is his own and resources it to an imaginary conservative politician. As a technique of this sort, resourcing involves obfuscating a prior source, and it therefore might be identified as a fallacy of false attribution. Construing it in such a manner, however, embeds it in a tradition of inquiry concerning logical argumentation and questions of justification; it also gives primacy to the question of truth or falsity. The term "resourcing," on the other hand, points to the inventional work accomplished by the obfuscation of prior sources; its concern is how doing so generates inferences that are manifestly different in meaning.

Resourcing belongs alongside an array of related terms that similarly have to do with the transformations and circulations of cultural forms; these include "remixing," "rearticulating," "recycling," "repurposing," "borrowing," "imitating," "reworking," "appropriating," "sampling," "recontextualizing," "reshaping," and "reusing." Each of these terms identifies something about the way cultural practices, metaphors, ideas, strategies, content, arguments, images, and so forth move through culture, resurfacing and reappearing. Each of these terms, in other words, has to do with strategies of rhetorical invention by which one generates novelty out of the already existent. Such activities have been the subject of increasing critical attention in recent years. The field of cultural studies, for instance, is highly invested in the circulation of cultural forms and pays a good deal of attention to them.[72] Postmodern theory, with its critiques of the individual humanist subject, has also brought awareness to such terms, which emphasize the flow of discourses beyond the purview of individual agency. New media have also drawn attention to such practices given that they seem to enable them. Some suggest, furthermore, that

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[72] See Richard Johnson, "What is Cultural Studies Anyway?" *Social Text* 16 (Winter 1986-1987): 38-80.

different historical epochs enable the historical predominance of such activities to various extents, and that we have now entered a time of their recurred predominance.[73]

Each of the aforementioned terms carries with it a particular emphasis. The terms "reshaping," "reworking," "borrowing," "sampling and "remixing" for example, draw attention to content and its manipulations. "Appropriating," "reappropriating," and "borrowing" similarly emphasize content, and they also appear to suggest a transfer of ownership that does not necessarily apply in resourcing. Imitation focuses our attention specifically on identifications between sets of content. Recontexualization underscores environment, or that which surrounds the point of origin. Each of these terms also suggests that some content that had previously been expressed is then subsequently expressed in a new manner.[74] This is obviously not the case in our paradigm case - the Ouija board. In that example, though the women may have thought that Kim should not marry Tom before sitting down to use the Ouija board, no prior expression necessarily existed to be respoken. Therefore, the aforementioned terms fail to capture the particular dynamic of resourcing.

Phrenology is a system that enabled rhetorical invention through resourcing. That is, phrenology was a means by which assessments of character could appear to come from one source, the phrenological system, while arising in fact from others. Phrenologists argued that the bumps on a person's head were an immanent declaration of the nature of that person's mind. In other words, phrenology suggests that a person's body stands in immanent judgment of his or her character. Inferences about character could thereby be presented as arising from the body's

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[73] Tom Pettitt, "Before the Gutenberg Parenthesis: Elizabethan-American Compatibilities" (paper presented at MIT5: Creativity, Ownership, and Collaboration in the Digital Age, Cambridge, MA, April 27-9, 2007). This paper is available at web.mit.edu/comm.-forum/mit5/papers/pettitt_plenary_gutenberg.pdf [accessed July 14, 2010].
[74] Richard A. Rogers, "From Cultural Exchange to Transculturation: A Review and Reconceptualization of Cultural Appropriation," *Communication Theory* 16 (2006): 474-503.

revelation of truth, and phrenologists could claim to simply speak that truth. Phrenology, therefore, construed the body's form as the source of judgments, and resourcing inferences to the body was one of phrenology's central modes of invention. As with the Ouija board, however, judgments did not truly arise from the body's revelation of character, and phrenological inferences had their origins elsewhere, in a source obfuscated by the system.

Resourcing draws attention to the existence of sources or points of origin that are hidden, occluded, denied, or ignored in some way in a given articulation. The discernment of origins is no straightforward matter; Edward Said describes them as "divine, mythical, and privileged," in contrast to the more human and accessible beginnings.[75] The continual recirculation of cultural materials means that novelty is elusive; we are held hostage by influence and its consequent anxieties, and a quest for true or ultimate origins often ends up being an endlessly regressive search after chimera.[76] For this reason, this chapter speaks of prior origins rather than authentic or true origins. While the notion of priority may not be entirely with its difficulties, it leads perhaps to not quite so many existential quandaries and unanswerable questions as an appeal to true or ultimate origins.

While the Ouija board serves as a prototypical example of resourcing, the term applies to a wide-ranging set of cases. For example, plagiarism might be identified as a form of resourcing. In plagiarism, another's content is passed off as one's own, usually knowingly and by a duplicitous and most likely lazy agent. What distinguishes plagiarism from something like imitation is the occlusion of the prior source. And like imitation, plagiarism can constitute an

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[75] Edward Said, *Beginnings: Intention and Method* (New York: Columbia University Press, 1985), xiii.
[76] As Jacques Derrida observed, "in the absence of a center or origin, everything became discourse," "Structure, Sign, and Play in the Discourse of the Human Sciences," *Writing and Difference* (Chicago: University of Chicago Press, 1978), 280.

inventive act, though it is one we do not much value and, in fact, usually regard as illicit.[77] It might also be possible to account for Plato's use of the figure Socrates in his dialogues as a case of resourcing, in which case, resourcing lies at the heart of the rhetorical tradition.

Resourcing's generation of novelty can serve the purposes of entertainment. It can give new life to the mundane. Ventriloquism, for example, appears to be a specific type of resourcing that involves a human-to-dummy shift. A voice emanates from a non-human figure in a manner that conceals the truly human source. Or perhaps more accurately, we should say that ventriloquism makes a joking pretense at hiding the true source of the voice. Part of the fun of watching a ventriloquist at work is one's very acute awareness that a person's voice is being thrown. The essence of ventriloquism's appeal is the way it plays with the misdirection of resourcing. The Ouija board can similarly be a source of entertainment. Today it is often packaged and sold as a board game that teenagers play at parties for fun and amusement without taking it very seriously. Even though they may not believe in channeling the spirits, the messages are interesting precisely because they are spelled out through the board. Palm readings and magic 8-balls can be similarly entertaining, even when there is little to no belief in an otherworldly source of the judgments that each provides. By using resourcing to simply make statements appear to come from an unusual source, one can apparently generate enough novelty to constitute a form of amusement.

During the nineteenth-century, phrenology was, in some of its contexts, a manner of entertainment. Itinerant phrenologists' displays of phrenological analysis often attracted large crowds and became a public spectacle. In the home, phrenological analysis could and often did

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[77] On imitation as inventional, see John Muckelbauer "Imitation and Invention in Antiquity: A Historical-Theoretical Revision," *Rhetorica* 21.2 (2003): 61-88.

become a parlor game.[78] We see evidence of phrenology's entertainment value in the *American Phrenological Journal*, with its numerous analyses of famous persons. Like the phrenological readings of Emerson and Cicero, these often imparted no new information, but retold the familiar through the font of phrenology.[79] Even today phrenological or physiognomical accounts of famous persons occasionally find their way into popular magazines. A recent *People Magazine* article, for example, provided character readings based on celebrities' faces. In noting that Jamie Foxx's protruding forehead is "an indication of imagination," and similar observations, it serves as an entertaining, passing distraction.[80] Even today, it can be fun to read a phrenological account of a famous person, even if it merely reiterates information about that person – its novelty comes from resourcing the judgment to details of his or her body. Resourcing, however, can also be more seriously undertaken, as it often was for nineteenth-century phrenologists; resourcing, indeed, was the foundation of phrenology's claim to scientific objectivity, which I will explain at some length.

2.5 RESOURCING, OBJECTIVITY, AND SCIENTIFIC RACISM

According to the Fowlers, the mind reveals itself through the body in a direct fashion. In the *Illustrated Self-Instructor*, they write, "The inherent character of every living being and thing gushes out through every organ of the body . . . compels all to carry their hearts in their hands."[81] "Gushes out" is a powerful term; the body is not a source of subtle and indirect hints about the

[78] Davies, *Phrenology, Fad and Science*, 37.
[79] For a compilation of nineteenth-century character analyses of famous persons, see Madeleine B. Stern, *A Phrenological Dictionary of Nineteenth-Century Americans* (Westport, CT: Greenwood Press, 1982).
[80] "About Face," *People Magazine*, 8 May 2006, 78.
[81] *New Illustrated Self-Instructor*, 59.

mind, but rather the mind forces its inexorable, visceral presence on the body. The individual has no control over character expression, the Fowlers explain, such that "we can not *help*, whether we will or no . . . expressing all our mental operations, down even to the very innermost recesses of our souls, in and by our countenances."[82] They even go so far as to suggest that this makes lying impossible.[83] The Fowlers credit Nature as revelator, writing, "Nature never deceives – never clothes that in a beautiful, attractive exterior which is intrinsically bad or repellant."[84] They further use the language of compulsion claiming, "Nature compels all her productions to proclaim their interior virtues – their own shame, even – and hoists a true flag of character at their masthead, so that he who runs may read."[85] The metaphorical masthead, it would seem, refers to the human head, riddled as it is with revealing bumps and rivets.

Michel Foucault argued that the modern period, which he identified as the nineteenth century onward, is concerned with hidden interior function in a way that is not true of previous ages. He suggested that the emergence of disciplines such as biology and political economy produced this concern.[86] Phrenology too seems reflect its time's fascination with interiors; one can describe phrenology as a system that conceives of facets of exterior appearance as marks of interior character.[87] Yet, the phrenological system is plagued by an uneasy ambivalence. In

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[82] Ibid., 58. They compare this to the communication of spirits, who "are said to converse mainly by their expressions of countenance – to *look* their thoughts and emotions, instead of talking them," 58. In some way, they seem to suggest the existence of the ideal of communication that John Durham Peters describes as elusive, *Speaking into the Air*, 63-108.
[83] See the *New Illustrated Self-Instructor*, 59-60.
[84] Ibid., 51.
[85] Ibid., 58. They explain the mechanisms of nature's control in terms of a vague theory of magnetic poles, Ibid., 58.
[86] Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1994). Judith Butler argues that "interiority is an effect and function of a decidedly public and social discourse, the public regulation of fantasy through the surface politics of the body," *Gender Trouble: Feminism and the Subversion of Identity* (New York: Routledge, 1990), 136.
[87] Shawn Michelle Smith argues that, "processes whereby identity was envisioned in the nineteenth century produced a model of subjectivity in which exterior appearance was imagined to reflect interior essence. Bodies were mapped as the vehicles of gendered and racialized interior essences; that is, bodies were posed as the surface

some respects, the Fowlers also appear to dissolve the distinction between interior and exterior, collapsing both into appearance. Doing so gestures toward the Renaissance concern for manifested resemblances (as opposed to hidden depths) in which "the world must fold in upon itself, duplicate itself, reflect itself, or form a chain with itself so that things can resemble one another."[88] One consequence of the Renaissance perspective, Foucault observed, is that "man's face and hands must resemble the soul to which they are joined."[89] The Fowlers' phrenological philosophy of nature is grounded in a trust in appearances and in the straightforward harmony of a world in which things are exactly as they appear to be. They even go so far as to claim a form of natural justice in which "every wrong done to man, animal, or thing becomes its own avenger, while every right embodies its own reward."[90]

The Fowlers' perspective stands in striking contrast to cynical or paranoid styles of rhetoric.[91] Paranoid and cynical styles are characterized in part by a distrust of appearances; behind an innocent façade lurk hidden dangers, possible conspiracies, or questionable motives.[92] Phrenology, on the other hand, construes appearance as a site of revelation. Instead of looking beyond it to what lies beneath, phrenology just looks more carefully and closely at the details of the outward form. The Fowler's phrenology system construes judgments of character as visually embodied, and the linguistic formulation of a character analysis is secondary to the supposedly

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signs of interior depths," *American Archives: Gender, Race, and Class in Visual Culture* (Princeton: Princeton University Press, 1999), 4.

[88] *The Order of Things*, 25-26. The Fowlers believed that every part of a thing corresponds to that thing as a whole, *New Illustrated Self-Instructor*, 42.

[89] *The Order of Things*, 28. This causes difficulties, furthermore, for the view that phrenology enabled invention by sign reasoning. A revelation of character would seem to be quite different from a signifier of character.

[90] *New Illustrated Self-Instructor*, 73. In this, it aligns with popular nineteenth-century intellectual currents that "preached the innate goodness of man and his rational ability to apprehend and act on the benevolent and just laws of the universe," Arthur Wrobel, "Orthodoxy and Respectability in Nineteenth-Century Phrenology," *The Journal of Popular Culture* 9.1 (1975): 38.

[91] Because of this philosophy, the organ of secretiveness seems to present some problems for phrenology: see *New Illustrated Self-Instructor*, 103.

[92] See Richard Hofstadter, *The Paranoid Style in American Politics and Other Essays* (New York: Knopf, 1965).

spontaneous visual representation that it simply seeks to translate into words. We might then say that phrenology resources inferences about character to the visual exterior of the body. Therefore, it serves as a powerful demonstration of the fact that resourcing, as a type of rhetorical invention, can involve both visual and verbal modalities.

Most important for this chapter's analysis, however, is how the mind's presumably unambiguous and inexorable bodily manifestations make judgments of character seem objective. For phrenologists, mental character is so directly and unambiguously revealed through the body that one might as well have "very intelligent" or "great sense of time" emblazoned across his or her forehead in black ink.[93] In this sense, phrenology construes character judgments as profoundly public. According to phrenology, assessing someone's character does not involve perspective and messily subjective opinion, and every single person who looks at Ben should see exactly the same judgment written across his body. Phrenologists are not judges of character, therefore; rather, phrenology positions its practitioners as witnesses of something that exists independently of them. It is therefore the case that the mind does not cause interpretive difficulties – it is anything but a complex hermeneutic puzzle. One reads rather than interprets character, and if there is any trouble at all, it is that one simply does not know what to look for.

According to the Fowlers, everyone has the inborn capacity to read character; they observe, "Both brute and man have a character-reading faculty, to take intuitive cognizance of the mental operations."[94] It is the case, however, that individuals do not always have a strong grasp of the complex details, which is precisely what phrenology teaches. We can understand

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[93] This recalls Nathaniel Hawthorne's *The Scarlet Letter* (1850) in which the main character is made to emblazon herself with a sign of her adultery, and a connection is quite possible given that Hawthorne was quite familiar with phrenology. See Taylor Stoehr, "Physiognomy and Phrenology in Hawthorne," *The Huntington Library Quarterly* 37.4 (1974): 355-400; Taylor Stoehr, *Hawthorne's Mad Scientists: Pseudoscience and Social Science in Nineteenth-Century Life and Letters* (Hamden, CT: Shoe String Press-Archon Books, 1978).
[94] *New Illustrated Self-Instructor*, 59.

this as a form of language training, and the *New Illustrated Self-Instructor* sometimes uses the term "natural language" to refer to the body's revelations of character.[95] This way of conceiving of phrenology also recalls its linguistic roots, discourse (*logos*) of the mind (*phren*). Phrenology not only informs us of the semantics, what the signs mean, but also details their syntax, or relationship to each other. As the Fowlers explain in the *New Illustrated Self-Instructor*, "If all nature's signs were fully understood, all could read, not only all the main characters of all they see, but even most of the thoughts and feelings passing in the mind for the time being – a gift worth more than Astor's millions."[96] One who has a strong grasp of the body's natural language, therefore, has access to a simply and objectively knowable character. The *New Illustrated Self-Instructor* - and phrenology more generally - claim to offer that gift.

In *The New Rhetoric*, Chaim Perelman and Lucie Olbrechts Tyteca observed that "value judgments, and even purely subjective feelings, can be transformed into judgments of fact through certain tricks of presentation."[97] The transformation Perelman and Tyteca identify here can be understood as a particular type of resourcing by which subjective origins are occluded. Though the phrase "tricks of presentation" suggests a fairly superficial process, they nonetheless hint at the transformative potential of resourcing: that it can turn the subjective into the seemingly objective. One of the "tricks" Perelman and Tyteca discuss is that of attributing a value judgment to someone else. When an assertion is attributed to an authority, it gains credibility. Phrenology takes this one step further by attributing assertions to nature, an even more authoritative source. That is to say, phrenology is a system that potentially enables one to present subjective judgments of character as "judgments of fact" that are the result of the direct

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[95] See, for example, Ibid., 66-67; Ibid., 69.
[96] Ibid., 60.
[97] Chaim Perelman and Lucie Olbrechts-Tyteca, *The New Rhetoric: A Treatise on Argumentation* (Notre Dame: University of Notre Dame Press, 1969), 180.

expression of nature. Resourcing profoundly impacts the rhetorical force of a phrenological judgment of character by giving it the appearance of objectivity.[98] If one believes in phrenology, one would regard a phrenological determination of great character as more important than one not resourced that way. It is in this way that phrenology becomes an authorizing discourse.[99]

Resourcing is important to science because of this connection to objectivity. In order to be considered scientific, assertions should be as detached from individual subjectivity as possible, and should to originate elsewhere, preferably in nature. For example, I may be convinced of statement X, but the statement is not scientific until it can be resourced to an experiment that both confirms it and becomes its new source. The modern hypothetico-deductive experimental method is precisely a system for resourcing statements in this manner. One begins with an assertion, or a hypothesis, which one often arrives at in an intuitive and subjective fashion. One then performs an experiment to prove it; the assertion thus becomes detached from individual subjectivity and resourced to the experiment. One thus transforms "I believe" or "I predict" into "The experiment has shown."[100] Philosophers of science have grappled with this problematic disjunction at the core of the scientific method. They respond largely by formalizing the split, labeling the first half of the process "the context of discovery" and the second, "the context of justification." Philosophers can then dismiss the context of discovery, in which assertions are human and subjective, as falling outside the realm of

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[98] The appearance of objectivity is enhanced when an individual's character analysis is written in a book, which further detaches the analysis from the individual phrenologist who performed it. The complex terms for each of the phrenological organs, some of which were neologisms, also add to the sense that there is something new and objective about a phrenological analysis of character.

[99] John van Wyhe argues that "one of the more constant elements of phrenology throughout its existence, besides bumps, was the power it gave its practitioners to speak authoritatively on all things human," "Was Phrenology a Reform Science? Towards a New Generalization for Phrenology," *History of Science* xlii (2004): 313.

[100] If we take this one step further, scientific experiment could therefore be understood as an act of rhetorical invention. On our preference for disembodied ideas, see Christopher Lawrence and Steven Shapin, "Introduction: The Body of Knowledge" in *Science Incarnate: Historical Embodiments of Natural Knowledge* (Chicago: University of Chicago Press, 1998): 1-19.

philosophy. They largely focus on the latter process of confirmation or disconfirmation. In doing so, they can push aside the issue of resourcing.[101]

We might end our analysis here, with the claim that phrenology enabled inferences to emerge as though the result of an objective science of the mind, that it served as an alternate point of origin from which these inferences could appear to arise, thereby participating in an inventional process of resourcing. A question haunts our analysis, however, one we have avoided addressing thus far, which is, what is the other origin that phrenology occluded? Bodies do not proclaim mental character in the manner phrenologists claimed; there was no immanent "gushing out" of character. As noted, the skull's outward shape does not indicate the power of the mind's various faculties, and the shape of a person's head says nothing about his or her character.[102] Despite its offer of a gift worth more than Astor's millions, phrenology tendered only pseudoscientific quackery. Since character is not revealed externally, objectively, and publicly, phrenological inferences about character came from other sources. Since origins are elusive, and we might never be able to settle on the true source of phrenological judgments, we will consider instead the question of the prior sources of phrenological judgments: where were they before their articulation through the phrenological system?

Unfortunately, we have no way to gain full access to the mechanisms through which phrenological judgments were levied. Similarly, one cannot definitively prove what made Susan and Kim's hands move despite the fact that one has every reason to believe that that it was not the urging of the spirit world. Ultimately, we can only speculate, which is precisely why

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[101] Hans Reichenbach initially formulated this argument, *Experience and Prediction: An Analysis of the Foundations and the Structure of Knowledge* (Chicago: University of Chicago Press, 1938). His view has dominated philosophical discussions of discovery.

[102] Except in a general sense. For instance, if someone's skull shows that a large part of the brain is missing, we can infer that his or thought processes likely will be disturbed in some manner.

resourcing works so effectively in both cases. That being said, one can quite reasonably assume that the phrenologist and his cultural milieu were two of the occluded sources of phrenological assertions. Let us begin by considering the phrenologist.

Preconceptions appear likely to have found their way into the process of phrenological inference in an idiosyncratic fashion. In other words, a given phrenologist might hold an opinion about a person and arrive at a reading of that person reflective of his or her personal perspective. For example, let us say that Orson Fowler thought that his friend Harry was a great father; when performing an analysis of Harry, he inevitably finds that his friend has an exceptionally large philoprogenitiveness organ. The question then becomes whether individual phrenologists were charlatans who were in on the ruse, knowingly presenting their preconceptions as phrenological truths, or whether they were instead dupes of their own system. The question of complicity is central to resourcing and often difficult to resolve, which should come as no surprise given that the obfuscation of sources is precisely the point of resourcing.

There would certainly have been financial incentive to ply a profitable pseudoscience, as Ambrose Bierce suggested in his description of phrenology as a science of pickpocketing through the scalp. However, it is also possible that phrenologists were deceived by their own system, convinced of the fundamental truth of their pseudoscience in the same way that Mr. Von Osten famously believed that his horse, Clever Hans, could count, even as he unintentionally fed it cues about how many times to tap its hoof.[103] We can find self-deception in what is an even closer analogue to phrenology, shamanism. In a study of practice, A.L. Kroeber wrote,

> Probably most shamans or medicine men, the world over, help along with slight-of-hand in curing and especially in exhibitions of power. This slight-of-hand is sometimes deliberate; in many cases awareness is perhaps not deeper than the foreconscious. The attitude, whether there has been repression or not, seems to be

[103] Theodore Sarbin, "On Self-Deception," *Annals of the New York Academy of Sciences* 364 (1981): 220-235.

> as toward a pious fraud. Field ethnographers seem quite generally convinced that even shamans who know that they add fraud nevertheless also believe in their powers, and especially in those of other shamans: they consult them when they themselves or their children are ill.[104]

Not all quacks are crooks, in other words, and self-deception may be more prevalent than we might at first think.

If we return to the Ouija board example, it is clear that Susan and Kim could have been complicit to varying degrees. It is possible that the women were fully aware that they were devising the content and only making it appear to originate with the spirit world. However it is equally possible that they believed they spelled out the message, "Kim, don't marry Tom," at the prompting of other-worldy beings. A person engaged in resourcing is not always aware that a judgment may originate with a source other than the apparent one, even when that originating source rests at least in part with his or her own machinations. For this reason, while phrenologists may have been conmen who were fully aware that the judgments they levied were not the sightings of nature's expressions of truth, they may also truly have believed that they were objectively reading character from another's body. It is most likely the case that individual phrenologists leaned toward one of these two poles to varying degrees.[105]

For the person who believed in phrenology, some perceptual self-deception seems likely to have played a role. It has been well established that once a person is primed to see certain things, he or she will tend to see them to the exclusion of what is unexpected.[106] Indeed, the Fowlers' instructions for testing phrenology suggested this very dynamic. They say that if you know someone is of firm character, you should look for their firmness organ, see that it is large,

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[104] A.L. Kroeber, *The Nature of Culture* (Chicago: University of Chicago Press, 1952), 311.
[105] I know of no examples where a phrenologist admitted to being a charlatan, though it is possible that this may have happened.
[106] See Daniel J. Simons and C.F. Chabris, "Gorillas in Our Midst: Sustained Inattentional Blindness for Dynamic Events," *Perception* 28 (1999): 1059-1074.

and phrenology's truth will be confirmed.[107] Therefore, when examining the skull of a known criminal, one looks for and is likely to find a large organ of Destructiveness. In this respect, phenology might fruitfully be compared to over reading a text, which arises out of a similar type of self-deception. In over reading, the text is viewed as the source of an interpretation that is underdetermined by the features of the text and has origins in the preconceptions of the person interpreting. Over reading, therefore, might be understood a certain type of resourcing.

None of this is to say that phrenology was radically indeterminate, but that it involved a significant degree of indeterminacy for reasons previously noted: the difficulty of discerning and measuring discrete phrenological organs and the presumed influence of intervening factors such as health, temperament, and so forth. Furthermore, a good deal of the Fowlers' phrenological writings forged only tangential connections between the details of individual skulls and broad conclusions about social matters. Take, for instance, the question from a reader of the *American Phrenological Journal* that began this chapter. The editors' conclusions about the organs motivating each side in the Civil War were not grounded in the analysis of particular skulls. In such cases, the indeterminacy was even more pronounced. It also deserves note that resourcing does not necessarily result in inaccurate assertions. Kim very well would be better off not marrying Tom, and in a similar way, some phrenological analyses were surely apt descriptions of character. However, these accounts did not derive their accuracy from the body's revelation of character.

Phrenological analyses occurred within a particular cultural context, which served as another important and occluded source of inferences. In other words, prevailing attitudes

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[107] *New Illustrated Self Instructor*, 167.

structured the levying of phrenological judgments in certain ways.[108] The most notable example of this, which we will consider at some length, was phrenology's reflection of prevalent nineteenth-century beliefs about race and ethnicity. The Fowlers regarded Anglo-American heads as superior to those of other races.[109] They did not disguise the normativity of their endeavors, explaining, "In pointing out the original constitution of humanity, Phrenology shows who departs therefrom, and wherein."[110] They believed moreover in phrenology's proscriptive implications observing that "by giving a *beau ideal* of human perfection, it teaches one and all, individuals and communities, wherein and how far they conform to, and depart from, this perfect human type, and thereby becomes the great reformer."[111]

During the 1860s, the *American Phrenological Journal* devoted a considerable amount of attention to issues of race and ethnicity, introducing recurring columns on ethnology and ethnography, for instance. The journal speculated about the phrenological character of a range of different races and ethnicities, and expressed derogatory opinions about everyone from the Eskimos to the native Irish.[112] The journal's treatment of the African-American and Native American races is particularly notable, however, given the history of race relations in the United States. The journal's authors seemed to have regarded African Americans as benignly inferior, as did many others at the time in American history, observing that

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[108] On this point, see Steven Shapin, "The Politics of Observation: Cerebral Anatomy and Social Interests in the Edinburgh Phrenology Disputes," *Sociological Review Monograph* 27 (1979): 139-178.
[109] They stated that the cranial organization of the European race proved "their intellectual and moral superiority over all other races of men," Orson Fowler and Lorenzo Fowler, *Phrenology Proved, Illustrated, and Applied* (New York: Fowlers and Wells, 1849), 26.
[110] *New Illustrated Self Instructor*, 73.
[111] Ibid., 73. The Fowlers were active in many social causes and their phrenological beliefs were integral to their activism. Though they do not discuss this in depth in the *Illustrated Self Instructor*, the belief that mind and body could both change was an important part of their phrenological system. They believed that the mind and body could change such that people could be reformed (even to the extent that your skull would change shape based on how you lived).
[112] "Noses," *American Phrenological Journal* (July 1863): 8.

> the negress makes a patient, attentive, and very affectionate nurse. And the negro is preferred to care for and groom the horse, because of his stronger social nature. Nor is there any question in regard to their sense of dependence, humility, devotion, and submissiveness. The negro is also kind to a fault - is even prodigal in giving; but he has very little economy, acquisitiveness being small, and he is proverbially improvident.[113]

The African American race is sometimes contrasted with the Native American. The above description continues,

> Compare the indolent, docile Negro with the executive and positive North American Indian! The latter has large Self-Esteem, Firmness, Destructiveness, and the other has not.[114]

Discussions of Native Americans in the *American Phrenological Journal* were sometimes disturbingly antagonistic. For instance, a scathing description of the Indian Chief Lean Bear compared his nose to the flaring nostrils of a horse and noted large destructiveness together with lack of calculation, time, tune, and constructiveness, among other things. The article in which this description appeared ended by noting that the chief would not adopt civilization and predicted the ultimate demise of the Indian race, stating, "It may be regarded as an uncharitable conclusion, but judging from all we know of these people, we predict their rapid and final extinction from this continent."[115] This account reflected the then popular view that Native Americans were unassimilable savages.

It would appear that some preconceptions about race may have been fundamentally embedded in the pseudoscience, and thereby systematically translated inherent biases into

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[113] "The African Race," *American Phrenological Journal* (July 1864): 5.
[114] Ibid. See also, "Negro Ethnology," *American Phrenological Journal* (April 1863): 79; "South Western Africa, and its Inhabitants," *American Phrenological Journal* (February 1857): 30-31; "Among the Skulls; Or Studies in Craniography," *American Phrenological Journal* (May 1864): 120.
[115] "The Native American Indians in New York," *American Phrenological Journal* (May 1863), 120. On nineteenth-century views of Native Americans see Steven Conn, *History's Shadow: Native Americans and Historical Consciousness in the Nineteenth Century* (Chicago: University of Chicago Press, 2004).

phrenological judgments, serving to reproduce – and authorize – racist and sexist discourse.[116] Skull shapes vary, and they do so in ways that loosely correlate with gender and racial ancestry. Today, forensic anthropologists are interested in these correlations because of their utility in the identification of skeletal remains. Such correlations vary in strength, are responsible for only a small percentage of cranial variation, and any consideration of them is fraught with misgiving given the problematic history of scientific racism.[117] Yet they can be useful in specific contexts. For example, African skulls have a greater tendency toward a post-bregmatic depression, or an indent at the top of the skull. The presence of this feature in skeletal remains is considered supportive of an identification of African ancestry. The existence of cranial correlations means that phrenological systems may have falsely associated character traits with skull features that did in fact vary by race, and did so in ways that systematically flattered the white race. In this way, phrenology could have systematically produced judgments that confirmed preconceptions; racism was potentially entrenched in the rules of the system. The Fowler's phrenological bust locates the region of Firmness precisely at the region of the post-bregmatic depression. As a result, from within the fabricated confines of the phrenological system, a physical variation that has nothing to do with character becomes "evidence" of the docility of those with African skulls.

While some inferences were built into the phrenological system, many others were derived in a less methodical fashion, nonetheless still reflecting shared cultural beliefs. At times, phrenologists appear to have either exaggerated drawings of skull shapes in a manner that caused

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[116] On race and phrenology, see Joan Burbick, *Healing the Republic: The Language of Health and the Culture of Naturalism* (New York: Cambridge, 1994), 137-144; Shawn Michelle Smith, *American Archives*; Reginald Horsman, *Race and Manifest Destiny*: *The Origins of American Racial Anglo-Saxonism* (Cambridge: Harvard University Press, 1981), 56-59, 120-122, 142-145.

[117] Forensic anthropologists are well aware of the problematic history of such measurements. See Linda L. Klepinger, *Fundamentals of Forensic Anthropology* (Hoboken, NJ: John Wiley & Sons, 2006).

them to conform to racist expectations and/or chosen to present anomalous skulls as typical.[118] And even in cases of obvious exaggeration and/or anomalous selection, whether or not a given person was knowingly complicit remains debatable. While we cannot trace the process that led to the selection and presentation of particular images, the case of Samuel Morton is instructive in regard to how one can unknowingly skew results so as to conform to preconceptions.[119]

Samuel Morton was an American scientist who gained prominence as a result of his work with skulls, of which he gathered a large collection in order to test the theory that the races could be objectively ranked on the basis of the size of the brain. Morton measured skulls by first filling them with lead shot and then measuring the amount of shot a given skull could contain. His data showed that head size varied across races, with the smallest skulls belonging to those of African descent, the largest to the white races, with Indians in between. This was "objective proof," he believed, of white racial superiority. Many years later, Stephen Jay Gould reanalyzed Morton's data. In doing so, he found that "Morton's summaries are a patchwork of fudging and finagling in the clear interest of controlling a priori convictions."[120] For example, Morton included or deleted subsets of the data in ways that favored his expectations; his sample of Indian heads, for instance, over-represents the Inca Peruvians, who have smaller cranial capacity, and under-represents the large-headed Iroquois. Correcting for Morton's errors, Gould found no significant differences in cranial size between the races. Perhaps most fascinating about Gould's analysis, however, is the conclusion he ultimately draws regarding Morton's lack of awareness. Gould writes,

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[118] See, for example, the image of a "Caucasian Brain," contrasted with an "Indian Brain" in the *American Phrenological Journal* (April 1860): 56. While described as average Caucasian and Indian brains, they are obviously either exaggerated depictions and/or anomalous selections.
[119] "Objections to Phrenology," *American Phrenological Journal* (July 1863): 17.
[120] Stephen Jay Gould, *The Mismeasure of Man* (New York: W.W. Norton, 1981), 86.

> I detect no sign of fraud or conscious manipulation. Morton made no attempt to cover his tracks and I must presume that he was unaware he had left them. He explained all his procedures and published all his raw data. All I can discern is an a priori conviction about racial ranking so powerful that it directed his tabulations along preestablished lines.[121]

In other words, Gould offered a striking account self-deception guided by culturally shared preconception.

In its resourced expression of cultural materials, phrenology performs a type of collective, cultural invention. The resourced articulation of social norms would, moreover, appear to be a mode of invention that performs an epideictic function. As Chaim Perelman and Lucie Olbrechts-Tyteca describe, the purpose of an epideictic speech is "to increase the intensity of adherence to values held in common by the audience and the speaker."[122] In its rearticulation of widely held beliefs as objective expressions of truth, phrenology would appear to do just that. Perelman and Tyteca's account of the epideictic emphasizes the orientation toward action. That is, in strengthening values that are already widely held, its prime import is not in motivating a change of beliefs. Instead, epideictic rhetoric "strengthens the disposition toward action by increasing adherence to the values it lauds."[123] In other words, phrenology's scientific racism may not have changed many people's opinions, but in reinforcing those they already held, it may have helped motivate action in support of those beliefs.

In contrast to the classical topoi, which take place as their organizing term, resourcing is fundamentally concerned with people and things as locuters of discourse. More specifically, resourcing considers the subject or object from which a given inference issues as a central facet of the rhetorical process. The extent to which individual agency controls the process of

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[121] Ibid., 69.
[122] Perelman and Olbrechts-Tyteca, *The New Rhetoric*, 52.
[123] Ibid., 50.

resourcing, however, is highly variable, and cultural discourses often circulate through individuals and objects to be respoken in ways that elude any particular subjective consciousness. Therefore, while it brings to the fore the importance of the subject as a point of origin or articulation, it simultaneously draws our attention to the murkiness of agency that is at the heart of a good deal of postmodern critique of the humanist subject. In some ways, our consideration of resourcing marginalizes the subject in the process of bringing the subject to the fore.

In "What is an Author," Foucault famously took issue with the privileged status of the author. He argued that there was a moment in which the idea of authorship took shape, thereafter assuming a place of privilege, and bringing considerations of authenticity and attribution to the fore. He posed the question previously voiced by Beckett, "What difference does it matter who is speaking?"[124] The question's import appears only to have grown since the essay's publication. Tom Pettit has argued for something he calls "the Gutenberg parenthesis," which refers to a particular moment in time in which singular composition and its straightforward reproduction reigned.[125] Pettit suggests that it is coming to an end, that the parenthesis is closing, and we are returning to a time of remixing, borrowing, and so forth.

This chapter offers one of the many possible answers to the question, "What difference does it matter who is speaking?" It does not ground its answer in an autonomous, transcendental subject, nor in proprietary questions of ownership, but instead, in rhetorical invention.

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[124] Michel Foucault, "What is an Author?" *Language, Counter-Memory, Practice: Selected Essays and Interviews*, ed. Donald F. Bouchard, trans. Sherry Simon (Ithaca, NY: Cornell University Press, 1977), 113-38. See also Roland Barthes, "To Write: An Intransitive Verb?" in R. Macksey and E. Donato, eds., *The Structuralist Controversy: The Languages of Criticism and the Sciences of Man* (Baltimore: Johns Hopkins University Press, 1970), 134-156.
[125] Tom Pettitt, "Before the Gutenberg Parenthesis: Elizabethan-American Compatibilities."

Inferences usher forth from points of origin, which are integral to their meaning.[126] Attributions therefore are generative of novelty, and the "author function" is at least partly inventional. Furthermore, and it is here this chapter puts its stakes, the obfuscation of sources constitutes a distinctive mode of creation. This chapter is most concerned with inventional moments of individuation in which cultural ideas appear as "authored," while origins in the familiar are simply obfuscated.

In 1951, J.C. Flugel wrote, "Phrenology has been psychology's great *faux pas*."[127] *Faux pas* it may have been, but to dismiss phrenology as merely an embarrassing blunder in the history of psychology is to ignore not only its influence on nineteenth-century American culture, but also its enactment of a prevalent mode of invention. Resourcing is certainly not unique to phrenology, and scientific racism appears to employ resourcing as a matter of course. Channeling preconceptions about racial hierarchies through a "scientific" discourse that blurs their origins serves to authorize them. While much attention to scientific racism focuses on the issue of authorization and its consequences, resourcing allows us to place scientific racism within an inventional context, acknowledging the mechanisms by which the discourse was created. This enables us to see rhetorical parallels between scientific racism and a range of other activities that include using an Ouija board or magic 8-ball, plagiarism, and over-reading a text. It also forces us to acknowledge the dangerous potential of resourcing.

Resourcing, moreover, has implications for our understanding of how the "mind" serves as an inventional resource beyond the particular example of the phrenological conception of

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[126] For a perspective on the author's body and rhetorical invention, see Lester Olson, "Audre Lorde's Embodied Invention," in *The Responsibilities of Rhetoric*, ed. Michelle Smith and Barbara Warnick (Long Grove, IL: Waveland, 2010), 80-95.

[127] As quoted in Young, *Mind, Brain, and Adaptation in the Nineteenth Century*, 9.

mind. Inferences that have their origins in personal opinion, already-circulating cultural materials and so forth can, and have been, resourced to other conceptions of mind as well. As I will discuss in a more detail in the conclusion, it may be possible to derive a similar explanation of the Freudian system of mind. Indeed, we know that Freudian accounts of hysteria reflected widespread views about gender. Furthermore, resourcing might give us a way to account for the inventional uses of other concepts that identify aspects of the internal self as well, such as temperament and even genes.

Given the murky issue of origins, it is possible that every utterance, every creation is resourced in some sense, and that there exists no pure origin out of which pristinely new thoughts, ideas, and explanations can emerge. Perhaps we must inevitably speak words that are channeled through us in some respect, obscuring their prior origin. Maybe we are all dummies and there are no ventriloquists. The recognition that doing so is not passive, but constitutes a generative act, however, may offer some comfort. Though we may not be able to reach the lofty ideal of radical novelty, resourcing is nonetheless a creative process of rhetorical invention.

3.0 CHAPTER THREE – INSIDIOUS MINDS: FREUD AS PSYCHODOXA IN SPOCK'S *BABY AND CHILD CARE*

The Freudian gospel . . . imbedded itself in the American mind after being filtered through the successive minds of interpreters and popularizers and guileless readers and people who had heard guileless readers talk about it – Frederick Lewis Allen[1]

3.1 INTRODUCTION

On September 25, 1970, vice-president Spiro Agnew gave a speech at a Republican Dinner in Milwaukee, Wisconsin entitled "The Age of Indulgence." In it, he condemned what he saw as the widespread permissiveness of the time, taking aim at someone who might at first appear to be an unexpected target, Dr. Benjamin Spock, pediatrician and author of the popular book on child rearing, *Baby and Child Care*. Agnew accused Spock of exerting a corrupting influence, holding him responsible for what he and others viewed as the unruliness of the 1960s youth,

> A permissive parent sees his child come to the dinner table wearing dirty clothes, his hands unwashed and his hair unkempt. The parent finds this offensive and turns to Dr. Spock's book – which has sold over 25 million copies in the past generation – for guidance. He reads this on that subject: "As usual, you have to compromise. Overlook some of his less irritating bad habits, realizing that they

[1] Frederick Lewis Allen, *Only Yesterday: An Informal History of the 1920s* (New York: Harper and Brothers, 1931), 99.

> are probably not permanent." The thing to be carefully avoided, says our foremost authority on children, is 'bossiness.' Who do you suppose is to blame when, ten years later, that child comes home from college and sits down at the table with dirty, bare feet and a disorderly faceful of hair.[2]

This was not the only occasion on which Agnew took aim at Spock. He made similar remarks in other speeches, attributing to Spock, "a paralyzing permissive philosophy."[3] Agnew was not alone in blaming Spock for promoting permissiveness. The Reverend Norman Vincent Peale, author of the bestselling book *The Power of Positive Thinking*, characterized Spock's parenting advice as "feed 'em whenever they want, never let them cry, satisfy their every desire."[4]

The baby doctor was perhaps not such an unexpected target as he might first appear. With the success of *Baby and Child Care*, Spock became a public figure. He published numerous books for a popular audience, including, among others, a photographic montage entitled *A Baby's First Year* and *Feeding Your Baby*, which focused on dietary considerations for infants. *Ladies Home Journal* asked him to write a regular child-rearing column called "Dr. Spock Talks with Mothers," which he did beginning in 1954.[5] Spock also participated in TV series, one for NBC and one for Pittsburgh's WQED.[6] During the 1960s and 70s, Spock's activities took a decidedly political turn as he became involved in liberal causes. He supported the civil rights movement and campaigned vocally against the Vietnam War, giving speeches and marching in protests alongside Martin Luther King, Jr. in Chicago. At one point he was

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[2] "The Age of Indulgence," Wisconsin Republican Dinner, September 1970, Milwaukee, WI. The full text of this speech is included in the appendix of the following work, John R. Coyne, *The Impudent Snobs: Agnew vs. the Intellectual Establishment* (New Rochelle, NY: Arlington House, 1972), 386.
[3] Ibid., 380.
[4] Benjamin Spock, "Don't Blame Me!" *Look*, January 26, 1971, 37. See also Benjamin Spock, "The Fuss Over *Baby and Child Care*," *Redbook Magazine*, October 1968, 48-49, 52.
[5] It later moved to *Redbook*. Spock made a good deal of money writing articles for popular media. He received $2000 a piece for his *Ladies Home Journal* and *Redbook* columns, Lynn Z. Bloom, *Doctor Spock: Biography of a Conservative Radical* (New York: Bobbs-Merrill, 1972), 179-180. The articles for *Ladies Home Journal* were later collected and published as a book, *Dr. Spock Talks With Mothers* (Boston: Houghton Mifflin, 1961).
[6] Bloom, *Doctor Spock: Biography*, 181-182. For other accounts of Spock's life see Thomas Maier, *Dr. Spock: An American Life* (New York: Harcourt Brace, 1998); Benjamin Spock and Mary Morgan, *Spock on Spock: A Memoir of Growing up with the Century* (New York: Pantheon Books, 1989).

convicted, though later acquitted, of conspiring to aid and abet draft resistance, and he served as the co-chairman of the Committee for a Sane Nuclear Policy. Spock even ran for president, though unsuccessfully. His political involvement garnered many headlines, such as "Dr. Spock: Friend of Babies, Enemy of the Bomb," and considerable criticism. When Agnew took aim at Spock that too made headlines, one of which asked, "Is it all Dr. Spock's Fault?"[7]

The stated object of Agnew's scorn, and the centerpiece of Spock's fame, however, was the baby book. For one, the book had tremendous cultural reach. In his speech, Agnew cited the sale of many millions of copies as evidence of its popular appeal. *Baby and Child Care*, first published in 1945, was the single bestselling book published in America during the 70-year period from 1895 to 1965.[8] It was translated into over thirty different languages, including Spanish as *Tu Hijo*, Italian as *Il Bambino Come Si Cura e Some si Alleva*, and German as *Dein Kind*. Lucille Ball and Desi Arnaz's characters in the T.V. show *I Love Lucy* mentioned using Spock's book for guidance, and Spock credited their reference to his work as an important moment in the book's burgeoning popularity.[9]

Baby and Child Care was published toward the beginning of the baby boom, which generated an audience of millions of new parents eager for child-rearing advice.[10] Children reared under the guidance of Spock were sometimes referred to as "The Spock Generation" or

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[7] Christopher Jencks, "Is it all Dr. Spock's Fault?" *New York Times Magazine*, March 3, 1968, 27, 76, 78, 80, 84, 89, 94-96. George J. Barmann, "Dr. Spock: Friend of Babies, Enemy of the Bomb," *Cleveland Plain Dealer* April 9 1967, Section AA, 1AA, 5AA. See also, Martha Towns, "Don't Knock the Spock!" *The Plain Dealer Sunday Magazine*, July 27, 1969.
[8] Alice Payne Hackett, *70 Years of Best Sellers 1895-1965* (New York: R.R. Bowker Company, 1967).
[9] Spock and Morgan, *Spock on Spock*, 137. The reference to Spock appeared in the *I Love Lucy* episode entitled "Nursery," season 5, episode 136 (originally aired December 5, 1955).
[10] See Charles E. Strickland and Andrew M. Ambrose, "The Baby Boom, Prosperity, and the Changing Worlds of Children, 1945-1963" in *American Childhood: A Research Guide and Historical Handbook*, eds. Joseph M. Hawes and N. Ray Hiner (Westport, CT.: Greenwood Press, 1985), 533-585.

Spock's Babies."[11] Spock received many letters from parents describing how useful they found the book to be. As one woman wrote, reflecting a sentiment expressed by many others, "My husband and I want to thank you for your pocketbook edition with all your wonderful advice. I doubt that we would have survived the last fourteen months without it."[12] Parents commonly noted how worn their copy was from use, and many referred to the book as their "bible."[13] Spock himself was initially wary of the extreme faith parents put in his book, but he jokingly explained that he became more comfortable once he realized that no one was blaming him for killing their children.[14] Of course, some did later accuse him of corrupting them.

Spock's supposed permissiveness was directly related to his use of Freudian ideas about the mind as a resource for developing child-rearing advice. This chapter is an analysis of precisely how Spock did so, examining *Baby and Child Care*'s engagement of Freudian themes as a case study in rhetorical invention. It suggests that during the twentieth century, Freudian ideas became a form of doxa, or a common sense understanding of the mind, that served as ready material for rhetorical invention. The implications of this particular study extend beyond Spock's use of Freudian ideas in order to make sense of how to raise children, however. For

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[11] Joy Miller, "Mrs. Spock Defends Nation's 'Godfather,'" *Miami Herald* Oct 6, 1968, 5E. In their "fan mail" to Spock, parents also referenced their "Spock babies" or "Spock's babies." See, for example, Margaret McNair to Benjamin Spock, personal letter, May 7, 1954, Spock Papers 1904-1968, Box 2, Corres May 1954, Spock Collection, Syracuse University Library, Syracuse, NY; Mrs. R.W. Simmons to Benjamin Spock, personal letter, October 19, 1954, Spock Papers 1904-1968, Box 2, Corres October 1954, Spock Collection, Syracuse University Library, Syracuse, NY.

[12] As qtd. in Jane F. Levey, "'Spock: I Love Him,'" *Colby Quarterly* 36.4 (2000), 279.

[13] See, for example, Margaret H. Morton to Benjamin Spock, personal letter, July 12, 1954, Spock Papers 1904-1968, Box 2, Corres July 1954, Spock Collection, Syracuse University Library, Syracuse, NY; Mrs. V.P. Domanski to Benjamin Spock, personal letter, July 16, 1954, Spock Papers 1904-1968, Box 2, Corres July 1954, Spock Collection, Syracuse University Library, Syracuse, NY; Marian B Nash to Benjamin Spock, personal letter, May 27, 1958, Spock Papers 1904-1968, Box 4, Corres May 1958; Mr. and Mrs. Stephen Kelly to Benjamin Spock, personal letter, December 5, 1955, Spock Papers 1904-1968, Box 3, Corres December 1955, Spock Collection, Syracuse University Library, Syracuse, NY. In addition to these, there exist many other letters of a similar nature.

[14] See transcript of an interview Lynn Bloom conducted with Benjamin Spock, May 9, 1967, Side 1A, Tape 70, Spock Papers, 1963-1971, 1978 Accession, Box 2, Writings, Medical Articles, Rochester, Minnesota, Spock Collection, Syracuse University Library, Syracuse, NY.

one, given that the Freudian conception of mind was widely shared and richly generative, it was and still is put toward many other inventive ends as well. This chapter provides insight into its discursive utilization, which had a profound impact during the twentieth century and beyond. Particularly interesting about *Baby and Child Care* is that Freud's theories are neither explicitly acknowledged nor fully detailed. It therefore provides a compelling example of how conceptions of the mind circulate in our midst, often without our notice, but with considerable rhetorical import as resources for argument.

3.2 THE FREUDIAN MIND AND SPOCK'S *BABY AND CHILD CARE*

When Spock published *Baby and Child Care*, behaviorism was one of the major theoretical influences on childhood and child-rearing practices.[15] John B. Watson and B.F. Skinner were both instrumental in the early development of behaviorism, which rejected the largely introspective psychology that preceded it. Strict behaviorists in the tradition of Watson and Skinner believed that we cannot know the mind, and they therefore treated it as a black box, the contents of which remain hidden from view. They focused on predicting and controlling behavior, attending to what enters and leaves the black box as opposed to the box itself. Watson, in particular, was interested in the doctrine's implications for how to raise children. He published a handbook for parents called *Psychological Care of Infant and Child* and, like Spock,

[15] Edna K. Shapiro and Nancy Nager. "The Developmental-Interaction Approach to Education," in *Revisiting a Progressive Pedagogy*, eds. Nancy Nager and Edna K. Shapiro (Albany: State University of New York Press, 2000), 17. The 1920s saw the application of scientific ideas to child rearing and the beginning of the child guidance and child study movements. The child guidance movement, funded by the Commonwealth Fund, was a progressive effort to prevent delinquency and mental illness through preventative efforts aimed at children. It established child guidance clinics in a number of different communities, which were run by various professionals. See Margo Horn, *Before It's Too Late: The Child Guidance Movement in the United States, 1922-1945* (Philadelphia: Temple University Press, 1989).

also wrote child-rearing articles for popular magazines, including *Collier's* and *Harper's*. *Psychological Care of Infant and Child* describes child rearing as a process of conditioning. For example, Watson recounts showing a child a white rat together with an unpleasant noise until the child not only becomes afraid of white rats, but of other white things as well. Of course, the book's aim was not to help parents instill a fear of rats in their infants, but to teach parents how to condition their children toward desired behavior.[16]

The behaviorist approach to raising children had its critics. Aldous Huxley's *Brave New World* can be interpreted as a *reductio ad absurdum* argument against it, illustrating the frightening result of taking the behaviorist method of child rearing to its logical extreme. By emphasizing how parents should be responsive to a child's needs and motivations, Benjamin Spock's *Baby and Child Care* was similarly a reaction against the rigid conditioning of behaviorist child rearing.[17] An adherent of the other major psychological paradigm of the early twentieth century, Freudianism, Benjamin Spock did not agree with the behaviorists. But before detailing how Spock used Freudian ideas about the mind as a generative resource with which to develop his child-rearing advice, I will first briefly outline Freud's conception of mind, its implications for child rearing, and its influence on Benjamin Spock.

Among the more significant implications of the Freudian turn was its role in shifting the focus of discourse about the mind away from the brain. Though Freud began his career as a neurologist, he ultimately abandoned neurology, believing that it would be too long until neurological research yielded truly interesting insights. Freud believed it was possible to understand the mind independently of its material instantiation, something that may seem

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[16] John B Watson, *Psychological Care of Infant and Child* (New York: W.W. Norton, 1928).
[17] This does not mean there were not overlaps and influences. For example, Watson's discussion of dreams was quite Freudian.

unfathomable from the perspective of our contemporary brain-obsessed culture.[18] Freud developed psychoanalysis as a framework for understanding the mind, stating his approach quite clearly: "Our psychical topography has *for the present* nothing to do with anatomy; it has reference not to anatomical localities, but to regions in the mental apparatus, wherever they may be situated in the body."[19] Over time psychoanalysis became an increasingly complex system that Freud sometimes revised quite radically. This chapter, however, is concerned neither with the progression of Freud's thought nor with the intricacies of his complex theories as it investigates the use of Freudian ideas in public culture.

The Freudian conception of mind that entered American culture in popularized form consisted of several core ideas. Freud's division of the mental apparatus into the distinct and sometimes conflicting regions of id, ego, and superego became widely known. Perhaps most familiar, however, was Freud's emphasis on the dynamic role the unconscious plays in mental life, an emphasis that had profound implications for our understanding of the motivations behind human behavior.[20] Freud's stress on the emotional and sexual aspects of human nature also garnered a good deal of attention. He proposed that we each have a libido, or sexual instinct, which expresses itself in various ways and the repression of which can lead to neurosis. The sexual aspect of Freud's work was quite controversial, causing him to be denounced by some religious authorities for whom "Freud is the spade bearded Anti-Christ, who debased mankind by

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[18] Freud wrote of his grand vision for a brain-based scientific psychology in "Project for a Scientific Psychology," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey, vol. 1, *Pre-Psycho-Analytic Publications and Unpublished Drafts* (London: Hogarth Press, 1966): 281-397. See J. Melvin Woody and James Philips, "'Freud's Project for a Scientific Psychology' After 100 Years: The Unconscious Mind in the Era of Cognitive Neuroscience," *Philosophy, Psychiatry, & Psychology* 2.2 (1995): 123-134.

[19] Sigmund Freud, "The Unconscious," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey, vol. 14, *On the History of the Psycho-Analytic Movement, Papers on Metapsychology, and Other Works* (London: Hogarth Press, 1957), 175.

[20] It is sometimes said that Freud discovered the unconscious. It is more accurate to say that he recognized its import to all aspects of life and popularized the concept. See Lancelot Law Whyte, *The Unconscious Before Freud* (New York: Basic Books, 1960).

insisting that all man's works, whether he desires it or not, are inspired by SEX."[21] Freud's emphasis on sexuality led to Adler and Jung's eventual defection. Of Freud's theory Jung explained that "the brain is viewed as an appendage of the genital glands."[22] Particularly controversial were Freud's widely-known discussions of infant sexuality.[23]

For Freud, the psychological is historical, and childhood experiences therefore have great import for adult mental life. Freud wrote a good deal about infant sexuality as the basis for adult sexuality, suggesting that we transition though several psycho-sexual stages on our way to adulthood, and that on the way we must deal with issues that include the Oedipus complex and penis envy. Freud firmly believed that adult psychosomatic disorders largely have their origin in parental child-rearing practices and that parenting, therefore, is of great importance.[24] In "The Question of Lay Analysis," Freud explicitly mentioned psychoanalysis's possible application to child-rearing practices writing,

> Perhaps you do not believe in these purely theoretical interests of psycho-analysis or cannot allow them to affect the practical question of lay analysis. Then let me advise you that psycho-analysis has yet another sphere of application, which is outside the scope of quackery law and to which the doctors will scarcely lay claim. Its application, I mean, to the bringing up of children.[25]

Freud, of course, did not write a child-rearing manual. Nor did he devote a significant amount of space to proscriptive advice for parents in his writings. Freud did, however, exert an influence on the child-rearing advice produced by others.

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[21] "The Explorer," *Time*, April 23, 1956, 72.
[22] As qtd. in ibid., 75.
[23] Nathan Hale suggests that even psychoanalytic views on sexually eventually became considered conventional, *The Rise and Crisis of Psychoanalysis in the United States: Freud and the Americans, 1917-1985* (New York: Oxford University Press, 1995), 299.
[24] Hale, *Rise and Crisis*, 283. See John F. Cleverley and D.C. Phillips, "The Loss of Innocence: The Freudian Child," *Visions of Childhood: Influential Models from Locke to Spock* (New York: Teachers College Press, 1986).
[25] Sigmund Freud, "The Question of Lay Analysis," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey, vol. 20, *An Autobiographical Study, Inhibitions, Symptoms, and Anxiety, The Question of Lay Analysis, and Other Works* (London: Hogarth Press, 1959), 249.

Though not immediate, Freud's influence on child-rearing advice was ultimately considerable. [26] Anna Freud's work on the application of her father's principles to child-rearing practices is one notable example. Others also wrote books that offered a Freudian perspective on how to raise children, including Margaret A. Ribble in 1943 and Selman Fraiberg in 1959. Of all of the applications, however, Spock's *Baby and Child Care* made the most significant contribution to the popularization of a Freudian approach to child care.

One of Spock's early encounters with psychoanalysis occurred when his wife, Jane Spock, received successful psychoanalytic treatment. Spock himself was later psychoanalyzed by one of Freud's disciplines, and his sessions explored his childhood experiences with a controlling mother.[27] A Yale-trained pediatrician, Spock decided to specialize in psychiatry, a novel combination during the first decades of the twentieth century.[28] Spock completed a one-year residency in psychiatry and attended the NY Psychoanalytic Institute. Though he did not become qualified as an analyst, he studied Freudian concepts and received considerable psychoanalytic training.[29] While a public figure, Spock was also a well-regarded physician and he held several prestigious clinical and academic positions, including stints at the Mayo Clinic,

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[26] Several studies have found a marked lack of Freudianism in the child-rearing literature of the 1920s and 1930s. Michael Sulman examined 455 magazine articles about child rearing written between 1919 and 1939 and found that Freudian concepts appeared infrequently, if at all, "The Freudianization of the American Child: The Impact of Psychoanalysis in Popular Periodical Literature in the United States, 1919-1939" (PhD diss., University of Pittsburgh, 1972). Geoffrey Steere examined childcare manuals of the 1920s and found little evidence of Freudianism in them either. Steere also looked at articles relating to psychoanalysis that were published at this time and found that they tended to overlook Freudianism's implications for child rearing. Steere suggests that Freud's absence from discussions of child rearing was not necessarily the result of any hostility toward his theories. Rather, it occurred because other successful alternatives for child rearing advice were available. For instance, many suggest that during the 1920s and 1930s, Emmet Holt's work was more important than Freud's. The U.S. government, for example, distributed Holt's *The Care and Feeding of Children*, which warned parents against holding their children too much, as a pamphlet, Geoffrey H. Steere, "Freudianism and Child-Rearing in the Twenties," *American Quarterly* 20.4 (1968): 759-767.

[27] Maier, *Dr. Spock: An American Life*, 95; Bloom, *Doctor Spock: Biography*, 71.

[28] Spock, "How My Ideas Have Changed," *Redbook*, October 1963, 54.

[29] Spock, "How My Ideas Have Changed," 122; Maier, *Dr. Spock: An American Life*, 116; and Bloom, *Doctor Spock: Biography*, 83.

the University of Pittsburgh's Western Psychiatric Clinic, and Case Western Reserve.[30] He published scholarly papers in academic journals and performed research studies, one of which was designed to test whether common child-rearing practices, such as those recommended in *Baby and Child Care*, resulted in well-adjusted children.[31]

Spock explained that psychoanalytic training drew his attention to areas that were significant for Freud, but that pediatrics had largely neglected, such as thumb sucking, and he experimented with applying Freudian principles to pediatric practice.[32] Spock's first work applying Freudian principles to child rearing practices was a 50-page pamphlet he co-authored with Dr. Mabel Huschka. Called *The Psychological Aspects of Pediatric Practice*, it was written for a specialized audience and was explicitly Freudian.[33] Others came to know of him as a "Freudian psychoanalytically oriented pediatrician."[34] Indeed, Spock ultimately believed that his most important contribution to child-rearing literature was the application of a psychoanalytic perspective.[35] More specifically, Spock was interested in preventative psychiatry, and he used Freudian principles to discover how to minimize the likelihood that a child will later develop psychological problems.[36]

Spock began writing *Baby and Child Care* in 1943, in the midst of WWII. He dictated to his wife, who sat at a typewriter recording his prose and offering suggestions about practical

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[30] See Bloom, *Doctor Spock: Biography*, 72, 77.
[31] This study, which he organized in 1959, met with mixed results. Spock published a number of papers based upon it, but it met with some criticism. Spock ultimately edited the 1968 edition of *Baby and Child Care* based on the study's findings. See Bloom, *Doctor Spock: Biography*, 205-207.
[32] Transcript of an interview Lynn Bloom conducted with Benjamin Spock, n.d., 6-7, Spock Papers, 1963-1971, 1978 Accession, Box 1, Spock-Family&Friends, Spock Collection, Syracuse University Library, Syracuse, NY. Thomas Maier describes the difficulty involved with trying to translate Freudian theory into practical advice, *Dr. Spock: An American Life,* 123.
[33] Benjamin Spock and Mabel Huschka, *The Psychological Aspects of Pediatric Practice* (New York: New York State Committee on Mental Hygiene, 1938).
[34] See Bloom, *Dr. Spock: Biography*, 75-76.
[35] Ibid., 126.
[36] On Spock's conception of preventative psychiatry, see his "Preventative Applications of Psychiatry," *Merrill-Palmer Quarterly* 2 (Fall 1955): 3-12,

matters based on her own child-rearing experience. Spock dedicated the first edition of *Baby and Child Care* to her, though he likely underrated her role in the acknowledgements.[37] Dorothea Fox, who was well-known for drawings of babies that appeared in places such as *Good Housekeeping* and *McCall's*, supplied the cartoon-like illustrations. Some were instructive, such as illustrations of how to put a nipple on a bottle, while others showed infants in scenes from everyday life. Spock also solicited input from various doctors, particularly pediatricians, to whom he sent a provisional draft of *Baby and Child Care*.[38]

The hardcopy edition of *Baby and Child Care* was published in 1945 by Duell, Sloan and Pearce while Pocket books simultaneously brought out the paperback edition. Though the content was the same, the two had slightly different titles, *The Common Sense Book of Baby and Child Care* and *The Pocket Book of Baby and Child Care*, respectively. The simultaneous publication of hard and soft cover editions was uncommon at a time when expensive hardcover editions usually appeared first, and it meant that a cheap paperback edition was immediately available for 25 cents.[39] The book's low price was a factor in its popularity and *Baby and Child Care*'s success, at least in part, reflected "it's accidental priority in the paperback publishing revolution . . . Spock's guide was for a time the only such book to be widely available to the

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[37] For a detailed account of the writing of the book, see Bloom, *Doctor Spock: Biography*, 101-115. See also Spock, "Writing *Baby and Child Care*," *Ladies Home Journal*, September, 1957. Jane Spock believed that she was not duly credited for her contribution. Mrs. Spock went so far as to suggest that she might have deserved co-authorship. See transcript of an interview Lynn Bloom conducted with Benjamin Spock, April 25, 1967, Cart.4-Side 1A, 9-11, Spock Papers, 1963-1971/1978 Accession, Box 1, Spock-Interviews, Spock Collection, Syracuse University Library, Syracuse, NY. When Spock revised the book in 1976, he also revised the acknowledgements to include a description of Jane Spock's contribution.

[38] Transcript of an interview Lynn Bloom conducted with Benjamin Spock, May 9, 1967, Side 1A, Tape 70, 9, Spock Papers, 1963-1971, 1978 Accession, Box 2, Writings Medical Articles Rochester, Minnesota, Spock Collection, Syracuse University Library, Syracuse, NY.

[39] See Maier, *Dr. Spock: An American Life*, 125; Bloom, *Dr. Spock: Biography*, 100, 115-116. For Spock's perspective, see Spock and Morgan, *Spock on Spock*, 137-139.

American public in an inexpensive edition."[40] A revised second edition was published in 1957, and a third edition appeared in 1968. Since then, several other editions have also appeared, with yet another edition slated for 2011. This chapter focuses on Spock's original exposition, the 1945 edition.

Baby and Child Care begins with the reassuring statement, "Trust yourself. You know more than you think you do." This advice is emblematic of the book, which encourages parents to have confidence in their own instincts when it comes to child rearing. Focusing on normal development and typical considerations in child rearing rather than on the unusual or abnormal, the book includes advice on a wide range of topics, such as toilet training, feeding schedules, and the treatment of illnesses. It provides advice on small matters, such as how best to put a sweater on a child, as well as such consequential concerns as how to deal with sibling rivalry. Sections are short and easy to digest, and the book is arranged in a loosely chronological fashion, following a child's natural course of development, though containing considerably more content regarding the first year of life than any other. Oriented toward the present, it addresses what one should do at any given stage and when confronted with particular contingencies. Spock carefully indexed the book himself rather than allowing someone else to do it because he felt that he knew what mothers might look for, ultimately creating around 1,500 entries.[41]

Benjamin Spock wrote *Baby and Child Care* for a popular audience, and it presents advice in a matter-of-fact manner. It does not cite experts, nor reference studies, nor provide sources of evidence and is written in an accessible style, using a nontechnical vocabulary, short sentences and colloquial phrases. Spock described the book as having a "friendly" tone, as did

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[40] Michael Zuckerman, "Dr. Spock: The Confidence Man," in *The Family in History*, ed. Charles E. Rosenberg (Philadelphia: University of Pennsylvania Press, 1975), 196. Zuckerman argued that this was not the only, or even the primary, reason for its success.
[41] Jack Harrison Pollack, "Mr. Baby Doctor: The Story of Benjamin Spock," *Today's Woman*, March 1954, 50.

others.[42] One mother wrote to Spock observing that his tone was so relaxed and easygoing that in reading the book she felt as if she knew him.[43] The book presumes a middle or upper class audience, supposing, for example, that its 1940s readers would have access to fridges, telephones, TVs, and doctors.[44] Spock also assumed that the mother acted as primary caretaker and, in order to avoid pronoun confusion, referred to the child as "he," a decision he explained at the outset of the book. In later years, in response to the protestations of feminists who objected to such sexist presumptions, Spock revised the book.[45]

Agnew's charge that *Baby and Child Care* encouraged permissiveness was a reaction against the generational change that he and Richard Nixon had conspired against. Spock's book offered an alternative to the rigid child-rearing advice of the 1920s, emphasizing flexibility and responsiveness to a child's needs and cautioning against harsh disciplinary measures. Spock, however, believed that some parents had misinterpreted his advice in the 1945 edition to mean that the child dictates what is best and that parents should comply.[46] In response, when he revised *Baby and Child Care* for the second edition, he "put more emphasis on the rights of parents, on the need for firm parental leadership."[47] Though his changes included thoroughly revising the chapter on discipline, Spock did not regard this as a change of opinion, but of emphasis.[48]

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[42] Spock, "Don't Blame Me," 38.
[43] Mrs. Clara F. Brand to Benjamin Spock, personal letter, April 16, 1958, Spock Papers 1904-1968, Box 4, Corres Apr 1958, Spock Collection, Syracuse University Library, Syracuse, NY.
[44] See Bloom, *Dr. Spock: Biography*, 129-133.
[45] See Benjamin Spock "Why This Revision of *Baby and Child Care*," in *Baby and Child Care*, rev. ed. (New York: Pocket Books, 1976), xix.
[46] Spock, "The Fuss Over *Baby and Child Care*," 48-49. See also Spock, "How My Ideas Have Changed," 122.
[47] Spock, "Don't Blame Me," 37.
[48] See the introduction to the 1965 edition for a discussion of these changes. Spock also talks about the issue of permissiveness in his book *A Better World For Our Children: Rebuilding American Values*. See also, Zuckerman, "Dr. Spock: The Confidence Man," 184, 202.

Agnew perhaps exaggerated Spock's influence, crediting him with the corruption of an entire generation. Spock disputed the notion that he wielded such power, explaining that "my critics confuse the popularity of *Baby and Child Care* with the book's influence," and adding, "it is popular because it is cheap, complete, and friendly. But in the few areas of child care in which I've really tried to change things, I haven't made a dent."[49] Spock recognized that his popularity reflected cultural changes that were already afoot, and which began neither with his book nor the 1960s. Rather, the first half of the twentieth century saw the growth of a parenting style that paid more attention to children's feelings. Spock attributed this shift to sources that included Dewey and Kilpatrick's work on the child's natural desire to learn. More tellingly, he also cited Freud's emphasis on loving bonds between parents and children.[50]

Jane Spock defended her husband against the accusations of permissiveness by drawing attention to Freud's influence, and it was no accident that she did so. She noted that the 1940s had seen a "great movement toward permissiveness which had nothing to do with Ben, but with the interpreting of Freud that was going on."[51] In addition to Mrs. Spock, others also held Freud responsible for fostering permissiveness.[52] The association between Freud and permissiveness had been circulating for some time and the link between the two writers was quite strong. Freud was a significant influence on *Baby and Child Care*, as Spock openly acknowledged. But Freud was more than just an influence – he was, more importantly, a resource for Spock's rhetoric.

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[49] Spock, "Don't Blame Me," 37.
[50] Spock, "The Fuss Over Baby and Child Care," 49. See also Spock, "How My Ideas Have Changed," 125. Spock's position is corroborated by several surveys of popular child-rearing literature, which suggest that "the 1920s marked the peak of restrictive socialization advice. By 1930 an emphasis on self-regulation had made significant gains and by 1940 two-thirds of the articles surveyed showed that permissive scheduling was being advised to American mothers. The shift was complete by 1948 in that all surveyed articles recommended self-regulation," Paul M. Dennis, "Between Watson and Spock: Eleanor Roosevelt's Advice on Child-Rearing From 1928-1962," *The Journal of American Culture* 18.1 (1995), 48.
[51] Miller, "Mrs. Spock Defends Nation's 'Godfather,'" 5-E.
[52] Geoffrey Gorer, "Are We 'By Freud Obsessed,'" *NYT Magazine* July 30, 1961, 57.

3.3 FREUD AS RESOURCE FOR SPOCK

Though Spock differed from Freud in some important respects, aiming to reduce conflict, for instance, while Freud believed it to be inherent and inevitable, *Baby and Child Care* was undoubtedly Freudian.[53] Several scholars have written about the presence of Freudian ideas in *Baby and Child Care*, and Spock himself observed that *Baby and Child Care* was, in part, an application of Freud to the daily care of children.[54] He considered himself a conduit of Freudian ideas noting, "Diluted extrapolations of Freudian concepts have greatly influenced American child rearing practices – through my writings among others."[55] One commenter wrote of *Baby and Child Care* that "most of its prescriptions, from feeding and toilet training to 'play with peers,' are solidly rooted in Freud's concepts." The commenter above, however, also wrote that despite its roots in Freud, it was "no Freudian text by a long shot."[56] Though he does not clarify this remark, one reason he might have characterized *Baby and Child Care* as "no Freudian text," despite acknowledging that the majority of its proscriptions are based on Freud's ideas, is that *Baby and Child Care*'s Freudian foundation is far from explicit.

Though Benjamin Spock's *Baby and Child Care* imparted distinctively Freudian child-rearing advice to an eagerly receptive public, it did not herald its Freudianism; in fact, it barely

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[53] Zuckerman, "Dr. Spock: The Confidence Man," 204. Freud was not the only influence on Spock's thought; Dewey and Darwin both impacted Spock's views on how children should be raised, as did others. See Spock, "Don't Blame Me," 38; Maier, *Dr. Spock: An American Life*, 132; William Graebner, "The Unstable World of Benjamin Spock: Social Engineering in a Democratic Culture, 1917-1950," *The Journal of American History* 67 (1980): 618, 623-625. Graeber offers a heavy-handed reading of Spock, with which I do not necessarily agree.
[54] See Hale, *Rise and Crisis,* 285-286; Bloom, *Dr. Spock: Biography*, 128-129; Spock, "Don't Blame Me," 38. Maier says its Freudianism was radical, *Dr. Spock: An American Life*, 135-143, 153. A. Michael Sulman did a thorough content analysis of the Freudian ideas present in *Baby and Child Care*, "The Humanization of the American Child: Benjamin Spock As a Popularizer of Psychoanalytic Thought," *Journal of the History of the Behavioral Sciences* 9.3 (1973): 258-265. See also, William G. Bach, "The Influence of Psychoanalytic Thought on Benjamin Spock's *Baby and Child Care*," *Journal of the History of the Behavioral Sciences* 10 (1974): 91-94.
[55] As qtd. in Sulman, "Humanization," 258. Spock wrote this in letter to Sulman.
[56] "The Explorer," 76, 78.

acknowledged it. The 1945 text of *Baby and Child Care* contains not a single instance of the name "Freud." In addition, it makes no mention of most of Freud's key terms. Words such as "libido," "sublimation," "fixation," "catharsis," "erotogenic zones," "oral zone," "oral period," "anal zone," "anal period," "latency," "id," "ego," "superego," "narcissism," and "Oedipus complex," are entirely absent, as are other terms central to Freudian psychoanalysis.[57] Even "unconscious," which might be the most fundamental concept in the Freudian vocabulary, appears only in adjectival form.[58] As Michael Sulman observes,

> Forms of the verb *to regress* appear infrequently, but with accuracy . . . infantile sexuality is called the child's natural and wholesome curiosity . . . [Spock] calls unconscious mental activity either inner tension, unconscious nervousness, subconscious fears, or, simply, anxiety. He explicitly refers to the psychoanalytic idea of unconscious mental intrapsychic conflict in only one instance.[59]

Spock certainly did not draw attention to *Baby and Child Care*'s decidedly Freudian orientation. And neither did his readers.[60]

Even at the height of its popularity, the book's Freudian orientation received remarkably little notice. Spock himself noted that in the years following its publication, the issue of the book's Freudianism did not arise much.[61] Book reviews of *Baby and Child Care* largely did not

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[57] Sulman, "Humanization," 265; Sulman provides a more extensive list of the relevant terms Spock does not use. Sulman also notes that Spock first uses the term "Oedipus complex" in the 1968 edition, and even then it appears in parentheses.
[58] Ibid.
[59] Ibid.
[60] Spock may have dropped the Freudian vocabulary for strategic reasons. Spock was influenced by a psychoanalytically-oriented child education expert, Carolyn Zachry, who found that people were sometimes more receptive to Freud's ideas if they were not expressed in Freudian terminology. See Maier, *Dr. Spock: An American Life*, 98. On Zachry's influence, see "Who is Dr. Spock," *Ladies' Home Journal*, March 1960. See also Carolyn Zachry, "The Influence of Psycho-analysis in Education," *Psychoanalytic Quarterly* 10.3 (1941): 431-44. John Kennell, a pediatrics professor, said that Spock "translated psychiatric concepts into lay terms," as qtd. in Bloom, *Doctor Spock: Biography*, 81. One of Spock's biographers described Spock as engaging in interpretation, explaining that Spock interpreted Freud for the average person, Bloom, *Doctor Spock: Biography*, 128.
[61] Maier, *Dr. Spock: An American Life,* 153.

mention Freud, and newspapers and magazine stories were generally silent on the subject.[62] A 1961 company-orchestrated readership survey contained no mention of Freud, either in the questions posed to readers or in readers' responses to them.[63] The numerous letters parents and readers sent to Spock, either to praise his book, criticize it, comment upon it, or offer advice for the next edition, similarly demonstrate a remarkable silence on the subject of Freud. Collectively, these letters suggest that for most parents, *Baby and Child Care*'s Freudian orientation was not a pressing concern.[64] The prevailing sentiment, which one finds repeated again and again in newspaper articles, book reviews, and letters from parents, is that the book offered practical commonsense advice.[65] Indeed, it is highly likely that you, as a reader of this chapter, knew of *Baby and Child Care*, but despite its popularity and influence, had not associated it with Freudianism prior to reading this chapter.

Baby and Child Care's understated Freudianism together with the public's seeming indifference to it might lead one to mistakenly surmise that the Freudian orientation of Spock's advice was neither significant nor interesting. However, the fact that it remained largely unremarked is one of the very reasons that *Baby and Child Care* is an instructive example of how the mind can serve as a resource in public culture. Spock's *Baby and Child Care* illustrates

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[62] See, for example, Bentley Glass, review of *The Pocket Book of Baby and Child Care*, by Benjamin Spock, *The Quarterly Review of Biology* 22.3 (1947): 236; Myron E. Wegman, review of *The Common Sense Book of Baby and Child Care*, by Benjamin Spock, *American Journal of Public Health and the Nation's Health* 36.11 (1946): 1329.
[63] Reader Survey by the Benjamin Company, Advertising Representatives for Pocket Books, 1961, Spock Papers 1904-1968, Box 67, Writings Books Baby and Child Care (Readers Comments), Spock Collection, Syracuse University Library, Syracuse, NY.
[64] While impossible to prove that Spock never or rarely got a letter mentioning Freud, my study of letters in the Spock Collection at Syracuse University suggests that this is the case. For a study of letters sent to Spock regarding the book, see Levey, "'Spock, I Love Him.'"
[65] The front cover of the first paperback edition of *Baby and Child Care* reads "an authoritative, illustrated, common-sense guide for parents on the care of children from birth to adolescence," *The Pocket Book of Baby and Child Care* (New York: Pocket Books, 1946).

how conceptions of the mind can serve as a generative resource while remaining to some extent in the realm of the undiscussed.

Spock engaged in a relatively straightforward and familiar form of invention, applying an abstract principle to a specific case in order to discover what to say about it. In other words, Spock utilized Freud's theories about the mind in order to develop inferences about how to raise children. This is an inventional strategy that people frequently engage as they develop discourse. For example, in order to account for the late-2000s recession, I might apply Adam Smith's theory of the invisible hand of the market and speak of its self-regulating dimensions. I might alternately use a Marxist framework and address issues of class, or engage one of any number of economic theories. But while *Baby and Child Care* draws upon Freud's theories to develop child-rearing advice, it elides them at the very same time. Spock largely presents his inferences, many of which take the form of concrete proscriptive advice, without detailing the underlying psychic rationale. Spock's advice about sucking serves as an excellent example of his use of Freud's theory in this manner.

In the first few months of their lives, babies exhibit a limited range of activities, not yet able to talk, walk, or laugh, for instance. During this period, sucking is one of a baby's most important behaviors as he or she begins to breast or bottle feed and possibly starts to suck his or her thumb or other objects. Sucking, therefore, has a prominent place in *Baby and Child Care*, and Spock advises parents on how to handle this vital part of their child's development, drawing heavily upon Freud's conception of the mind. For instance, Spock used Freudian theory to explain the basis of sucking behavior, writing, "A baby nurses eagerly for two separate reasons.

First, because he's hungry. Second because he *loves* to suck."[66] Spock explained that thumb-sucking is not the bad habit some consider it to be, but simply an expression of the need to suck. He wrote, "Thumb-sucking in the early months is not a habit, it shows a need."[67] Specifically, Spock's explanation of sucking as an expression of a fundamental need derives from Freud's account of the libido's role in the psychical apparatus.

Freud suggested that the need to suck is one manifestation of the libido, or sexual drive, which is analogous to other essential human drives, such as hunger, an aggressive drive, and the drive toward death. By his structural model of mind, a particular region of the psychic apparatus, the id, serves as the reservoir for the various drives, including the libido. The mind regulates the drives, which take the form of internal psychic energy, according to economic principles of accrual and release. The pleasure principle guides the libido's operations, meaning that it is geared toward attaining pleasure and avoiding its reverse.[68] The need to suck and its satisfaction is understood not only as a manifestation of the libido, but also in relation to the id's place within a larger psychical apparatus and its natural course of development. The id exists alongside the ego and superego, which are responsible for other aspects of psychic function, and which mitigate the id's influence.[69] Freud's views on sucking also included a temporal dimension. Freud suggested that the libido becomes attached to various objects as one goes through different stages of psychosexual development. The oral stage, in which the libido is focused on the region of the mouth, is first, followed by anal and genital stages.

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[66] Spock, *The Common Sense Book of Baby and Child Care* (New York: Duell, Sloan, and Pearce, 1945), 24. All subsequent *Baby and Child Care* quotes come from this first hardback edition.
[67] Ibid., 137. This sentence is bolded in the original.
[68] Sigmund Freud, "Introductory Lectures on Psychoanalysis," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey, vol. 16, *Introductory Lectures on Psychoanalysis (Part 3)* (London: Hogarth Press, 1963), 356-357.
[69] Sigmund Freud, "The Sexual Aberrations," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey, vol. 7, *A Case of Hysteria, Three Essays on Sexuality, and Other Works* (London: Hogarth Press, 1953), 162.

Given that *Baby and Child Care* aims to advise anxious young parents, it is geared toward the proscriptive more than the explanatory. Spock drew on Freud's theory therefore as a generative resource with which not only to explain behaviors but also to formulate practical advice about how best to manage them. Spock's advice about how parents should deal with sucking behaviors extrapolates not only from Freud's theory of the libido, but also his account of intrapsychic conflict. Spock might in fact be understood as offering a recipe for staving off neurosis through preventative measures.

According to Freud, libidinal forces come into conflict with the forces of the ego in ways that can be problematic. Neurotic symptoms then emerge out of the contradictory demands of libido and ego.[70] Freud wrote, "People fall ill of a neurosis if they are deprived of the possibility of satisfying their libido – that [is] they fall ill owing to 'frustration', as I put it – and . . . their symptoms are precisely a substitute for their frustrated satisfaction."[71] According to Freud, frustration is the most obvious and easily identifiable cause of neurosis.[72] Regression is one neurotic manifestation, and Spock notes the possibility that an older child might later return to sucking behaviors. He writes that "when he can't make a go of things at the more grown-up level, he [the child] retreats to early infancy when sucking was his chief joy."[73] Spock's advice about how to manage a child's sucking behaviors appears designed to prevent that.

Spock suggests that parents do their utmost to give a child sufficient sucking opportunities and writes that thumb-sucking a sign that a child has not yet satisfied its needs. He explains that a child will suck its thumb when it has not had "enough sucking at the breast or

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[70] Ibid., 29-30.
[71] Freud, "Introductory Lectures," 344.
[72] Freud, "Types of Onset of Neurosis," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed., James Strachey, vol. 12, *The Case of Schreber, Papers on Technique, and Other Works* (London: Hogarth Press, 1958), 231.
[73] Spock, *Baby and Child Care*, 142.

bottle to satisfy his sucking instinct."[74] He recommends that parents ensure that the child gets enough time to satisfy that craving,

> If you feed him plenty, but don't give him enough chance to suck, he'll feel unsatisfied in his sucking craving and try to suck something else – his fist, or his thumb, or the clothes. It's important to give him a long enough nursing period at each feeding and to have a sufficient number of feedings each day.[75]

He suggests that if a baby starts to try to suck its thumb, the parent should give him additional time to suck on the breast or bottle.[76] According to Spock, ensuring that a young baby has adequate opportunity to suck makes it less likely that he will suck his thumb when older. If an older child does suck his or her thumb, Spock did not recommend common techniques of the time, such as tying its arms down, putting something foul tasting on its thumb, or making it wear mittens. Instead, he wrote, "If *anything* needs to be done for thumb-sucking, it should be to make the child's life more satisfying."[77] He said, "See to it that his life is good."[78]

It is clear, therefore, that Spock extrapolated from Freudian principles regarding the mind's operations in order to provide concrete advice for raising a well-adjusted child. By advising parents to give children the opportunity to satisfy their sucking impulse, Spock effectively encouraged them to avoid frustrating their child's libido, thereby presumably forestalling neuroses. Freud's abstract principles are moreover brought to bear on very specific aspects of child rearing involving sucking behaviors, such as the length and duration of feedings, the question of tying a thumb-sucking child's arms down, and so forth. Moreover, beyond the issue of sucking, *Baby and Child Care* frequently suggested how parents should avoid frustrating their children. As a result, it is not difficult to demonstrate the Freudian origins of Spock's

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[74] Ibid., 137.
[75] Ibid., 24.
[76] Ibid., 138.
[77] Ibid., 143.
[78] Ibid., 144.

purported permissiveness, meaning that Spiro Agnew's condemnation was indirectly a critique of a particular conception of mind, though Agnew likely had so sense that that was the case.

As Spock's advice regarding sucking behaviors demonstrates, *Baby and Child Care* drew out the practical entailments of Freud's theory for various aspects of child rearing, but presented them shorn of their underlying psychic rationale. Spock's account of a "need to suck," for instance, is devoid of the complexity that underlies Freud's theory of the libido and the oral stage. Spock's suggestion that parents give their children adequate opportunity to suck similarly elided the details of Freud's ideas about frustration and neurosis. Spock's advice regarding other areas of child rearing follows the same pattern. When Spock notes the possibility of "retreating" to an earlier stage, for instance, he introduces the Freudian notion of regression without detailing the psychic underpinnings of this complex phenomenon, nor addressing the related theories of fixation or sublimation. Given the book's emphasis on the pragmatic, doing so makes sense; parents want to know what to do with their children in various situations and do not necessarily need to know why they should do it.

Since Spock did not explicitly detail the theory of mind from which he derived his child-rearing advice, one might say that *Baby and Child Care* presents the entailments of Freudian theory as disconnected fragments.[79] In other words, the entailments are wholly detached from the underlying theory of mind that gives rise to them. Such entailments may even take on a life of their own, as has the Oedipus complex, which sometimes seems to circulate independently of Freud's ideas about the mind. We might describe this as a process by which the generational principle is forgotten while the conclusions and implications we derive from it spin off and circulate autonomously. At some point, the connection to a theory of mind can be lost entirely

[79] On fragmentation, see Michael Calvin McGee, "Text, Context, and the Fragmentation of Contemporary Culture," *Western Journal of Speech Communication* 54 (1990): 274-289.

and the fragment might be said to be about the mind only in a historical and genealogical sense.[80] This, at least in some contexts, happened with Freudian ideas about the mind, and it provides some insight into *Baby and Child Care*. Yet, fragmentation does not seem to provide a full account. Just because Freud's theories of mind are not delineated in the text does not mean they are *in absentia*, and they still might have had a meaningful presence in the audience's encounter with it. More specifically, some of Spock's readers may have brought the missing Freudian detail to bear on the text, a possibility with important implications for rhetorical invention.

In the *Art of Rhetoric*, Aristotle defined an enthymeme as a particular type of syllogism that relies on the listener to supply some of the premises. An enthymeme is sometimes described as a truncated syllogism, or a syllogism in which some of the premises are missing or unstated. According to Aristotle, enthymemes are used when the missing premises are so well known that the speaker can reliably depend on the audience members to insert them.[81] The elided materials of the enthymeme, therefore, exist largely in the realm of doxa. Aristotle provides the following example of an enthymematic argument: "To prove that Dorieus was the victor in a contest at which the prize was a crown, it is enough to say that he won a victory at the Olympic games; there is no need to add that the prize at the Olympic games is a crown, for everybody knows it."[82] The audience supplies key information that fills in the details of the argument. Crucial to

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[80] For example, the terms "highbrow" and "lowbrow" are remnants of phrenological discourse that no longer retain any meaningful connection to the pseudoscience.

[81] This is the standard account of enthymemes. For a more complex and nuanced perspective see, for example, Lloyd F. Bitzer, "Aristotle's Enthymeme Revisited," *Quarterly Journal of Speech* 45 (1959): 399-408; Thomas M. Conley, "The Enthymeme in Perspective," *Quarterly Journal of Speech* 70 (1984): 168-187. In recent years, rhetorical scholars have observed the value an expansive view of the enthymeme. See J. Walker, "The Body of Persuasion: A Theory of the Enthymeme," *College English* 56 (1994): 46-65; Roger C. Aden, "The Enthymeme as Postmodern Argument Form: Condensed, Mediated Argument Then and Now," *Argumentation and Advocacy* 31.2 (1994): 54-64. Cara Finnegan suggested that there are visual enthymemes, "The Naturalistic Enthymeme and Visual Argument: Photographic Representation in the 'Skull Controversy,'" *Argumentation and Advocacy* 37 (2001): 133-149.

[82] Aristotle, *The Art of Rhetoric*, trans. J. H. Freese (Cambridge, MA: Harvard University Press, 2000), 1357a.

the success of an enthymeme is that missing premises be well enough known that audience members can be reliably depended upon to supply them.

To claim that *Baby and Child Care*'s Freudianism is supplied in an enthymematic fashion is to say that Spock explicitly stated certain premises and conclusions in the text, while the audience filled in others based on familiar details of Freudian theory. In other words, the audience provided the Freudian elaboration at the root of Spock's advice, fleshing out the explanation by supplying missing premises. For example, we might break the Freudian rationale for allowing a child to suck into a syllogistic structure with the premises that (1) a child deprived of sucking opportunities will be frustrated, (2) frustrated children become neurotic, and (3) parents should avoid creating neurotic children, together with the conclusion (4) do not deprive your child of the opportunity to suck. In this case, we might say that in *Baby and Child Care* Spock presented the conclusion without the premises, depending on the audience to fill those in. But I take the enthymeme, and its particular logical structure, merely as a starting point. This process of "filling in" does not necessarily happen in a strictly enthymematic manner. The audience could have brought Freudian ideas to bear on the text in a less clearly defined way, supplying Freudianism in an ad hoc fashion, and thereby contributing Freudian detail. The concern here, moreover, is not with the details of how Freudian ideas might have been brought to bear on the text, but simply that they potentially were so. In either case, Freudianism was certainly well enough known at the time of *Baby and Child Care*'s publication that we might consider it to have existed in the realm of doxa, thereby being available to be brought to bear on the text by many readers.

3.4 FREUDIANISM AS DOXA

Community members share a wide array of beliefs, many of which are mundane. In the United States people largely believe that the sun goes up each morning, that most people prefer eating pizza to brussels sprouts, and that Alaska is very cold. These beliefs and others constitute what is sometimes called common knowledge. Scholars have developed a range of different conceptual frameworks with which to account for common knowledge and the role it plays in human activity. These concepts, which stem from a variety of perspectives, disciplinary and otherwise, include ideology, the ideograph, doxa, public opinion, commonsense, vox populi, mass consciousness and social knowledge.[83] Each of these has a different orientation and/or emphasis. Doxa is central to the rhetorical tradition, and it therefore exists in relation to a matrix of discussions that best address the matters of our concern, which include rhetorical invention.

Doxa can be defined as "all that is considered true, or at least probable, by a majority of people endowed with reason, or by a specific social group."[84] While we are sometimes aware of the doxa that circulates in our midst, it does not always make its way into conscious awareness. Pierre Bourdieu explores the taken-for-grantedness of many of our shared beliefs, which he characterizes as part of "the universe of the undiscussed." He argues that doxa can undergird our social life in a profound manner while floating beneath awareness.[85] Aristotle believed that doxa provides the material not just for the enthymeme, but for rhetoric more generally, thereby

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[83] See Michael Calvin McGee, "The 'Ideograph': A Link Between Rhetoric and Ideology," *Quarterly Journal of Speech* 66 (1980): 1-16; Thomas Farrell, "Knowledge, Consensus, and Rhetorical Theory," *Quarterly Journal of Speech* 62 (1976): 1-14; Sofia Rosenfeld, "Tom Paine's Common Sense and Ours," *William and Mary Quarterly* 65 (2008): 633-668; John Lyne, "Science, Common Sense, and the Third Culture," *Argumentation and Advocacy* 42 (2005): 38-42.

[84] Ruth Amossy, "Introduction to the Study of Doxa," *Poetics Today* 23.3 (2002): 369.

[85] See Pierre Bourdieu, *Outline of a Theory of Practice*, trans. Richard Nice (Cambridge: Cambridge University Press, 1977), 164-169. On his conception of doxa, see John F. Myles, "From Doxa to Experience: Issues in Bourdieu's Adoption of Husserlian Phenomenology," *Theory, Culture, & Society* 21.2 (2004): 91-107.

playing an essential role in civic life.[86] Modern scholars, such as Perelman and Tyteca echoed and elaborated on Aristotle's vision of doxa as a foundation of social organization. Their *New Rhetoric* has been described as "a reminder that there can be no social life, no verbal communication, no mutual persuasion without a solid background of shared opinions and beliefs."[87] Plato, of course, did not share this evaluation; his well-known critiques characterized doxa as debased knowledge, vastly inferior to episteme; when we use it, he suggested, we do so to our detriment.[88] Whether shared understandings serve constructive ends or are a liability, and it is surely some combination of both, doxa persists regardless. Within a given community individuals share beliefs about a wide range of subjects, and they invariably make use of those beliefs in practical affairs.

Doxa's implications for rhetorical invention are obvious; it is material with which we create.[89] As the shared understanding that makes communication possible, doxa participates in the generation of discourse in a fundamental and possibly inevitable sense.[90] As Sharon Crowley suggests, "Rhetorical arguments circulate within *doxa*. In this view, rhetorical arguments are always already available; they are simply activated or enlivened within a rhetorical encounter. Jacques Derrida might have said that rhetorical arguments are cited."[91]

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[86] See Aristotle, *Rhetoric*, 1404a. He used the term endoxa to identify shared beliefs that are more stable than doxa.
[87] Ruth Amossy, "How to Do Things With Doxa: Toward an Analysis of Argumentation in Discourse," *Poetics Today* 23.3 (2002): 465. See also Thomas Farrell, *Norms of Rhetorical Culture* (New Haven: Yale University Press, 1993).
[88] On Plato's views on doxa, see Eric A. Havelock, *Preface to Plato* (Cambridge, MA: Harvard University Press, 1963), 234-253.
[89] Thomas Farrell talks about social knowledge as generative, "Knowledge, Consensus, and Rhetorical Theory," 9-10. Chaim Perelman and Lucie Olbrechts-Tyteca similarly draw attention to its constructive possibilities in *The New Rhetoric*.
[90] See Alan Gross and William M. Keith, "Extension," *Rhetorical Hermeneutics: Invention and Interpretation in the Age of Science*, eds. Alan G. Gross and William M. Keith (Albany: State University of New York Press, 1997), 214; Roland Barthes emphasizes doxa as starting point that we speak against, *Image, Music, Text*, trans. Stephen Heath (New York: Noonday Press, 1988), 200.
[91] Sharon Crowley, *Towards a Civil Discourse: Rhetoric and Fundamentalism* (Pittsburgh: University of Pittsburgh Press, 2006), 47-48.

Some find doxa's role in the inventive process disabling. Roland Barthes believed that doxa serves as a stultifying obstacle to creativity, associating it with clichés, stereotypes and the like. He called doxa a "necrosis of language, a prosthesis brought in to fill a hole in writing."[92] J.R. Cox describes the fact that we have to reach into doxa in order to arrive at novel conclusions as the "scandal of doxa."[93] While anxieties regarding novelty and creativity certainly have their place in rhetorical considerations of invention, their immediacy wanes to some extent when it comes to everyday affairs. One may strive for great feats of pure creativity in artistic pursuits, but one generally does not do so in the making-do of daily life. The demands and restraints of everyday affairs mean that one must commonly make use of materials at hand as a matter of necessity.

As Freud demonstrates, expert theories about the mind can infiltrate and become part of a community's doxa.[94] Indeed, Sigmund Freud's influence on contemporary American culture has been profound. On his hundredth birthday, one magazine pronounced, "As much as any man, Sigmund Freud stands on the Great Divide between the 6,000 years of human history prior to 1900 and the Future."[95] Freud's 1909 visit to the United States to deliver a series of lectures is often cited as an important moment in the popularization of Freudianism. As one scholar remarked, "Although the immediate impact of the Clark lectures was not very great, they can be seen as the beginning of a one-sided intellectual love affair between large numbers of Americans

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[92] Barthes, *Image, Music, Text*, 199; Barthes here speaks of stereotypes, but construed in a very broad sense, as seemingly equivalent to doxa. See Anne Hershberg Pierrot, "Barthes and Doxa," *Poetics Today* 23.3 (2002): 427-442. See Amossy, "Introduction," 369-370.

[93] J.R. Cox, "Cultural Memory and Public Moral Argument," Van Zelst Lecture (Northwestern University, 1980). Thomas Farrell makes a related point in *Norms of Rhetorical Culture*, 231. Both Cox and Farrell discuss the political implications of doxa's relationship with invention, which the final section of this chapter will address.

[94] Likewise, expert theories are influenced by doxa and there is likely a constant dialectical movement between the two, blurring the distinction between episteme and doxa. Freud indeed was influenced by common ideas and Alfred Kinsey (of the sex studies) believed that sublimation was a restatement of older religious views, Hale, *Rise and Crisis*, 297.

[95] Editors, "Freud 100th Birthday," *Saturday Review*, May 5, 1956, 7.

and some aspects of psychoanalysis."[96] "Some" is an important qualifier here given that certain aspects of Freudianism became more readily popularized than others. WW2 contributed a good deal to Freud's popularity in the United States; shell-shock, or war neurosis, was a widespread concern during the 1940s, and Freud's theories of mind provided an important resource for explaining and addressing the issue.[97] The period between the 1940s and 1960s was a highpoint in the American popularity of Freud's ideas.[98] Indeed, by 1947, Freud's "status as a modern Socrates, the 'most famous psychiatrist of all time,' . . . [was] clear."[99] Ultimately, Freudian psychoanalysis found a more widespread popularity in the U.S. than it did even in Europe, where its following was more cultish.[100]

Freud's theories of mind "flared out to all compartments of 20th century life," and one could find them in all sorts of cultural spheres, in political analysis, in self-help books and in studies of famous persons, for instance.[101] Freud's influence was not limited to the educated, wealthy, or academic, moreover, and his ideas ultimately had a diffuse and wide-ranging influence. Translated editions of his writing were readily available, as were numerous books and articles on the subject of Freudianism, many of which presented his ideas in oversimplified form.[102] Popularizing psychoanalysts, such as Lucy Freeman, author of *Fight Against Fears*, were instrumental in promulgating Freud's ideas during the 1950s.[103] Just as importantly, they circulated through even less formal channels, such as *Baby and Child Care*. Freudianism had a

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[96] Gorer, "Are We 'By Freud Obsessed,'" 5.
[97] Hale, *Rise and Crisis*, 276-282.
[98] Ibid., 284, 277.
[99] Ibid., 284.
[100] Gorer, "Are We 'By Freud Obsessed,'" 5. This point is also made in "The Explorer," 76.
[101] "The Explorer," 72. See also, Milton L. Miller, *Nostalgia: A Psychoanalytic Study of Marcel Proust* (Boston: Houghton Mifflin, 1956); Walter Lippman, *Public Opinion and the Phantom Public* (New York: MacMillan, 1922); Freudian theory was also the basis of the Rohrschach test. James Thrall Soby claimed that without Freud, the surrealist movement would never have emerged, "Suggestions and Symbols," *Saturday Review*, May 5, 1956, 11.
[102] Hale, *Rise and Crisis*, 284, 277.
[103] Hale, *Rise and Crisis*, 283, 294.

robust presence in popular culture, "all the way down to the twenty-five-cent 'originals' full of the rituals of castration, parricide, and infantile sexuality."[104] His ideas were fodder for cartoonists, and cocktail party chatter, for instance.[105] At a certain point, Freud's ideas became so widely popularized that they were, one might say, commonplace. The extent to which people invoked Freudianism even became the subject of jokes, as in W.H. Auden's remark that "today thanks to Freud, the man-in-the-street knows (to quote by an inaccurate memory from *Punch*) that, when he thinks a thing, the thing he thinks is not the thing he thinks he thinks, but only the thing he thinks he thinks he thinks."[106] Auden notably suggested that Freud constituted "a whole climate of opinion."[107]

As with other forms of doxa, Freud's ideas often exerted their influence surreptitiously as part of the realm of the undiscussed. Moreover, they continue to do so. In 2006, the authors of a book on the mind wrote,

> [Freud's] conceptual revision has been fully accepted in everyday language. We're all Freudians now, at least when we're not being professional psychologists. Consider the following unremarkable statement: 'I've been friends with him for years, but I just realized that I never *really* liked him.' This report doesn't sound odd to us at all; but to the nineteenth-century ear, the reference to an unconscious mental attitude would sound utterly paradoxical, like 'I'm married, but I'm still a bachelor.'[108]

In other words, the knowing adoption of Freudian theory by those directly involved with psychoanalysis, either as practitioners or patients, was not nearly as significant as his indirect, diffuse, and continuing influence on sometimes unwitting multitudes.[109]

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[104] Donald Barr, "Freud and Fiction." *Saturday Review* 39 (May 5, 1956), 36.
[105] "The Explorer," 72.
[106] W. H. Auden, "Sigmund Freud," *New Republic*, October 6, 1952, 16.
[107] Hale, *Rise and Crisis*, 284.
[108] André Kukla and Joel Walmsley, *Mind: A Historical & Philosophical Introduction to the Major Theories* (Indianapolis: Hackett Publishing, 2006), 41.
[109] "The Explorer," 76.

As doxa, Freudian ideas served as a discursive resource that enabled the evolution of thought and the generation of discourse throughout many cultural domains. In addition to well-known Freudian explanations of such things as dreams and slips of the tongue, Freud's ideas about the mind were used to account for a dazzling array of aspects of the social world, some of which were mentioned earlier in this chapter.[110] Common criminals were able to explain their behavior in psychoanalytic terms and Hitler even used psychoanalytic terminology to justify his invasion of Poland, an event credited with starting World War II; he explained that he did so because the Poles' inferiority complexes made them unnecessarily barbaric.[111] Perhaps the following statement is more illuminating, however, than a list of scattered examples,

> Every hour of every day now, and especially in America, there are people who cannot forget a name, or make a slip of the tongue, or feel depressed; who cannot begin a love affair, or end a marriage, without wondering what the 'Freudian' reason may be.'[112]

Freudianism could be used to evolve thoughts about almost anything, including, of course, child rearing. And, moreover, people used it to do just that.

By a certain point, Freud became so thoroughly diffused through culture, such "common coin," that many readers would have been wholly familiar with Freud's ideas long before they picked up Spock's *Baby and Child Care*. Even intricate details of Freudian theory were shared knowledge in some communities. Given Freud's far-reaching cultural penetration, it appears likely that Freudian ideas about the mind formed part of at least some readers' encounters with

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[110] Freud himself was well aware of its potential application to various domains, including language, history, evolution, art, philosophy, and education, among others. Freud even made some forays into these areas with essays on Leonard da Vinci and Michelangelo's work, for example.

[111] See Gorer, "Are We 'By Freud Obsessed,'" 56. Hitler's Freudian explanation for the invasion is noted in Leonard Engel, "A Science Milestone," *Science Digest* 35 (1954), 85. It is Freudian via Adler, who actually introduced the specific term "inferiority complex." Benjamin Spock was also interested in Freudian applications beyond the particular case of child rearing. For instance, he wrote an article that offered a Freudian take on some Cold War concerns, "A Psychiatric View of the Cold War," *Fact*, May-June, 1966: 3-7.

[112] Alfred Kazin, "The Freudian Revolution Analyzed," *NYT Magazine*, May 6, 1956, 22.

Baby and Child Care, even some of those that were elided from the book. More specifically, it is possible that many audience members who read Spock supplied the Freudian doxa themselves in an enthymematic or other manner.

3.5 IMPLICATIONS FOR *BABY AND CHILD CARE*

Given the extent of Freud's popularity and the saturation of his ideas, the fact that so few readers appear to have referenced *Baby and Child Care*'s Freudian orientation is all the more remarkable. Some readers were almost certainly well versed in Freudianism, fully aware of the book's Freudian orientation, and readily could have engaged in a discussion of it. One possible explanation for the absence of such conversations is that because Freudian ideas had entered the realm of doxa, *Baby and Child Care*'s Freudianism simply seemed unremarkable; it was just plain common sense. As previously noted, the book was frequently described as providing common sense advice on child rearing. One opinion columnist even wrote of *Baby and Child Care* that "it stands now and probably forever as the most completely commonsense book on bringing up baby."[113] Moreover, as another scholar described, "*Baby and Child Care* is, to the extent that any single book can be, an embodiment of its culture."[114] In this case, the Freudianism may have seemed so ordinary as not to be worth mentioning.

Our recognition that psychodoxa often exists in the realm of the undiscussed also suggests another intriguing possibility. While some audience members might have knowingly supplied the missing Freudian details, others may have done so unknowingly. Since we are often

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[113] Martha Towns, "Don't Knock the Spock!"
[114] Zuckerman, "Dr. Spock: The Confidence Man," 190.

simply unaware of the doxa that inhabit us, some parents may have found *Baby and Child Care*'s Freudian elements wholly familiar and even may have unwittingly extended them by bringing other Freudian details to bear on their reading of the text, while remaining entirely unaware of having done so. These parents obviously would not have talked about a Freudianism of which they remained unaware. Nonetheless, though they are not cognizant of it, their reading of *Baby and Child Care* still engaged a Freudian conception of mind. The two possibilities, moreover, are not mutually exclusive, and it is likely that some readers experienced a combination of the two.

In supplying Freudian ideas, whether knowingly or not, readers participated in the inventional process becoming, in some ways, the book's co-authors. Recognizing this fact draws our attention to the oft-neglected inventional component of reading. Reading is not always a passive ingestion of given content, but can be a creative process in which one works with that content. [115] When *Baby and Child Care*'s readers brought Freudian ideas to bear, they did not do so in a proscribed manner, but at will, opportunistically, perhaps by whim, and possibly in ways that Spock had not intended. One of the important things a reader's knowledge of Freud potentially brought to his or her encounter with *Baby and Child Care* was the ability to draw connections between seemingly disparate pieces of advice, such as that concerning sucking, toilet behaviors, and Oedipal feelings.

By presenting advice independently of its psychic rationale, Spock's *Baby and Child Care* construed many behaviors as separate concerns parents must deal with while raising a child. Familiarity with Freud, however, enables one to forge connections between these

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[115] See Michel de Certeau, "Reading as Poaching," in *The Practice of Everyday Life*, trans. Steven Rendall (Berkeley: University of California Press, 1984), 165-176. See also Clayton Koelb, *Inventions of Reading: Rhetoric and the Literary Imagination* (Ithaca: Cornell University Press, 1988).

behaviors. Freudian theory acts as a unifying principle that organizes various strands of discourse. The relationship between sucking behaviors and toilet training serves as an instructive example. In *Baby and Child Care*, Spock provided a good deal of advice about toilet training, another important developmental milestone in a child's early years and a frequent source of anxiety for parents. As with Spock's discussion of sucking, his account of a child's anal productions elides the layers of explanation we find in Freud.

Spock observes that young children sometimes resist toilet training, describing how the child

> sits down obediently but never has a movement as long as he stays there. But right after getting up, he moves his bowels in the corner or in his pants. He almost seems to be saying, 'This movement is mine, and I want to do it my own way.' This kind of resistance is very common indeed, and it occurs, for a short period, in lots of babies . . . It's perfectly natural.[116]

While Spock characterizes this difficulty in toilet training as relatively common and normal, he considers another type more problematic. Spock describes the resistance that occurs when "the baby holds his movement in, not just when he's on the seat, but afterwards, too. He gets to be constipated for psychological reasons."[117] Here Spock gestures toward the mind as the source of this trouble (and consequently the source of its explanation), but fails to elaborate the underlying psychic rationale we find in Freud.

According to Freud, sucking and anal behaviors are integrally connected given that both are consequences of the same psychic organization and developmental processes. Freud explains that as the oral stage gives way to the anal stage the child's libido becomes focused on and attains pleasure from the anal region. Freud observes that at this time the child may intentionally

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[116] Spock, *Baby and Child Care*, 194.
[117] Ibid., 195.

retain faecal matter toward masturbatory ends.[118] In other words, the id-housed libido underlies both sucking and anal behaviors, a connection that Spock does not draw, but that the knowledgeable reader may forge him or herself.

The same is true of Spock's discussion of perhaps the most emblematic Freudian idea, the Oedipus complex. Spock explains that between the ages of 3 and 6 children

> love intensely those who are close to them, and even become romantic. The boy of 3 ½ will declare that he is going to marry his mother when he grows up. He has no definite idea of what marriage is, but he knows whom he loves and can't be argued out of it. The little girl is apt to feel the same way about her father.[119]

Spock acknowledges the sexual origin of such feelings, explaining that they represent "an early stirring of sexual feeling at this period which is an essential part of normal development"; such an acknowledgement of early sexuality is distinctly Freudian.[120] Spock does not connect these feelings to sucking and toilet training through the concept of the libido and its propensity to cathect to various objects, however. As a result, Spock's *Baby and Child Care* does not construe sucking and toilet training as sexual behaviors, which was one of the most controversial aspects of Freud's theory.[121] Had he done so, *Baby and Child Care*'s reception might have been quite different.

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[118] Sigmund Freud, "Infantile Sexuality," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey, vol. 7, *A Case of Hysteria, Three Essays on Sexuality, and Other Works* (London: Hogarth Press, 1953), 183. For more on Freud's discussion of anal character, see Sigmund Freud, "Instincts and their Vicissitudes," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey, vol. 14, *On the History of the Psycho-Analytic Movement, Papers on Metapsychology, and Other Works* (London: Hogarth Press, 1957), 117-140; Sigmund Freud, "On Transformations of Instinct as Exemplified in Anal Erotism," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey, vol. 17, *An Infantile Neurosis and Other Works* (London: Hogarth Press, 1955), 127-133.

[119] Spock, *Baby and Child Care*, 301.

[120] Ibid, 301.

[121] Furthermore, the Oedipus complex is important not only because we can observe these feelings crop up during early childhood, but also because they often remain part of unconscious mental life, something Spock does not mention. One might say Spock is not interested because he is not interested in discussing the future implications. However, he advises parents on how to deal with the Oedipus complex precisely because doing so the wrong way can have terrible consequences.

Those well versed in Freudianism would likely have read *Baby and Child Care* very differently than those who had little or no familiarity with Freud's ideas. However, even if the reader does not know enough to bring Freudian theory to bear on the text, it can be present in a reader's encounter in another manner – as implied. The text of *Baby and Child Care* indirectly suggested some of the mind's contours, which is to say, they could be derived or inferred from that which is directly presented. From *Baby and Child Care*, for example, one gets the idea that the child's mind is not a blank slate, but that it comes with certain propensities, such as a need to suck. The child's inexorable need for pleasurable sucking might similarly suggest the existence of something like the id. Parents, furthermore, have a good deal of responsibility for protecting their child's fragile psyche, which reacts negatively to the sting of thwarted need. When Spock discusses parental discipline he explains that as a child gets older, "the ideas of right and wrong that his parents taught him have not been forgotten. In fact they have sunk in so deep that he now thinks of them as his ideas."[122] Without stating so explicitly, this passage suggests that some part of a child's mental apparatus becomes an internalized disciplinarian; it insinuates the existence of the superego.

Of course, while Spock's *Baby and Child Care* implies certain aspects of Freud's conception of the mind, one cannot derive all of Freud's theory indirectly from the text nor, in fact, anything close to all of it. In fact, what *Baby and Child Care* supplies, implicitly, is a highly simplified and less detailed conception of the mind than does Freud; it is a conception of mind in broad and vague outlines. Doxa, moreover, often exists in precisely this form, a loose collection of vague ideas. Claiming that some of Freud's ideas about the mind became doxa is not to suggest that the average person was conversant in the intricacies of Freudian theory and

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[122] Spock, *Baby and Child Care*, 313.

used it to navigate practical affairs, but that some of his ideas seeped into mainstream public culture and became a popular resource with which to evolve thoughts about the world.

Imagine a rural, working-class parent of the 1950s who was unfamiliar with Freud, having never encountered his ideas, directly or otherwise, or who had only the barest of contact with them. Since *Baby and Child Care* contained no explicit reference to Freud, readers such as the aforementioned would not have known that the book's parenting advice, and the nature of the mind it suggests, are in any way Freudian. Yet this reader might well have picked up on its implications and come away, whether knowingly or not, with a Freudian inflected conception of the mind. What is particularly interesting about this scenario is that *Baby and Child Care* would have indirectly exposed such heretofore ignorant audience members to the Freudian theory of mind, or at least those aspects of it that were implied by the text. *Baby and Child Care* therefore participated in the diffusion of Freudian ideas.

Just as doxa can exist in the realm of the undiscussed, it can also circulate surreptitiously, and Freudian doxa was no exception. One contemporary noted that Freud managed to influence people who had never even heard his name.[123] *Baby and Child Care* was therefore one of many vehicles by which Freud's ideas spread throughout mainstream culture as they underwent the transition from expert theory into psychodoxa. Even people who disagreed with Freud's ideas could not escape their reach as,

> Innumerable people who will never admit that they believe a word of his writings, who nevertheless, 'unconsciously,' as they would say, have learned to look for 'motivations,' to detect 'compensations,' to withhold a purely moralistic judgment in favor of individual understanding, to prize sexual satisfaction as a key to individual happiness.[124]

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[123] Kazin, "The Freudian Revolution," 22.
[124] Ibid.

Baby and Child Care provides a concrete example of Freud's ideas circulating unnamed, tacitly, and indirectly.

While the impact of a single book, even one as popular as *Baby and Child Care*, may not be enough to influence a community's doxa, en masse, the results can be profound. Moreover, once people had a grasp of Freudian ideas, even in vague form, they were then able to use them as a resource for their own acts of invention. As a result, *Baby and Child Care* not only used Freudian ideas as a resource, but also participated in the diffusion of that resource, which could then be put toward subsequent inventional ends. For instance, when confronted with a depressed and self-critical adult, the rural couple who had read *Baby and Child Care* might speculate that his parents were strict disciplinarians, thereby unwittingly drawing upon Freud's notion of the superego as a way to evolve thoughts about his plight.

Despite the fact that Freud's ideas had little explicit presence in *Baby and Child Care*, Freudianism served as an inventional resource for both Benjamin Spock and readers of his book. As this chapter has shown, Spock drew on this particular conception of mind as an inventional resource in order to formulate his child-rearing advice. Moreover, as they engaged with the book, readers played a potentially important role in creating meaning. They filled in or extended Spock's argument, and may have even done so in ways that he had not intended. Readers may also have derived a conception of mind from the text and then applied it in an entirely different context. It also deserves notes that the possibilities described above, the mind as supplied and implied, are not mutually exclusive, but elements of both might have be present in a reader's encounter with *Baby and Child Care*. A given person might be consciously aware of one Freudian element, while being exposed to others tacitly. Spock's *Baby and Child Care* therefore illustrates some of the ways in which Freudian doxa were engaged as resources for rhetorical

invention. Moreover, it serves as an example not only of Freudian discursive utility, but of how other conceptions of the mind might serve as doxastic resources as well.

3.6 PSYCHODOXA

As should be apparent at this point in the analysis, some of a community's shared beliefs concern the nature of the human mind. Not all of these beliefs are Freudian. Philosophers of mind have long acknowledged the existence and significance of commonly shared knowledge about the mind, which they characterize as a folk psychology. For philosophers, folk psychology generally refers to "a network of principles which constitutes a sort of common-sense theory about how to explain human behavior . . . [Folk psychology] is deeply ingrained in our common-sense conception of ourselves as persons.[125] Elements of the West's prevalent folk psychology include our beliefs that people are largely rational agents and that they have desires that explain their behaviors.[126] Philosophers debate the epistemic status of our commonly shared beliefs about mental life, contrasting folk psychology with the formal theories of mind devised by philosophers and psychologists. Their arguments largely revolve around a set of core issues: whether folk psychology constitutes a legitimate theory of mind, how it relates to other theories of mind, and whether it has any scientific merit. While these arguments do have relevance to this chapter, "Insidious Minds" has been concerned with practical matters of usage. Its aim has

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[125] Terence Horgan and James Woodward, "Folk Psychology is Here to Stay," *The Philosophical Review* 94.2 (1985), 197. The term "folk psychology" is somewhat ambiguous in that scholars ascribe it different meanings. Wilfred Sellars is sometimes credited with suggesting the idea that our everyday understanding of the mind is a type of folk psychology.
[126] Horgan and Woodward, "Folk Psychology," 197.

been to discover how doxastic beliefs about mind served as a discursive resource, irrespective of their legitimacy.

Like Freudian doxa, other conceptions of the mind are generative resources that enable the evolution of thoughts in relation to a subject. Imagine that you arrive at a party with your good friend Reggie, who then leaves after staying for only an hour. Another friend asks you why Reggie left the party so early and you tell him that Reggie had a job interview the next morning and was afraid he would perform badly if he stayed up late. Though you are most likely oblivious to the fact, your response is grounded in a particular conception of mind. It is based upon an understanding of Reggie as an intentional agent with certain mental states that motivate his behavior. If pressed, you might even be able to explicitly articulate these underlying beliefs, though they are likely to seem so self-evidently true as to make their expression superfluous. Ordinary persons do not often pause to interrogate their presumptions about other minds and often fail to notice them entirely. It may even appear to you, though falsely, that there exists no other possible conception.

While one's beliefs about the mind may seem self-evident, alternative possibilities do exist, and are similarly generative. Imagine that you firmly believe in the existence of a homunculus. When pressed to explain Reggie's early departure, you might claim that a little person inside Reggie's head told him to leave. Or, more realistically, you may envision a close kinship between mind and brain and explain that Reggie left because the neurons in his prefrontal cortex were firing rapidly. The second of these possibilities is not too far removed from the sort of explanations one finds increasingly often today. For example, a short, and otherwise not especially notable article recently posted on Oprah.com includes an account of behavior of precisely this sort. The author pondered his intense emotional response to a young

chimpanzee, explaining, "What I was feeling was the same complex firing of neurons and synapses that ascribe human emotion to the furry, the liquid eyed, the infantile."[127] The author's account arises out of a belief in the brain basis of behavior. He does not posit a mental state that motivates his behavior, nor indeed does he appeal to a homunculus or even a Freudian unconscious. Yet any of these could have been an equally fruitful resource for creating an account of why he responded in a particular way to the animal.

There exist different categories of doxa, such as widely-shared beliefs about Alaska, beliefs that concern food, those that relate to temperature, and, of course, beliefs about the mind.[128] This chapter introduces the term "psychodoxa" to identify the class of beliefs about the mind that are shared by a community, which, like other categories of doxa, does not necessarily form a coherent or consistent system. While it is true that we could just refer to doxastic beliefs about the mind and eschew the introduction of a label, there are reasons to support the introduction of a dedicated term for this category of doxastic beliefs. Psychodoxa is a distinctively pervasive and exceptionally generative category of doxa that has a special salience for rhetoric. While people share beliefs across a range of subjects, few categories of doxa match the power to explain so many aspects of the world as do conceptions of the mind. Take, for example, culturally-shared beliefs about the sun. People believe that it is hot, that it provides sunlight, and that it rises in the morning and sets in the evening. Such beliefs allow us to make sense of and produce discourse about the coldness of a cloudy day or the darkness of night. But beyond that, our beliefs about the sun have little import for everyday human affairs and have a relatively limited range of generative potential. The same is true of beliefs about Alaska, foods,

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[127] David Rakoff, "I Don't Love Your Dog -- and You Can't Make Me," CNN.com (via oprah.com), June 5, 2009 http://www.cnn.com/2009/LIVING/personal/06/05/o.not.pet.person/index.html [accessed July 22, 2010].
[128] See Jean-Louis Dufays, "Received Ideas and Literary Reception: The Functions of Doxa in the Understanding and Evaluation of Texts," *Poetics Today* 23.3 (2002): 443-464.

and temperature. Indeed, many categories of doxa are characterized by a limited scope of applicability.

Unlike many other classes of doxa, ideas about the mind have the potential to apply to many aspects of our social world; we can explain almost anything in their terms. The idealist position takes this potential to the extreme, viewing the mind as the source of reality such that nothing can be explained without it. The sun, Alaska, brussels sprouts all become the product of the mind, and the mind becomes the source of our accounts of them. But even in a more pedestrian sense, the mind is a concept with incredible explanatory prolificacy. Freudianism, and its twentieth-century application to many different cultural domains is a powerful example of that, and phrenology was an equally versatile resource. As the previous chapter observed, people applied phrenology to discussions about prison reform, politics, career aptitude, crime, and marriage, to name just a few examples. One could find phrenological accounts of major political and social figures of the time; phrenologists even produced their own child-rearing manual.[129] This explanatory power is true not just of Freudianism and phrenology, moreover, but of other conceptions of mind as well, and today's conception of mind-as-brain may be an equally catholic resource.

The elision of an underlying psychic rationale that characterized *Baby and Child Care*, moreover, is common to other applications of psychodoxa. In many cases, the theory of mind is generative, but not made explicit. When you explain why Reggie left the party early, for example, you do not state your belief in Reggie's intentionality, though it underlies your

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[129] Orson Fowler, *Love and Parentage Applied to the Improvement of Offspring, Including Important Directions and Suggestions to Lovers and the Married Concerning the Strongest Ties and Most Momentous Relations of Life* (New York: Fowlers and Wells, 1844); Orson Fowler, *Self Culture, And Perfection of Character Including Management of Youth* (New York: Fowlers and Wells, 1848). For an account of phrenology's influence on the arts, which points to its pervasiveness as psychodoxa, see Charles Colbert, *A Measure of Perfection: Phrenology and the Fine Arts in America* (Chapel Hill: University of North Carolina Press, 1997).

explanation, and the listener may fill in that missing detail. In her article, "Recognizing Lincoln: Image Vernaculars in Nineteenth-Century Visual Culture," Cara Finnegan describes a case in which phrenological details were supplied in this manner.[130] Finnegan considers an early photograph of Abraham Lincoln, which was displayed in a nineteenth-century magazine as an illustration of his character. According to Finnegan, the magazine depends on the audience to fill in missing enthymematic premises in order to apprehend this image as an expression of Lincoln's character. The audience must supply the phrenological and physiognomical information that head shape and facial features can be an indication of character. Only by supplying this doxastic information, which was part of the common image vernacular, or visual culture, of the nineteenth century, does one apprehend the image of the young Lincoln as a representation of his early character. Finnegan's article is an important demonstration of the fact that psychodoxa are not only verbal, but involve visual dimensions as well.

We tend to label those features of our environment that have a high degree of salience, and the designation of a specific category of doxastic beliefs is not unprecedented. The word "stereotype" refers to collections of ideas that have to do with types of persons, thereby identifying another distinct category of doxastic beliefs. As with beliefs about the mind, we could drop the title "stereotype" and instead simply refer to widely-shared beliefs about categories of persons. However, like beliefs about the mind, it is useful to afford this category its own name because of the pervasiveness and social import of such ideas. Labeling a feature of the environment facilitates talking about that feature; the term serves as a shorthand that enables efficient expression. It also, just as importantly, draws our attention to that feature of the world. The term "stereotype" has proven to be highly useful, so much so that it has possibly even

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[130] Cara Finnegan, "Recognizing Lincoln: Image Vernaculars in Nineteenth-Century Visual Culture," *Rhetoric and Public Affairs* 8.1 (2005): 31-57.

become overused. Psychodoxa, on the other hand, are every bit as pervasive as stereotypes and just as significant for rhetoric, but have been woefully neglected.

Our presumptions about others' minds guide our most basic interactions, and are therefore fundamental to sociality. Uttering a single word or glancing in a particular manner are actions based on a set of beliefs about how other persons' minds will process them. Conceptions of mind, therefore, are central to rhetoric's study of our symbolic interactions with others. As a result, ideas about the mind constitute a category of doxa that rhetoricians should consider carefully. The conclusion of "Made Up Minds" examines how psychodoxa influence approaches to rhetorical theory and criticism themselves. Yet despite their centrality to rhetoric, rhetoric has paid little attention to psychodoxa. One of this chapter's aims, therefore, has been to draw attention to ideas about the mind as a category of shared beliefs that have considerable import for the rhetorical tradition. It does not adopt the philosopher's nomenclature of "folk psychology" precisely because rhetoric is oriented to a different set of concerns and different sets of literatures. A new term signals an alternative starting point: with the rhetorical rather than philosophical. Psychodoxa points not to the possible and debatable value of this set of beliefs as an "ology," but to its actual use in everyday practical affairs.

3.7 CONCLUSION: PSYCHODOXA AND CRITICAL RHETORIC

In a powerful statement of the profound consequence of our psychodoxa, the renowned philosopher of mind Jerry Fodor once observed that if certain foundational precepts of folk psychology are wrong then it might well be "the greatest intellectual catastrophe in the history of our species; if we're that wrong about the mind, then that's the wrongest we've ever been about

anything."[131] Fodor's statement draws our attention once more to the essential role beliefs about the mind play in human affairs, a significance this chapter has suggested extends to rhetorical matters. Fodor observes that their import is such that should our ordinary presumptions about intentionality, belief states, and so forth be incorrect, it would not just constitute an intellectual catastrophe, but the biggest intellectual catastrophe of all time. Fodor's statement points, moreover, to a possibility that has not yet been addressed in this chapter's discussion of psychodoxa, that these beliefs are potentially erroneous.

It is at least conceivable that everything we take to be commonsense about the mind and its operations is simply incorrect. Some take this so far as to suggest that our everyday understanding of mental states is akin to a mythology,

> Like the gods that Homer invoked to explain the outcome of battles, or the witches that Inquisitors invoked to explain local catastrophes, they *do not exist* . . . there are no such things as beliefs or desires or hopes or fears or thoughts. These putative states and processes are the badly misguided posits of a seriously mistaken theory, just like phlogiston and caloric fluid and the luminiferous ether.[132]

Given their foundational place in human affairs, the prospect that our shared beliefs about the mind are fabrications has some compelling implications. Stephen Stich and Ian Ravenscroft illustrate the radical potential of this possibility with a striking example from American history. As they observe, if folk psychology is false then Lincoln could not have signed the declaration to end slavery because of his desire to end the practice, nor could he have done so because he thought it was a good strategic move. Since they both rely on faulty everyday intuitions about intentionality, desire, and so forth, neither of these explanations can possibly be correct.[133] In

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[131] Jerry Fodor, *Psychosemantics* (Cambridge, MA: MIT Press, 1987), xii.
[132] Stephen Stich and Ian Ravenscroft, "What *is* Folk Psychology?" *Cognition* 50 (1994), 447-448.
[133] Ibid., 448.

other words, some of our most basic accounts of human history collapse if what we commonly believe about the mind proves to be incorrect.

The recognition that contemporary beliefs about the mind may be radically mistaken draws our attention rather sharply to social nature of psychodoxa. The commonsense beliefs about the mind that we take for granted are neither natural nor inevitable; instead, they are at least to some extent socially constructed, and may be thoroughly so. Our psychodoxa constitutes a malleable category that can change over time in response to contingencies. Freud's influence has been one moment in the history of the mind's envisionings, and it would be foolish to believe that it cannot fade into irrelevance, that is, if it has not already begun to do so. At different times, and in different places, very different ways of conceiving of the mind have seemed entirely ordinary and inevitably true. As a result of its changing outlines, psychodoxa shapes our engagement with the world in a contingent manner, and can work normatively in support of existing distributions of power. Psychodoxa, therefore, is a social category with considerable import for critical rhetoric.

Raymie McKerrow's influential formulation of critical rhetoric reimagined rhetoric as focused on doxastic channels of power rather than epistemic questions of truth.[134] He wrote,

> Doxastic knowledge functions as the grounding of a critical rhetoric. Rather than focusing on questions of 'truth' or 'falsity,' a view of rhetoric as doxastic allows the focus to shift to how the symbols come to possess power – what they 'do' in society as contrasted to what they 'are.'[135]

Critical rhetoric orients itself toward doxa because it considers communicative practices as contextualized and contingent. It critiques, moreover, the ways in which discourses create and

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[134] R.E. McKerrow, "Critical Rhetoric: Theory and Praxis." *Communication Monographs* 56 (1989): 91-111. See also Jim. A. Kuypers, "*Doxa* and a Critical Rhetoric: Accounting for the Rhetorical Agent Through Prudence," *Communication Quarterly* 44.4 (1996): 452-462.
[135] McKerrow, "Critical Rhetoric: Theory and Praxis," 104.

sustain power. As Robert Hariman suggests, doxa does not just consist of opinion about what is, but also attributions of rank and status.[136] When we turn to doxa as a generative resource, we reach into this storehouse of existing power structures, thereby perpetuating them through our inventive acts. Karlyn Kohrs Campbell has shown, however, that doxa can also be put toward liberatory ends, describing how marginalized groups can use doxa as material with which to unseat those in power. [137] Psychodoxa, like other types of doxa, therefore, can be normative vehicles of power or tools of liberation.

There is perhaps no better illustration of the implications of a society's beliefs about the nature of a child's mind can have for social distributions of power than John Locke's writings, which serve as a compelling example of the potential political consequence of conceptions of the mind. Toward the end of seventeenth century, Locke rejected the long-dominant doctrine of innate ideas, which held that ideas are largely inborn and stem from some transcendental source or divine authority. Locke instead argued that each person is born as a blank slate, or tabula rasa, upon which experience writes itself. In *An Essay Concerning Human Understanding* Locke famously wrote, "Suppose the mind to be, as we say, white paper, void of all Characters, without any Ideas."[138] Locke's empiricist philosophy of mind held that most human ideas have their origin in sensation, and that complex ideas are built up on that basis. According to Locke, the foundation of knowledge is real-world experience and reflection on that experience. Despite appearing relatively unremarkable today, during his time, Locke's views were innovative, controversial, and fraught with radical political implications.

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[136] Robert Hariman, "Status, Marginality, and Rhetorical Theory," *Quarterly Journal of Speech* 72 (1986): 38-54. On doxa (social knowledge) as normative, see Farrell, "Knowledge, Consensus, and Rhetorical Theory," 10.
[137] Karlyn Kohrs Campbell, "Inventing Women: From Amaterasu to Virginia Woolf," *Women's Studies in Communication* 21.2 (1998): 111-126.
[138] John Locke, *An Essay Concerning Human Understanding*, ed. Roger Woolhouse (London: Penguin Books, 1997), 109.

The doctrine of innate ideas was an important instrument in the preservation of an aristocratic political order. It allowed persons with authority, such as religious leaders and members of the royalty, to claim power as bearers of truths to which others had no access. Locke's arguments for the child's mind as tabula rasa were considered a statement of egalitarianism that challenged such claims of noble birth. By suggesting that we all begin with the same, equally blank slate of a mind, it undermined hereditary or divine arguments for power. It thereby also positioned education rather than birth as centrally important. In addition to the broad political implications of his work, Locke put his ideas toward immediate practical ends. He wrote letters to his cousin and her husband, which were later published as *Some Thoughts Concerning Education*, advising them on child-rearing practices. As the empiricist rejection of innatism demonstrates, the child's mind is an important site for debates over the malleability of human potential. Such debates continue today in the form of the nature vs. nurture divide, which though dominated by the framework of genetics, still entails a perspective on the mind. The political implications moreover remain the same, with appeals to nurture often associated with a more liberal political ideology.[139]

Freud's ideas about the mind have consequences for how people situate themselves and others with respect to the world. In part because of its emphasis on the unconscious influence of childhood frustrations outside of one's control, Freudianism challenged conventional notions of individual responsibility for one's actions and circumstances.[140] One could explain bad behaviors by appealing to unconscious impulses beyond one's power to control, for example.

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[139] Intellectual forebearers to Locke's *tabula rasa* include Aristotle. For the political implications of Locke's work see Neal Wood, *The Politics of Locke's Philosophy: A Social Study of 'An Essay Concerning Human Understanding'* (Berkeley: University of California Press, 1983). On the contemporary nature vs. nurture debates see Steven Pinker, *The Blank Slate: The Modern Denial of Human Nature* (New York: Penguin, 2002).
[140] See Gorer, "Are We 'By Freud Obsessed,'" 56.

That he provided material for such explanations was one reason Freud was criticized for fostering permissiveness. Freud's work had other widely-critiqued social implications besides, construing men as superior to women and heterosexuality as the norm, for example. When one considers Freud explicitly, however, it is quite apparent that a theory of mind is at stake. Equally important is how a Freudian conception of mind, or any conception of mind, can exist in Bourdieu's realm of the undiscussed, as it did in Spock's *Baby and Child Care*, wielding political consequence beyond awareness.

One of critical rhetoric's goals is to identify sources of power and uncover their often unspoken bases in order to "unmask or demystify the discourse of power."[141] While presumptions about such social categories as gender and race are often interrogated, those concerning the mind receive much less critical attention. We might go so far as to suggest that rhetoric has neglected a category of doxa that is in fact central to human sociality. Furthermore, critical rhetoric has not done enough to theorize psychodoxa as pervasive and often insidious instrument of power. As this chapter has shown, conceptions about the mind have important social consequences, from how one raises one's children to how one ascribes responsibility for action. Psychodoxa can be an instrument of institutional power, as in the innatism that preceded Locke, or an instrument used to undermine such institutions, as in a criminal's appeal to Freudian theory to elude sanction. While psychodoxa exists in the form of formal theories and specific vocabularies, it is important to remember that it also pervades discourse – and serves as an instrument of power - in less obvious ways.[142] This chapter has shown how conceptions of

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[141] McKerrow, "Critical Rhetoric: Theory and Praxis," 91.
[142] Davi Johnson has done some interesting critical work focusing on neuroscientific vocabularies. See Davi Johnson, "Psychiatric Power: The Post-Museum as a Site of Rhetorical Alignment," *Communication and Critical/Cultural Studies* 5.4 (2008): 344-362.

the mind can serve as a discursive resource in the absence not only of a specialized psychological vocabulary, but also of any explicit reference to psychic structure.

Parents do not always interrogate the presumptions that guide their child-rearing practices,

> The new parent or the young teacher quickly settles into a routine and may never realize that the practices that have been slipped into are based on assumptions that could be astounding if made explicit . . . the bases of popular child-rearing practices and of deep-seated attitudes toward children pass largely unexamined.[143]

As this chapter discussed at length, these presumptions sometimes exist in the form of psychodoxa, remaining unacknowledged and unexamined while yet having powerful social implications. Spock's *Baby and Child Care* circulated a Freudian conception of mental life that had at its core an account of the psychic dangers of frustrated desire. In so doing, *Baby and Child Care* may very well have contributed to a culture of permissiveness. Indeed, it is at least conceivable, though perhaps not demonstrable, that the distinctive culture of the 1960s, with its hippies, anti-authoritarian ethos, and free love, coincided in some meaningful ways with the psychodoxa of the time. It is certainly the case, though he was unaware of the fact, that a particular conception of the mind was at the heart of Spiro Agnew's dissatisfaction with Spock's *Baby and Child Care*. Agnew objected to Spock, that is true, but he also objected to the conception of mind Spock used to generate his advice.

Spock's *Baby and Child Care* is a particularly valuable site for the analysis of psychodoxa given that many, including Spock himself, have acknowledged the book's Freudian orientation. As a result, the theory of mind governing Spock's advice is readily known. For other texts and sites of analysis, however, it might be more difficult to discern the theory of mind

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[143] John Cleverley and D.C. Philips, "Preface," *Visions of Childhood: Influential Models From Locke to Spock*, vii-viii.

that serves as a generative resource. This is one of the challenges rhetorical studies of psychodoxa must address. In some cases, comparisons across time and culture helps to reveal the influence of psychodoxa. Therefore, an understanding of the history of the mind's envisionings may be a useful resource for rhetoricians. That said, we must also acknowledge the troubling possibility that psychodoxa will sometimes remain unrecognizable even as it exerts a subterranean influence.

As an example of the inventional utility of psychodoxa, *Baby and Child Care* is both unremarkable and quite remarkable. It is unremarkable in its typicality: it is a representative material artifact that illustrates how psychodoxa can serve as a rhetorical resource in public culture. *Baby and Child Care* illustrates common means by which psychodoxa functions as a generative resource, and the dynamics found therein can be seen in many other cases as well. It is a remarkable example, however, in its prominence. *Baby and Child Care* was an incredibly popular book that had considerable impact on how people thought about child rearing during the twentieth century. Furthermore, while Spock's *Baby and Child Care* serves as an illustrative example of psychodoxa, psychodoxa in turn provides a revealing perspective from which one can better understand this important twentieth-century text. Our analysis of Freudian psychodoxa in Spock's *Baby and Child Care* gives us an important new perspective on this important book in American cultural history. Psychodoxa enables us to develop a robust account of how Freud mattered for Spock's baby book and for its readers.

Today's American parents do not tend to see their children as libido-driven creatures, plagued by the conflict between id, ego, and superego and prone to the development of neuroses, which must be staved off by the proper care and feeding. Instead, today's child is viewed as a brain-bearing one. In the twenty-first century, many parents respond to a child's undesirable

behavior by seeking out medications designed to target what is presumably the cause of that behavior, the brain and its disorder. Some of the most heated debates in child rearing today concern the possible overmedication of children for behavioral issues, and the focal point of such debates is often ADHD and Ritalin. The full rhetorical and critical implications of today's views about mind-as-brain remain to be seen. The next chapter takes one step toward better understanding them, analyzing the case of Terri Schiavo in order to understand how rhetorical invention proceeds upon the basis of a brain-based mind.

4.0 CHAPTER FOUR – IS ANYONE IN THERE? TERRI SCHIAVO AND THE BRAIN-BEGOTTEN MIND

Body and mind, like man and wife, do not always agree to die together – Charles Caleb Colton[1]

4.1 INTRODUCTION

The 1994 documentary *Einstein's Brain* followed Japanese professor Kenji Sugimoto on his singularly focused quest to find Albert Einstein's brain. Having spent much of his life studying Einstein, Sugimoto had a fervent desire to come into contact with his idol's cerebral organ, which had been preserved upon death for scientific study. Dr. Thomas Harvey, the Princeton University pathologist who had performed Einstein's autopsy in 1955, was the person last known to be in possession of it, and after a number of quixotic false starts and dead ends, Sugimoto eventually tracked Harvey down at his home in Lawrence, Kansas. Harvey, who still had some pieces of the brain preserved in jars in a closet, was kind enough to give Sugimoto a small piece

[1] Charles Caleb Colton, *Lacon: Or Many Things in Few Words; Addressed to Those Who Think* (London: Longman, Hurst, Rees, Orme, and Brown, 1820), 153.

to take home with him. As the documentary ends, the Japanese professor celebrates his success by singing karaoke at a local bar in Kansas, dedicating his song to Albert Einstein.[2]

Part of what makes *Einstein's Brain* so strangely fascinating is that Professor Sugimoto fails to offer any rationale for his desire to directly encounter Einstein's brain. He moves from person to person, scene to scene, relentlessly repeating some version of the statement, "I am looking for Einstein's brain." One of the few indications of his motivation comes toward the beginning of the documentary as he laments never having been able to fulfill his wish to meet Einstein. It appears that Sugimoto feels that contact with Einstein's brain is the closest he can get to an encounter with the man himself. However, Sugimoto's views on the significance of the brain, and more importantly, what he hopes to accomplish through contact with it, are never articulated.

In some ways, Sugimoto's quest serves as a representative anecdote for the modern obsession with the brain. In contemporary American culture, the brain has become a holy grail of sorts, an object afforded almost mystical significance, and which many believe to offer privileged access to a person's mind and identity. The belief that the brain is an object with singular significance exerts a powerful cultural influence, and numerous expeditions have been undertaken to discover its secrets. Scientists lead the charge with their efforts to develop new technologies and methodologies that enable us to "get our hands on" the living, working human brain. The public, in turn, eagerly awaits the results of these endeavors. Yet, like Sugimoto, we often go looking for the brain without knowing exactly what to expect, or what we hope to accomplish once we have it in our hands.

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[2] *Relics: Einstein's Brain*, directed by Kevin Hull, BBC Films, 1994, http://www.streaming-madness.net/2010/03/29/einsteins-brain-1994/ [accessed July 25, 2010].

4.2 TERRI SCHIAVO AND THE BRAIN-BEGOTTEN MIND

Though notable for his intense, yet seemingly unsophisticated desire for simple contact, Sugimoto's interest in Einstein's brain was not unprecedented. When he originally preserved it for study, Dr. Thomas Harvey had believed Einstein's brain was important, and over the years a number of people have taken more than a passing interest in it.[3] Scientists have published several studies reporting on examinations of Einstein's brain hoping to discover the source of his genius.[4] The cerebral organs of other remarkable individuals have also generated considerable interest, including those belonging to Walt Whitman, Vladimir Lenin, and the infamous criminal Edward H. Rulloff, to name just a few examples.[5] Attention to the brains of notable persons is a reflection of the prevailing belief that their brains are the source of their distinctiveness.

For much of Western history, people have regarded the brain as the seat of the mind's operations, and therefore as a dwelling place of the inner thinking self. Scholars have debated the precise nature of this relationship while scientists have empirically investigated it. The introductory chapter detailed some of the positions scholars have taken on this issue: some have argued that the mind is an independent functional category and should be considered as such, while others have suggested that the mind is entirely reducible to the brain, and that mental states

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[3] For example, a reporter called Steven Levy wrote about his own, more lighthearted, journey to find Einstein's brain, "I Found Einstein's Brain," *New Jersey Monthly* August, 1978. See also, Carolyn Abraham, *Possessing Genius: The Bizarre Odyssey of Einstein's Brain* (New York: St. Martin's Press, 2002). Roland Barthes even wrote of Einstein's brain, "The Brain of Einstein," *Mythologies*, trans. Annette Lavers (New York: Hill and Wang, 1972), 68-70.

[4] See, for example, Marian C. Diamond, Arnold B. Scheibel, Greer M. Murphy, and Thomas Harvey, "On the Brain of a Scientist: Albert Einstein," *Experimental Neurology* 88 (1985): 198-204; B. Anderson and T. Harvey, "Alterations in Cortical Thickness and Neuronal Density in the Frontal Cortex of Albert Einstein," *Neuroscience Letters* 210 (1996): 161-164; S.F Witelson, D.L Kigar, and T. Harvey, "The Exceptional Brain of Albert Einstein," *The Lancet* 353 (1999): 2149-2153; F.E. Lepore, "Dissecting Genius: Einstein's Brain and the Search for the Neural Basis of Intellect," *Cerebrum* 3 (2001): 11-26.

[5] See Brian Burrell, *Postcards from the Brain Museum: The Improbable Search for Meaning in the Matter of Famous Minds* (New York: Broadway Books, 2005).

and qualities are best explained as brain states or qualities. Many others have positioned themselves somewhere in between these two poles.[6] As the previous chapter has demonstrated, however, scholarly debates and academic investigations into the mind are distinct from lay conceptions, or psychodoxa. While certainly influenced by expert discussions, and likely exerting an influence over them as well, public perceptions of the relationship between mind and brain are a distinct realm of inquiry. Moreover, psychodoxa can undergo change over time, and as Freud's influence has waned, another point of view has gained considerable traction.

Recent years have seen a demonstrable shift toward even greater public interest in and attention to the brain than ever before. Remarkable, and well-publicized, advances in disciplines that study the brain, such as neuroscience, neuropsychology, and cognitive science have, at least in part, motivated and sustained such interest. George Bush proclaimed the 1990s "The Decade of the Brain," a decree that brought increased funding to the brain sciences as well as government efforts to promote the benefits of brain research to the public.[7] Technologies that enable the production of images of the living human brain have attracted perhaps the most attention. Prior to their advent, in order to gain an understanding of the contours of a person's brain one had to wait until his or her death to perform an autopsy. Now, one can place a person in a scanning device, such as a CT or MRI machine, and moments later have a detailed picture of his or her brain. In the late nineteenth century, shortly after the discovery of x-rays, Thomas Edison made sustained and widely publicized attempts to produce such images by x-raying the

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[6] For the history of the brain sciences see Stanley Finger, *Minds Behind the Brain: A History of the Pioneers and Their Discoveries* (New York: Oxford University Press, 2000); Louise H. Marshall and Horace W. Magoun, *Discoveries in the Human Brain: Neuroscience Prehistory, Brain Structure, and Function* (Totowa, NJ: Humana Press, 1998); M. Jeannerod, *The Brain Machine: The Development of Neurophysiological Thought* (Cambridge, MA: Harvard University Press, 1985); M.R. Bennett and P.M.S. Hacker, *History of Cognitive Neuroscience* (Chichester, UK: Wiley-Blackwell, 2008).

[7] President George Bush, Proclamation, "Decade of the Brain, 1990-1999, Presidential Proclamation 6158," *Federal Register* 55, no. 140 (1990): 29553, available at http://www.loc.gov/today/pr/1995/95-121.html [accessed July 25, 2010].

brain. Ultimately, he and the others who made similar efforts, were unsuccessful.[8] New brain-imaging technologies have finally brought about the realization of this longstanding desire: we can now, it appears to many, "see" inside the skull to "have a look" at the living human brain.[9]

The brain's increasingly prominent place in contemporary society together with our growing understanding of the organ has led some scholars to suggest that we have crossed the threshold into a new neuroculture, or neurosociety.[10] Neuroscientific research has certainly had an impact across multiple disciplines, and as scholars have begun to address its implications for their domains of study, subfields such as neurotheology, neurolaw, neuroeducation, and neuroeconomics have emerged.[11] Neuroethicists survey the terrain of our contemporary neuroculture, asking questions about the potential social impact of new neuroscientific technologies and examining their implications for privacy, and so forth. Some claim that with time, neuroscience will continue to have an even more profound social influence. Zack Lynch, for example, argues that neurotechnology will ultimately "allow people to experience life in ways that are currently unattainable. Neurotechnology will enable people to consciously improve emotional stability, enhance cognitive clarity, and extend sensory experiences."[12] He suggests, for example, that neuroeducation will enable more efficient learning, allowing one to

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[8] Reports of his attempts ran in numerous newspapers in 1905.
[9] For a critique of this widespread characterization, see Michelle Gibbons, "Seeing the Mind in the Matter: Functional Brain Imaging as Framed Visual Argument," *Argumentation and Advocacy* 43 (2007): 175-188.
[10] Zack Lynch claims to have coined the term "neurosociety," "The Emerging Neurosociety," http://neurosociety.com [accessed July 25, 2010]. On both terms, see Nicolas Langlitz and Fernando Vidal, "Neurocultures: A work-shop at the Max-Planck Institute for the History of Science," www.neuroculture.org/NeuroculturesBerlin.pdf [accessed July 25, 2010].
[11] Fernando Vidal, "Brainhood, Anthropological Figure of Modernity," *History of the Human Sciences* 22 (2009): 22.
[12] Zack Lynch, "Neurotechnology and Society (2010-2060)," *Annals of the New York Academy of Sciences* 1013 (2004): 233. See also, Zack Lynch and Byron Laursen, *The Neuro Revolution: How Brain Science is Changing Our World* (New York: St. Martin's, 2009).

"[learn] Arabic in one year rather than ten, or calculus in eight weeks."[13] Who can deny the attractiveness of such a prospect.

Some people are skeptical of dramatic claims about the impending neuroscientific revolution of modern life. In a statement with a deflating effect on overblown claims, one prominent neuroscientist "recently observed that '98% of brain imaging is just blindly groping in the dark.'"[14] Another scholar has identified "brain overclaim syndrome" as an affliction that affects those overly enamored by neuroscientific findings. Yet another uses the term "neuro-realism" to refer to the way in which the public regards images of the brain as unproblematically real or objective.[15] Yet, whether or not neuroscience will transform how we live, it is undoubtedly the case that it has already changed how we explain the world.

Explanations based on neuroscientific facts have proliferated in recent years, cropping up in even some of the most unexpected places. For example, *The Times* reported on the death of a young filmmaker in London from a drug overdose, a relatively commonplace, albeit unfortunate, occurrence. In order to account for the young woman's overdose, the reporter appealed to neuroscientific findings, explaining that

> an endless thirst for risk could be simply a result of how the teenage brain is programmed. In the adult brain, small pleasures will cause correlating spikes in brain activity. In teenagers, gentle treats such as a nice walk just don't cut it. Their brains don't react; they remain bored.[16]

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[13] Lynch, "Neurotechnology and Society," 232.
[14] S.F. Dingfelder, "Questionnaire: Do Psychologists Have 'Neuron Envy'?" [interview with V.S. Ramachandran], *APA [American Psychological Association] Monitor* 39.6 (26-7 June 2008): 26.
[15] Stephen J. Morse, "Brain Overclaim Syndrome and Criminal Responsibility: A Diagnostic Note," *Ohio State Journal of Criminal Law* 3 (2006): 397-412; Judy Illes, Matthew P. Kirschen, and John D. E. Gabrieli, Letter, "From Neuroimaging to Neuroethics," *Nature Neuroscience* 6 (2003): 205.
[16] Eleanor Mills, "Robin Whitehead: Fatal Glamour of the Gutter," *The Sunday Times*, January 30, 2010, http://www.timesonline.co.uk/tol/comment/columnists/guest_contributors/article7009522.ece [accessed May 27, 2010].

Neuroscientific explanations have a demonstrable public appeal. Indeed, some researchers have found that people afford neuroscientific explanations of psychological phenomena greater credence than those that do not contain neuroscientific information. They speculate that "the presence of neuroscientific information may be seen as a strong marker of a good explanation, regardless of the actual status of that information within the explanation."[17] Whether their potential implications are exaggerated or not, the omnipresent circulation of neuroscientific discourses has had and will continue to have a significant impact in public culture.

Contemporary American culture is not only characterized by increased attention to the brain as a site of research and source of explanations, a brain-centric conception of the mind/self has concurrently taken hold. Many people now regard the mind/self as not just grounded in the brain, but identical with it.[18] Fernando Vidal writes that today's cultural landscape is characterized by the prevalence of what he calls "brainhood," or the property not merely of having a brain, but of being a brain. He uses the term "cerebral subject" to refer to how "the human being is specified by the property of 'brainhood,' i.e. the property or quality of *being*, rather than simply *having*, a brain."[19] Vidal is not alone in observing that conceptions of mind/self have become increasingly brain-centric. Nicholas Rose introduces the term "the neurochemical self" to identify a similarly brain-determined view of the self, emphasizing the

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[17] Deena Skolnick Weisberg, Frank C. Keil, Joshua Goodstein, Elizabeth Rawson, and Jeremy R. Gray, "The Seductive Allure of Neuroscience Explanations," *Journal of Cognitive Neuroscience* 20.3 (2008): 470.

[18] A group of German neuroscientists suggested that neuroscientific research changes how the public conceives of the mind (as opposed to vice versa), noting in a collectively written article that, "the results of the neurosciences will have consequences for the conceptualization of human beings and human society, once the public becomes aware of them . . . We'll have to face dramatic shocks regarding our self image in the foreseeable future. Humanities and the neurosciences have to engage in a thorough dialogue for constructing a new and consistent image of man," as qtd in Cornelius Borck, "Through the Looking Glass: Past Futures of Brain Research," *Medicine Studies* 1 (2009): 335. The translation is Borck's. Fernando Vidal challenges this characterization of causality, "Brainhood."

[19] Fernando Vidal, "Brainhood," 6; Francisco Ortega and Fernando Vidal, "Mapping the Cerebral Subject in Contemporary Culture," *Electronic Journal of Communication Information and Innovation in Health* 1.2 (2007): 255-259. See also Vidal and Ortega's online brainhood project (www.brainhood.net).

importance of chemical balances and imbalances.[20] As Vidal and Rose suggest, it is now widely believed that the brain not only holds the key to a person's identity, but that in fact it constitutes identity.

"Brain in a vat" thought experiments, of which there is a significant tradition in philosophy, play with the logical extension of regarding a person as equivalent to his or her brain. A prototypical version might suppose that a person's brain is removed from his or her body and placed in a jar where it still experiences consciousness. Or an alternate iteration might suppose that the brain is placed into an entirely new body. Given belief in a cerebral self, in both cases we believe that the brain determines the identity such that the "owner" of that brain still exists, simply embodied in a new vessel.[21] With the exception of science fiction, manifestations of the cerebral self in popular culture are usually of a more subtle variety than a brain hypothetically removed from the body and placed in a jar. Take, for example, the title to a *New York Times* online discussion forum, "Does the Brain Like E-Books." The title references the "brain" in lieu of the person.[22] As Fernando Vidal describes, "Embodied in countless statements declaring that the brain decides, learns and loves, or even that brains, rather than persons, understand each other, personification relies on an ontological reversal such that 'You are your brain' becomes factual, while 'You are yourself', figurative."[23] In other words, we have come to

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[20] Nikolas Rose, "Neurochemical Selves," *Society* 41 (November/December, 2003): 46-59. This article is associated with three-year project on brain, self, and society in the 21st century. See http://www2.lse.ac.uk/BIOS/research/brainSelfSociety/Home.aspx [accessed October 5, 2010].
[21] On this tradition in philosophy, see Cathy Gere, "The Brain in a Vat," *Studies in History and Philosophy of Biological & Biomedical Science* 35 (2004): 219-225.
[22] "Does the Brain Like E-Books," *The New York Times*, October 14, 2009, http://roomfordebate.blogs.nytimes.com/2009/10/14/does-the-brain-like-e-books/ [accessed May 29, 2010]
[23] Vidal, "Brainhood," 21. Max Bennett and Peter Hacker critique this mode of explanation by neuroscientists, referring to it as the mereological fallacy. They claim that "this application of psychological predicates to the brain *makes no sense* . . . The brain neither sees, *nor is it blind* – just as sticks and stones are not awake, *but they are not asleep either . . . The brain is not a logically appropriate subject for psychological predicates,*" "The Mereological Fallacy in Neuroscience," in *Philosophical Foundations of Neuroscience* (Malden, MA: Blackwell, 2003), 72.

regard the synecdoche as the literal. Moreover, once the brain is regarded as the necessary and sufficient determination of self, every other part of us can be disregarded.

Though the mind still has a place in the cultural landscape as a meaningful category that is related to, though distinct from, the brain, it would seem that the rise of the "cerebral subject" may portend the eventual obsolescence of the mind, which will become outmoded, as psyche and the mind's other predecessors once were. While one would need to perform a thorough analysis in order to ascertain this with any certainty, it appears that not only have terms such as "brain function" become an increasingly frequent part of contemporary discourse, but that they have displaced "the mind" to some extent. "Brain function" now often identifies operations that have long been regarded as the province of the mind, such as thought, memory, imagination, attention, and so forth. A growing preference for terms such as "brain function" over "mind" not only appears to characterize scholarly contexts, but popular discourse as well. Given the cerebral subject, the term "mind" perhaps appears vague, carrying with it vestiges of the dualisms and quackeries of the past. It is certainly the case that "mind" still co-exists alongside "brain function," but it appears to have receded in significance in some compelling ways.

While acknowledging that a terminological shift reflecting a possible turn away from the mind appears to be afoot, this chapter takes discussions of brain function, cognitive function, and related terms as discussions of the mind. It does so in accordance with the approach identified earlier, which entails focusing not on a certain terminology, but on a cluster of ideas concerning the thinking self that brings within its purview the phrenological and Freudian minds as well as the cerebral self. Moreover, to reflect the cerebral self's conflation of brain and self, together with its status as the new way of thinking about what we have long known as the mind, I use the

terms "brain," "mind," and "self" throughout this chapter, often interchangeably, but sometimes to lend particular emphasis.

In "Is Anyone in There? Terri Schiavo and the Brain-Begotten Mind," I investigate how the contemporary cerebral self serves as a resource for rhetorical invention. More specifically, I analyze how this conception of brain/mind/self led to the production of discourse in a particular instance: the case of Terri Schiavo. The Schiavo case is an important moment in the history of the mind's envisionings in part because of its public nature. Called "perhaps the most litigated end-of-life case in history," media coverage of the case became so extensive as to warrant description as "a public spectacle airing nonstop on cable and playing on front pages around the world."[24] At the center of the case was the status of a young woman's brain/mind/self. One day in 1990 Terri Schiavo went into cardiac arrest and collapsed, possibly as a result of a potassium deficiency caused by an eating disorder, was deprived of oxygen for a period of time, and thereby suffered profound brain damage. As a result of this damage, Schiavo was severely incapacitated and needed artificially-delivered nutrients and other care to subsist. Several years after her collapse, and after many attempts at rehabilitation, her husband petitioned the court to have life-sustaining treatments halted for his wife. He believed that she was in a persistent vegetative state, with no awareness or potential for it, and the courts agreed. Her parents, however, challenged the court ruling, arguing that she was in a minimally conscious state and should continue to receive treatment.

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[24] Jay Wolfson, "Foreword," in *The Case of Terri Schiavo: Ethics at the End of Life*, eds., Arthur L. Caplan, James J. McCartney, and Dominic A. Sisti (New York: Prometheus Books, 2006), 15; Tamara Lipper, "Between Life and Death," *Newsweek*, March 28, 2005, 30. On the media coverage of the case, see Robert M. Walker and Jay Black, "Terri Schiavo and Televised News: Fact or Fiction?" in *The Case of Terri Schiavo: Ethics, Politics, and Death in the 21st Century*, ed. Kenneth W. Goodman (New York: Oxford University Press, 2010), 210-224.

Over the years, the Terri Schiavo case wound its way through numerous courts and hearings. And while it began as a family dispute, it ultimately became a mainstream public debate and the subject of intense media scrutiny. It attracted such widespread interest that the Pope released a statement addressing the situation, and President Bush interrupted a vacation to fly to Washington D.C. on Air Force One to sign into law emergency legislation aimed to prevent the removal of life-sustaining treatments in order to keep Terri Schiavo alive. Ultimately, the legislation failed, and Terri Schiavo died in 2005. Upon the burial of her cremated remains, Terri Schiavo's husband erected a grave stone stating that she "departed this earth" in 1990 and was "at peace" in 2005. Michael Schiavo's gravestone inscription reflects the question at the very crux of this case: when did Terri Schiavo cease to exist a person?[25]

Figure 3: Terri Schiavo's Gravestone [Photograph taken by author]

[25] See Gregory E. Pence, "Terri Schiavo: When Does Personhood End?" in *The Elements of Bioethics* (Boston: McGraw Hill, 2007), 137-170.

Michael Schiavo and others suggested that Terri Schiavo experienced cognitive death shortly after her collapse and was thereafter merely existing as a mindless body or, to frame it crudely, a vegetable. On the other hand, her parents and those who supported their position claimed that although she did not possess an inner life as rich and varied as a "normal" person's, Terri Schiavo still had vestiges of a mind/self and was therefore entitled to live. In order both to develop and defend a stance with respect to someone's mental status, one can use a range of different techniques for assessing mental life, including behavioral evaluation, clinical tests, and the use of technologies. In this case, as in many others, examination of the stuff of the brain, as a source of a person's mind and self, played an important role in the debates over whether or not she should be kept alive or left to die.

It was impossible to get one's hands on Terri Schiavo's brain in order to address the question of whether she should remain on life support. Though her brain was removed and examined upon her death, and the autopsy findings reported with great interest, obviously by that point the decision to withhold nutrients had already been made.[26] The rhetorical situation of the Terri Schiavo case involved an exigency that demanded a different response. Fortunately, modern science has created a means to respond to that exigency: brain-imaging technologies that allow one to create representations of the living and still skull-encased brain. Three scans of Terri Schiavo's damaged brain were produced, and they played a significant part in the debate about the state of Terri Schiavo's mind/self.[27]

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[26] "Report of Autopsy" by Jon R. Thogmartin, Chief Medical Examiner, District Six, Pasco & Pinellas Counties, case no. 5050439, June 12, 2005. Available under the timeline entry for June 15, 2005, at http://www.miami.edu/ethics/schiavo/schiavo_timeline.html [accessed July 5, 2010].

[27] Ronald E. Cranford, "Facts, Lies, and Videotapes: The Permanent Vegetative State and the Sad Case of Terri Schiavo," *The Journal of Law, Medicine, and Ethics* 33 (2005): 364. An image of Terri Schiavo's brain, alongside that of a "normal brain" is available on a website devoted to the Terri Schiavo case maintained by the University of Miami Department of Bioethics: http://www6.miami.edu/ethics2/schiavo/2%20CTs.png [accessed July 5, 2010].

If we allow that scientific images are discourse for understanding the world, the production of those images constitutes a rhetorical act of invention. One might say, therefore, that the production of CAT scan images of Terri Schiavo's brain was an act of rhetorical invention, and part of the process whereby people developed thoughts in relation to the Schiavo case. CAT scan technologies enable the production of a particular type of discourse: visual discourse about the living human brain. If one believes in a brain-begotten mind, these images therefore also constitute visual communication about the mind and self. The contemporary belief that personhood is fundamentally brain-based motivated considerable attention to Terri Schiavo's brain, and the visual representation of her brain constituted an important type of visual discourse in the case. CAT scan images are highly authoritative, and in the Schiavo case, scans were accepted into court proceedings as evidence. They also circulated in popular contexts and became part of the public debate on the issue. However, the images did not in themselves answer the question of Schiavo's mental status. As is often the case in the inventional process, one discursive production leads to another as one extends and clarifies. CAT scans of Schiavo's brain became the focal point of considerable further discursive invention as people made inferences about their meaning.

One of the ways in which the cerebral self is realized as a discursive resource is through the production and interpretation of CAT scan images of the brain. This chapter proposes that in order to understand how this occurs, we must account for the role recalcitrance plays in both their production and interpretation. As the next section will explain, scientists take advantage of the recalcitrance of the natural world in order to produce the CAT scan, a highly determined form of discourse that has its origins with the brain in an important sense. But ultimately, we must also make meaning of this discourse by engaging in interpretation, which may lead to

multiple, potentially inconsistent and/or contradictory inferences. Recalcitrance helps to account for the tension between the authoritativeness of the image, which is produced out of a highly constrained process, together with the indeterminacy that characterizes its interpretation. As this chapter suggests, interpretation is not entirely unconstrained given that expertise channels recalcitrance, acting as a generative check on interpretive activity. The chapter begins by examining the relationship between recalcitrance and invention, analyzing their mutual complicity. It then turns to an analysis of the CAT scan image of Schiavo's brain and interpretations of it.

4.3 RECALCITRANCE AND RHETORICAL INVENTION

Writing on rhetorical invention typically emphasizes decisive extensions into the world. The emphasis is on exploration, with paths taken toward ideas and expressions, with expansions and additions, and with movements in a new direction. Invention, in other words, is about positive extension in a certain direction. Key concepts in rhetorical invention reflect this emphasis on actuation, and subtly suggest its opposite. Consider, for example, two classical rhetorical terms prominent in contemporary thought about rhetorical invention, kairos and topoi.

Kairos is often defined as "the exact or critical time, season, opportunity."[28] This timeliness is generative, acting as an impetus for discourse and action. Eric Charles White identifies two distinct origins of the term:

> In archery, it refers to an opening, or 'opportunity' or, more precisely, a long tunnel-like aperture through which the archer's arrow has to pass . . . The second

[28] Henry George Liddell and Robert Scott, *A Greek-English Lexicon* (Oxford: Clarendon, 1996), 859.

> meaning of kairos traces to the art of weaving. There it is the 'critical time' when the weaver must draw the yarn through a gap that momentarily opens in the warp of the cloth being woven.[29]

This emphasis on possibility suggests its opposite. Apertures and gaps do not always appear. Sometimes we drop a stitch or fail to find a target and sometimes we encounter impossibility and unfeasibility instead. An arrow might be too wide for its target, or we might fail to see the gap that appears in our yarn. We might be out of sync, find ourselves stuck, or arrive at the wrong time, either too early or too late.

Rhetorical topoi are resources for producing discourse.[30] They comprise a storehouse of arguments that one grabs as necessary, a conceptual place that one goes to get material to support an argument. The topoi also have a generative capacity, organizing our perceptions of the world and producing novelty.[31] As evidenced by the description of the topoi as a "storehouse" or "place," much thinking about the topoi involves a spatial metaphor.[32] Quintilian wrote a famous description of topical invention in such terms:

> Let us now turn to consider the "places" of arguments . . . in the sense of the secret places where arguments reside, and from which they must be drawn forth. For just as all kinds of produce are not provided by every country, and as you will not succeed in finding a particular bird or beast, if you are ignorant of the localities where it has its usual haunts or birthplace, as even the various kinds of fish flourish in different surroundings, some preferring a smooth and others a rocky bottom, and are found on different shores and in divers regions (you will

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[29] Eric Charles White, *Kaironomia: on the Will-to-Invent* (Ithaca: Cornell University Press, 1987), 13. White derives this from R.B. Onians, *The Origins of European Thought about the Body, the Mind, the Soul, the World, Time, and Fate* (Cambridge: Cambridge University Press, 1951), 343-49.

[30] Two well-known topical systems are Burke's pentad and the system outlined in Perelman and Olbrects-Tyteca's *New Rhetoric*. See W. Ross Winterowd, "'Topics' and Levels in the Composing Process," *College English* 34 (1973): 701-709. For a discussion of Perelman and Olbrechts-Tyteca's topical system, see Karl R. Wallace, "*Topoi* and the Problem of Invention," *Quarterly Journal of Speech* 58 (1972): 387-395.

[31] For a discussion of the topics that construes them as a sort of storehouse see Elbert W. Harrington, "A Modern Approach to Invention," *Quarterly Journal of Speech* 48 (1962): 373-378. Richard McKeon emphasizes the generative potential of the topics, *Rhetoric: Essays in Invention and Discovery*, ed. Mark Backman (Woodbridge, CT: Ox Bow Press, 1987), 205. See also Michael Leff, "The Topics of Argumentative Invention in Latin Rhetorical Theory from Cicero to Boethius," *Rhetorica* 1.1 (1983): 23-44.

[32] Carolyn Miller, "The Aristotelian *Topos*: Hunting for Novelty," in *Rereading Aristotle's Rhetoric*, eds. Alan Gross and Arthur Walzer (Carbondale: Southern Illinois University Press, 2000), 130-146.

> for instance never catch a sturgeon or wrasse in Italian waters), so not every kind of argument can be derived from every circumstance.[33]

Quintilian paints a vivid picture of traversing various locations in order to find arguments, but this portrait is only indirectly concerned with the counterpart to any journey: those places we cannot visit.

While kairos and topoi imply the existence of the impasse, we take it as our focus. If we are to consider invention a form of travel, we must pay explicit attention to the fact that there exist fences, gates, and barriers in addition to open passes. Padlocks, obstacles and guards sometimes block our way, preventing us from entering places we would very much like to visit. Sometimes we fail to make it to another locale as we grind to a halt, get mired in the mud, or become bogged down and unable to move. Kairos and topoi are just two examples of an orientation toward positive actuation that is shared by much work on rhetorical invention, which typically pays little attention to the fact that so many of one's efforts to extend oneself into the world are rebuffed. Recalcitrance can account for those aspects of the world that block our attempts at extension into it.

Recalcitrance is the resistance one meets through contact with something other than oneself. It is a stricture that opposes efforts to extend oneself into the world and exert one's will. A recalcitrant child, for example, is one that fights against efforts to control its behavior. Though a site of resistance, recalcitrance is not the enemy of invention. We do not always want free reign to romp at will through the expanse of all that is possible. There are times when we are not satisfied with poetic imaginings as a resource for making sense of the world. For some purposes, for instance, the poet's speculations about selfhood provide an insufficient account of

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[33] Quintilian, *The Institutio Oratoria*, vol. 2, trans. H.E. Butler (London: William Heinemann, 1921), 5.10.20-22.

the mind. As a result, sometimes we actively seek out circumstances in which we will encounter recalcitrance. We want something to push back against our extensions to give them shape or, we might say, we want our discursive productions to originate in some way outside of ourselves. Scientists are particularly apt to attempt to control, or even close off, avenues for extension in their endeavors, and like many scientific artifacts, CAT scans of the brain are produced out of a process that incorporates a high degree of recalcitrance.

During the course of our lives, we encounter resistance to our attempts at extension in many forms. Sometimes an artist finds a beautiful piece of wood and tries to carve it into a sculpture, but the material is too brittle, fractures easily, and cannot hold a shape. Laws determine what individuals are permitted to say and do in various contexts and there exist prisons to contain those who overstep those bounds. Social norms exert a subtle restraint on our actions, sometimes serving as invisible gates that shut off certain possibilities. Death, Barry Brummett observes, is the Great Recalcitrance, closing off avenues for expression in a final and unavoidable manner.[34] One can find accounts of such resistances within different disciplinary contexts, from various perspectives, and with varying degrees of explicitness. Kenneth Burke provides a particularly significant account within a rhetorical framework. This chapter adopts "recalcitrance" as its key term instead of other related expressions, such as resistance, opposition, or constraint, precisely because of Burke's use of the term and the importance of his writing on the subject.[35]

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[34] Barry Brummett, "On To Rhetorical Relativism," *Quarterly Journal of Speech* 68 (1982): 425.

[35] As one might expect, some accounts of human encounters with the world's resistance do not use the term "recalcitrance," but nonetheless address the same phenomenon. John Durham Peters uses the phrase "interruptions by nature" to characterize those occasions when the world pushes back against our extensions into it. He identifies Burke's recalcitrance as one account of "interruptions by nature" along with Emerson's concept of commodity and Peirce's notion of secondness, *Speaking into the Air: A History of the Idea of Communication* (Chicago, University of Chicago Press, 1999), 156. Emerson's explanation of commodity is brief – it is term he uses to identify physical necessity, *Nature* (San Francisco: Chandler, 1968), 15-18. Peirce gives a more extensive account of secondness. It

Kenneth Burke identified the principle of recalcitrance in *Permanence and Change*, where he wrote, "The point of view, in seeking its corroboration or externalization, also discloses many significant respects in which the material of externalization is recalcitrant."[36] He extended his account by observing that "the universe can manifest orders of recalcitrance corresponding to the orders of assertion."[37] In other words, the materials of externalization are not all the same. While Burke does not overtly delineate the types of recalcitrance that correspond to various orders of assertion, others have done so. James McGuire and Trevor Melia, for example, discern three distinct types of recalcitrance in Burke's work. I will refer to these three types of recalcitrance as linguistic, social, and natural, respectively.[38]

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forms part of his larger semiotic system, which also includes firstness and thirdness. Peirce describes secondness as follows, "We talk of *hard* facts. That hardness, that compulsiveness of experience, is Secondness. A door is slightly ajar. You try to open it. Something prevents. You put your shoulder against it, and experience a sense of effort and a sense of resistance . . . It is inconceivable that there should be any effort without resistance or any resistance without a contrary effort," Charles S. Peirce, "Sundry Logical Conceptions," in *The Essential Peirce: Selected Philosophical Writings*, vol. 2, ed. Peirce Edition Project (Bloomington: Indiana University Press, 1998), 268. Lloyd Bitzer's account of the rhetorical situation is another important example. It is highly sensitive to the resistance the world offers to our efforts to manipulate it. He identifies three parts to the rhetorical situation, the third of which is the set of constraints that shape a response to an exigence. His account, however, seems in some ways to suggest that recalcitrance is anthetical to rhetoric. He writes that in order for an exigence to be rhetorical, it must be able to be modified by discourse. Recalcitrance is that which cannot be modified by discourse. See Lloyd Bitzer, "The Rhetorical Situation," *Philosophy and Rhetoric* 1 (1968): 1-14. Scott Consigny discusses the constraints of the rhetorical situation explicitly in relation to Burke's concept of recalcitrance, "Rhetoric and Its Situations," *Philosophy and Rhetoric* 7.3 (1974): 175-186.

[36] Kenneth Burke, *Permanence and Change* (Berkeley: University of California Press, 1984), 89.

[37] Ibid., 263. For Burke's account of recalcitrance, see also, 255-261.

[38] J.E McGuire and Trevor Melia, "Some Cautionary Strictures on the Writing of the Rhetoric of Science." *Rhetorica* 7 (1989), 89. In a footnote, McGuire and Melia indicated their intention to publish an article about the three types of recalcitrance with a title of that same name. The article, unfortunately, was never written, as confirmed by James McGuire in personal correspondence. Floyd Anderson, Lawrence Prelli and Matthew Althouse provide a somewhat different schema from McGuire and Melia in their project to "alembricate," or distill and refine, Burke's concept of recalcitrance, "Alembricating Kenneth Burke's Concept of Recalcitrance," Paper presented at the National Communication Association Annual Conference, San Diego, CA, November 2008. They demarcate types of recalcitrance based on the elements of Burke's pentad: act, scene, agent, agency, and purpose. Other categorizations are surely possible as well, and it seems likely that greater attention to recalcitrance would result in different elaborations. Though Burke is an important starting point, his work on the subject is not a puzzle that once solved will reveal all we need to know about recalcitrance. Recalcitrance is a rich and multifarious concept. Just as there is no single definition of invention, there are many ways to understand recalcitrance and scholars have yet to uncover its full complexity.

(1) **Linguistic recalcitrance**. This category receives the least attention. McGuire and Melia explain it as the "recalcitrance implicit in language itself," which is to say that language enables and disables certain modes of reflection.[39]

(2) **Social recalcitrance**. McGuire and Melia explain that "texts dealing with human relations inevitably reflect their 'materials of externalization' by displaying a normative component."[40] Just as the physical features of the world delimit an individual's movements through it, an individual's actions in the world are also shaped by social norms. Contact with another entails certain limitations. Burke suggests that the individual with anarchic tendencies will have those tendencies normalized by the social environment. For example, one cannot walk naked though the streets for very long before meeting recalcitrance in the form of police intervention. Many forms of social recalcitrance occur by more subtle means, and such implicit and unspoken social norms are equally restraining. As an account of normative pressures, social recalcitrance is related to a good deal of other work on social norms, normativity, socialization, etc…[41] A weakness with many accounts of social normativity, however, is that they fail to connect social pressures with the physical recalcitrance of the natural world. "Recalcitrance" is a term that enables this connection to come to the fore.

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[39] McGuire and Melia, "Cautionary Strictures," 89.
[40] Ibid., 89.
[41] For example, we might describe Foucaultian accounts of how dominant formations shape our extensions into the world as theorizations of a form of recalcitrance. Jeffrey Murray proposes a relationship between Levinas' work and social recalcitrance. He finds Burke's concept of social recalcitrance inadequate and argues that it "needs to be extended and developed to describe more explicitly and more thoroughly the kind of recalcitrance offered by the Other to the self's symbolic drama," Murray, Jeffrey W, "Kenneth Burke: A Dialogue of Motives," *Philosophy and Rhetoric* 35 (2002): 28.

(3) **Natural recalcitrance**: This type of recalcitrance has to do with the brute physical strictures of the world. McGuire and Melia explain that *scene*, in its simplest sense, is nature. They explain, moreover, that "the greatest recalcitrance is met by texts directly describing scene and is not fully accounted for in sheerly linguistic or rhetorical terms."[42] One cannot jump out of a window and take flight, for instance, because the physical world does not allow for it; gravity resists this effort to extend oneself in a certain direction. McGuire and Melia are most interested in this final type of recalcitrance, which they discuss at considerably more length than the others.

Burke's description of recalcitrance has implications for efforts to try to establish an objective reality. For instance, Burke writes, "The 'discoveries' which flow from the point of view are nothing other than revisions made necessary by the nature of the world itself. Thus they have an objective validity."[43] He continues, "and our 'opportunistic' shifts of strategy, as shaped to take this recalcitrance into account, are objective."[44] These quotes suggest that when they are shaped by the world's action, discoveries have an objective basis and become more than the product of a particular perspective. Indeed, McGuire and Melia consider recalcitrance a means of grounding science in the natural world and revealing its nontextual basis, suggesting that natural recalcitrance reveals the existence of such scientific entities as the motion of the celestial bodies, Avogadro's number, and the effect of the moon on the tides. Where we meet with recalcitrance, they might say, we discover the world independent of our subjectivity. Not all, however, agree with this position.[45]

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[42] McGuire and Melia, "Some Cautionary Strictures," 89.
[43] Burke, *Permanence and Change*, 89.
[44] Ibid., 89.
[45] On the basis of their understanding of recalcitrance, McGuire and Melia defend a minimal realism and reject the wholesale social constructionism of rhetoric of science scholars such as Alan Gross, Bruno Latour and others. Their

While recalcitrance enacts a restrictive function, its generative capacity is also considerable. Kenneth Burke suggested that recalcitrance plays a specific inventional role, writing,

> In the end, our *pseudo-statements* may have been so altered by the revisions which the recalcitrance of the material has forced upon us that we can now more properly refer to them as *statements*. It is a pseudo-statement to say 'I am a bird.' Our symbolism has been revised into a complete practical statement when we can say 'I am an aviator.'[46]

Recalcitrance, in other words, compels revision. It induces adjustments and alterations, which produce a statement that is considerably different from the one with which one began. Specifically, Burke believed that recalcitrance can bring about a statement that is less fanciful and more practical than the original; in other passages he referred to recalcitrance as a corrective.

Burke's recognition of the generative capacity of recalcitrance is also evident in another, longer passage from *Permanence and Change*:

> One strategically alters his statements, insofar as he is able, to shape them in conformity with the use and wont of his group. At this stage his message is taken up and variously reworked by many different kinds of men – and by the time they have fitted it to the recalcitrance of social relationships, political exigencies, economic procedures, etc., transferring it from the private architecture of a poem into the public architecture of a social order, those who dealt with it in its incipient or emergent stages could hardly recognize it as having stemmed from them.[47]

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argument does not put an end to the realism vs. constructionism debate, however. Edward Schiappa, for one, contests McGuire and Melia's interpretation. While they make a case for the distinctiveness of science, he argues that Burke does not regard scientific ways of knowing as fundamentally different from other ways of knowing, "Burkean Tropes and Kuhnian Science: A Social Constructionist Perspective on Language and Reality," *Journal of Advanced Composition* 13 (1993): 401-422. Barry Brummett also disputes McGuire and Melia's conclusions, remaining unconvinced that recalcitrance gives us access to the world as it is and arguing that the symbolic is unavoidable. He suggests that even death, the most recalcitrance of occurrences, ends up being symbolically shaped and processed, "On to Rhetorical Relativism." Maurice Charland makes a related point with respect to identity, explaining that new constitutive rhetorics "serve to overcome or define away the recalcitrance the world presents by providing the subject with new perspectives and motives," "Constitutive Rhetoric: Case of the *Peuple Québécois*," *Quarterly Journal of Speech* 73.2 (1987): 142.

[46] Burke, *Permanence and Change*, 256.

[47] Ibid., 258.

In this passage, Burke uses the terms "shaping" and "reworking," which highlight the transformative nature of recalcitrance. However, the transformation occurs in a conservative direction given that recalcitrance forces normalization to the collective to such an extent that the final product barely resembles the original.

Some suggest a more radical creative potential for recalcitrance than Burke's revision, including Pierre Bourdieu and Janet Atwill. They both write of the generativity of limits, which are places from which an extension can no longer proceed or, we might say, sites of recalcitrance. Pierre Bourdieu suggests that limits – or sites of recalcitrance - play a role in the world's essential formation. He suggests that restrictions and confines configure the world itself, inexorably determining its structure.[48] Janet Atwill makes a more narrow claim regarding the importance of limits for artistic creation. She argues that art's successes cannot be separated from its limits and suggests that art proceeds in relation to its boundaries, striving to violate or redefine them. Boundaries, in other words, serve as an impetus for creativity.[49]

It also deserves note that recalcitrance is not a phenomenon that exclusively affects our measurable extensions into the world; it also plays a role in invention that never find expression. Though thought might appear to be a recalcitrance free zone, we are irrevocably social beings. As Karen LeFevre argues, invention is always a social act and cannot be dissociated from our relationships with others.[50] Even the most solitary moments of invention involve contact with internalized others. Freud's superego is one way to theorize the nature of this other within

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[48] He writes, "'the world is based on the limit [*thalasth*],' said an old Kabyle. 'Heaven and earth are separated by the limit. The eyes have an enclosure [*zerb*]. The mouth has a limit. Everything has a limit.' To bring order is to bring distinction, to divide the universe into opposing entities," Pierre Bourdieu, *Outline of a Theory of Practice*, trans. R. Nice (Cambridge: Cambridge University Press, 2009), 124.

[49] See Janet Atwill, "Techne and the Transformation of Limits" in *Rhetoric Reclaimed: Aristotle and the Liberal Arts Tradition* (Ithaca, NY: Cornell University Press, 1998), 47-69.

[50]Karen Burke LeFevre, *Invention as a Social Act (*Carbondale: Southern Illinois University Press, 1987). Michael Billig makes the case that thought itself is dialogical, *Arguing and Thinking: A Rhetorical Approach to Social Psychology* (Cambridge: Cambridge University Press, 1996).

oneself, and not the only one. We must, therefore, acknowledge that recalcitrance plays a role in thought and that cognitive extension also meets with recalcitrance. There exist gates and barriers even within our own heads.

The next section of this chapter considers an important way in which recalcitrance is generative, one that has not received enough attention in the literature on invention. It examines the proactive and purposeful use of recalcitrance to channel invention. Two examples should illustrate the basic principle. Imagine an artist who throws paint at a canvas. She is taking advantage of the direct recalcitrance that canvas offers. She is aware of the fact that the canvas will not allow paint to pass through and will instead force a revision in its trajectory, causing it to disperse in a creative splatter. It is similarly possible to take advantage of social recalcitrance. Suppose, for example, that a protest group attempts to march down a forbidden street. The group knows that it will not be able to proceed down that street very far, but will meet the recalcitrant strictures of the law. It commits this act of civil disobedience in order to incite, or one might say invent, a public spectacle. CAT scans, as we will see, are another place where recalcitrance is channeled toward generative ends.

4.4 PRODUCING THE RECALCITRANT MIND

In *Speaking Into the Air*, John Peters wrote of a persistent cultural fantasy that "if only the signifying vehicles would vanish so that we could see into each other's hearts and minds, genuine communication would be possible."[51] With transparent minds and hearts, the fantasy

[51] Peters, *Speaking into the Air*, 64.

goes, we would know others directly without the messy confusion of the communication process. If this were to happen, it would then follow, the Terri Schiavo case would never have become a legal battle. Given that we would immediately and unproblematically apprehend Schiavo's mental status, there would be no need to argue about it. Though Peters dismisses the fantasy, it is clear that brain-imaging technologies allow us to tap into it in some respects. By providing visual representations of the living human brain, they appear to make signifying vehicles vanish, enabling us to see into each other's minds. In other words, some read the production of a certain type of visual discourse about Schiavo's brain as a means of making her mind transparent.

The Terri Schiavo case was not a single event, but a complex morass of court trials, appeals, and such that revolved around many different issues of contention. Terri Schiavo's parents challenged Michael Schiavo's guardianship of his wife with allegations of spousal abuse and nefarious monetary motivations. There was disagreement about whether Ms. Schiavo would have wanted life-saving treatments to be removed in the event of severe incapacitation.[52] The question arose of whether artificially-delivered nutrition constitutes a medical treatment or basic care, and as the case progressed, the focal point became the separation of governmental powers. Ultimately, however, Schiavo's mental status was perhaps the central question in the case, not only for medical diagnosis, but in legal proceedings and in the public debate. Moreover, while the reign of the cerebral self can be credited with some of the attention directed toward Schiavo's brain, developments in the medical field not wholly unrelated to it were also key.

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[52] For the legal details of the case, see Arthur L. Caplan, James J. McCartney, and Dominic A. Sisti, *The Case of Terri Schiavo: Ethics at the End of Life* (Amherst, NY: Prometheus Books, 2006); George J. Annas, "'Culture of Life' Politics at the Bedside – The Case of Terri Schiavo," *The New England Journal of Medicine* 352 (2005): 1710-1715; Lois Shepherd, *If That Ever Happens to Me: Making Life and Death Decisions After Terri Schiavo* (Chapel Hill: University of North Carolina Press, 2009). For a rhetorical analysis of the case, see Michael J. Hyde and Sarah McSpiritt, "Coming to Terms with Perfection: The Case of Terri Schiavo," *Quarterly Journal of Speech* 93.2 (2007): 150-178.

For centuries, the termination of breathing and a heartbeat marked the end of life. However, the introduction of artificial respiration and feeding tubes in the 1960s, which gave doctors the ability to indefinitely sustain the body of someone who had lost all mental capacity, led to the emendation of conceptions of death. New medical definitions of death grounded in the brain began to emerge.[53] A committee at Harvard Medical School introduced a rigorous "Harvard criteria" of brain death, which specified the cessation of all brain activity, including that which is responsible for breathing.[54] The Harvard criteria, however, identifies only one specific coma state, and there exist other variations. Persons in a vegetative state, for example, lack higher cognitive function and are in a coma, but they are not brain dead by the Harvard criteria because their brain stems are functional, they breathe, and they have cycles of sleep and wakefulness. Many believe that though it does not meet the Harvard criteria of brain death, persistent vegetative state (PVS) constitutes another kind of death: the end of a person.

Diagnosing a vegetative state presents a challenge, in part because people in this state can behave in ways that are suggestive of cognitive function, moaning, opening their eyes, or even smiling. However, they do not engage in any of these behaviors in a meaningful manner; a vegetative state is defined by a lack of awareness - of oneself, others, and the environment.[55] One can say that the signs of arousal that characterize a vegetative state are accompanied by

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[53] This new definition is supplementary, and used in particular cases, as in a person with a strongly beating heart whose brain no longer functions. Most people are still declared dead based on heartbeat and breathing, Gregory Pence, "Terri Schiavo: When Does Personhood End," 143-144. See also, Margaret Lock, *Twice Dead: Organ Transplants and the Reinvention of Death* (Berkeley: University of California Press, 2002).

[54] Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death, "A Definition of Irreversible Coma," *Journal of the American Medical Association* 205 (1968): 337-340.

[55] This is the criteria for delineating PVS detailed by the Multi-Society Task Force on PVS, "Statement on Medical Aspects of the Persistent Vegetative State," *New England Journal of Medicine* 330 (1994): 1499-1508, 1572-1579.

"lack of any evidence of a working mind either receiving or projecting information."[56] A central factor in the diagnosis of a vegetative state, therefore, is lack of evidence of the existence of internal subjectivity, or self, of any sort. The condition is considered to be persistent (PVS) when a person has remained in a vegetative state for a year or more.[57] Careful diagnosis of PVS is crucial because it indicates extremely low possibility of meaningful recovery.[58] Some suggest that long-term vegetative states should be more accurately called permanent instead of persistent.[59]

One might characterize PVS as a state in which the physical body persists while the person who once inhabited that body is irretrievably gone. In this case, withholding nutrients from a person in PVS is not depriving a person of food, but allowing a mindless body to cease operations. A PVS diagnosis lends support to arguments to halt treatments, and those who argued that Schiavo's feeding tube should be removed, such as Michael Schiavo, claimed that Terri Schiavo was in a persistent vegetative state. On the other hand, those who believed that life-sustaining treatments should be continued, as did her parents, largely suggested that Terri Schiavo was minimally conscious, a mental state in which there is at least some shred of awareness and a self, however minimal.[60] Clinical evaluation is imperative for the diagnosis of PVS; doctors observe patients over a period of time and perform tests aimed to detect any possible signs of awareness. Neurological tests, such as EEGs, MRIs and CAT scans, are also considered useful and confirmatory of diagnosis. This chapter focuses on CAT scans, one of the

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[56] B. Jennett, "The Vegetative State," *Journal of Neurology, Neurosurgery, & Psychiatry* 73.4 (2002): 355. See also B. Jennett, *The Vegetative State: Medical Facts, Ethical and Legal Dilemmas* (Cambridge: Cambridge University Press, 2002).
[57] Jennett, "Vegetative State," *J Neurol*, 356.
[58] Jennett, *Vegetative State: Medical Facts, Ethical and Legal Dilemmas*," 64.
[59] Royal College of Physicians Working Group, "The Permanent Vegetative State," *Journal of the Royal College of Physicians of London* 30 (1996): 119-121.
[60] J.T. Giacino, S. Ashwal, and N. Childs et. al., "The Minimally Conscious State: Definition and Diagnostic Criteria," *Neurology* 58 (2002): 349-353.

technologies used to gain understanding of the state of Terri Schiavo's brain, the results of which played a salient role in debates over the case.

From the time of her collapse until the removal of the feeding tube keeping her alive, several CAT scans of Terri Schiavo's brain were taken.[61] She had her first CAT scan on February 25, 1990, the day she collapsed and suffered cardiac arrest. Though her brain appeared normal on that scan, those taken later that year showed signs of progressive atrophy. Her last CAT scans in 1996 and 2002 showed evidence of severe atrophy.[62] These later scans of Terri Schiavo's brain clearly showed the expanded gaping spaces of her ventricles. Her brain looked dramatically hollowed out in comparison with that of a person without brain injury, a potent indicator of a severely degraded brain. CAT scans of Schiavo's brain not only played a role in medical diagnosis, but also in the legal proceedings surrounding the case; they were admitted as evidence in several court hearings and were discussed in affidavits by doctors and in rulings by judges. A CAT scan also made its way into the public debate surrounding the case.

Bruno Latour might refer to the CAT scanning apparatus as a technological inscription device. Such devices are means by which material substance is transformed into a written form that is "directly usable in an argument," and which is "regarded as having a direct relationship to 'the original substance.'"[63] This chapter suggests that CAT scan images, like many scientific images, are regarded as having a powerful relationship to the original substance because of the recalcitrance that enables their production. Precisely how scientific images incorporate recalcitrance, of course, differs across types of images and technologies. It differs even across

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[61] In addition, Schiavo had an MRI scan in 1990, prior to the insertion of a deep brain stimulator. EEGs, which test for brain electrical activity, were also performed, Cranford, "Facts, Lies, and Videotapes," 364-365.
[62] Cranford, "Facts, Lies, and Videotapes," 364-365.
[63] Bruno Latour and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts* (Princeton: Princeton University Press, 1986), 51.

those technologies that can produce images of the brain. It deserves note that brain imaging technologies fall into two broad categories, structural and functional. Structural scans, such as the CAT scan of Terri Schiavo's brain, are images of the material organization of the brain. Functional images, on the other hand, which include PET scans and fMRIs are representations of brain activity as measured by some feature such as blood flow.[64] This chapter concludes with a discussion of some of the implications of its arguments for functional scans.

CAT scans and x-rays are both produced by means of fundamentally similar processes. Both are based on the same phenomenon, that x-ray photons pass through the different substances of the body to varying degrees depending on density. When x-rays are directed toward the body, they pass freely though low-density substances, such as the air-filled lungs. On the other hand, they are absorbed to a great extent by dense materials, such as bone. X-rays expose film, and in a traditional x-ray, the pattern of light that passes through the body is recorded by the exposure pattern on the film. The grey-scale x-ray images we recognize as typical of the genre, in which bones appear white and tissues are in various shades of grey, have their characteristic appearance because of these exposure patterns.[65]

CAT, or Computer Assisted Tomography, scans involve more sophisticated technology than the traditional x-ray. Instead of exposing film, x-ray beams that pass through the body in CAT scan imaging are picked up by a sophisticated detector that allows them to be processed by computers. The technology is referred to as tomography, which comes from the root tomo,

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[64] EEGs are also a type of functional test, though they receive relatively little public attention, perhaps because they do result in the same sort of appealing visual image as many other functional tests.

[65] For a history of x-rays, see Bettyann Kevles, *Naked to the Bone: Medical Imaging in the Twentieth Century* (New Brunswick, NJ: Rutgers University Press, 1997); Bernike Pasveer "Knowledge of Shadows: The Introduction of X-ray Images in Medicine," *Sociology of Health and Illness* 11.4 (1989): 360-381; Bernike Pasveer, "Representing or Mediating: A History and Philosophy of X-ray Images in Medicine," in *Visual Cultures of Science: Rethinking Representational Practices in Knowledge Building and Science Communication*, ed. Luc Pauwels (Lebanon, NH: Dartmouth College Press, 2006).

meaning slice, because it allows for the scanning of slices of the body as opposed to one scan of the entire depth. An analogy that is often employed to aid in visualizing this is a loaf of bread. Traditional x-rays produce a single image of the loaf while the CAT scan allows for images of individual slices. Despite their complexity, however, CAT scans, like traditional x-rays, rely on the fundamental principle of differential absorption.[66]

It is instructive to consider the production of a CAT scan in terms of recalcitrance that has both direct and indirect effects. Consider that every time someone drops a brick out of a window, it hits the ground. In the absence of highly unusual circumstances, it never hangs suspended in air, never sails away, and never flies upward to the sky. On one hand, there is the perspective of a person who wants to get the brick to float through the exercise of willpower or the incantation of a magic chant. In this case, gravity acts as a force that directly impedes that person's desire to extend her will by suspending a brick in midair. It is also the case that people observe that every time a brick is dropped from a height it falls to the ground because of the force of gravity. This incessant falling to the ground of bricks serves as a form of recalcitrance against the claim that bricks float when dropped out of a window. In this case, natural recalcitrance is operating indirectly as it shapes the claims we can make.

In CAT scan production, recalcitrance exists in the form of bones and other substances that block x-ray beams from passing through body. In over simplified terms we might describe producing a CAT scan as throwing some x-rays at a person and seeing where they meet recalcitrance. The recalcitrance incorporated into the production of a CAT scan is both restrictive and enabling, reflecting the fundamental tension of recalcitrance more generally. It is restrictive in that the differential absorption of x-rays by various substances rebuffs efforts to

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[66] For a clear and accessible explanation of CAT scanning, see Lois E. Romans, *Introduction to Computed Tomography* (Baltimore: Williams & Wilkins, 1995).

alter the pattern the image takes. When a technician wants a person's hand to reveal an unusually shaped bone structure, for instance, the recalcitrance of the process thwarts his or her symbolic will. However, the recalcitrance is also the very channel through which the image is created, and the proliferation of CAT scan images is evidence of its dynamic capacity to engender visual discourse.

While natural recalcitrance plays a critical role in the production of CAT scan images, social recalcitrance also pertains, not least because of the dangers of x-ray exposure. In the immediate aftermath of their discovery, x-rays were a popular craze. Demonstrations at locations such as Bloomingdales attracted throngs of people anxious to get novel pictures of the bones of their hands and feet. However, as reports of people dying from x-ray exposure grew, dangers were increasingly recognized, and x-rays began to be controlled more tightly.[67] It is a widely shared and piously valued social norm that we protect our own health as well as the heath of other people, a potent source of social recalcitrance. Because of it, the use of x-rays on humans is limited to certain contexts, such as medical diagnosis. Furthermore, CAT scan operators must be trained and licensed, and they must follow certain protocols to ensure safety. The high degree of social recalcitrance that limits uses of CAT scans moreover distinguishes it from popular forms of mechanical representation, such as photography, which also incorporate a high degree of natural recalcitrance. Photography and other such technologies are much less socially constrained, much less governed by protocol, because they do not involve the same inherent danger as do x-ray technologies.

Efforts to channel recalcitrance are fundamental to science, and the production of scientific images is often distinguished from the production of other forms of discourse by the

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[67] Kevles, *Naked to the Bone*, 47-48.

incorporation of high degree of recalcitrance, making them tightly constrained by the brute physical forces of nature.[68] Images of this sort differ greatly from surrealist paintings, for example, where an ear might be connected to a knee just because the artist feels like putting it there. CAT scans, in other words, are not a form of idiosyncratic expression, but revelations of a particular absorption pattern. In addition to the constraints of natural recalcitrance, protocols for producing images exist not only to reduce danger, but also to limit avenues for authorial intent. In other words, the image has its origins with the features of the world as opposed to an experimenter's subjectivity. For this reason, we generally do not think of CAT scan images as authored, but rather regard them as made or taken.[69] Moreover, this also explains why we often forget that CAT scan images are a form of discourse, and that the process of creating them is an inventional one.

McGuire and Melia argue that as a result of recalcitrance, scientific artifacts such as x-rays are objectively grounded, claiming that "those effects are there, and they are real, because they have to do with the world and not with our conventions . . . there are no prior grounds, let alone social conventions, for suspecting the existence of what is brought about by the resources of the laboratory."[70] And although its focus on invention means this chapter can proceed without taking sides on the question of objectivity, it deserves note that many would characterize CAT scans as objective representations of the body given their incorporation of such a high degree of recalcitrance. Of course it is also the case, as Lorraine Daston and Peter Galison observed in their work on mechanical image making, that efforts to "extirpate human intervention between

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[68] Because the natural world exerts its influence on the appearance of scientific images to varying extents, the authors of some scientific images meet with more recalcitrance than others. Not all are equal in this regard.
[69] For this reason, recalcitrance is a fundamental theoretical concept for the rhetoric of science. While rhetorical analysis typically begins with consideration of the persuasive means available in any given situation, scientific images must be analyzed by also considering where they are unavailable, in other words, with the recalcitrances involved – that is where the stakes are for science.
[70] McGuire and Melia, "Some Cautionary Strictures," 99. They argue for a minimal realism.

object and representation," no matter how valiant, are "never wholly successful."[71] One can even find ways intervene in the production of x-ray and CAT scan images.[72] But the insertion of the human is an aberration that conflicts with the goal one generally has when performing such scans, which is to create a representation determined by the brute physical strictures of the world, which then has a certain reality as a result.

While the recalcitrance of the CAT scan process limits one's ability to control the appearance of the image, thereby restricting invention and limiting available means of persuasion (at least in principle), it strengthens one's ability to persuade in another sense.[73] The scientific image may be persuasive precisely because of its recalcitrances. If the CAT scan of Terri Schiavo's brain is determined by the density of bodily substances alone, then what a technician thinks or feels about the case, for example, will be of no consequence. CAT scan images may be persuasive discourse about Schiavo's brain because people know, whether they consciously consider it or not, that even on the technician's most creative day, she would not have had much power to impose her symbolic will. Part of the CAT scan's persuasiveness, it would seem, comes from its determination by the brute physical strictures involved in the process of image creation. Conversely, the persuasive force of an image is undermined when one becomes aware of soft spots where space to exert one's own perspective can be found. Recalcitrance therefore limits the means of persuasion while increasing rhetorical force.

Those who scanned Terri Schiavo's brain aimed to produce a picture determined exclusively by the contact x-rays make with the physical stuff of her brain. They wanted to

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[71] Lorraine Daston and Peter Galison, "The Image of Objectivity," *Representations* 40 (1992): 98.
[72] On how x-rays can be manipulated and exaggeration see Daston and Galison "The Image of Objectivity," 110-111. Given that they are computerized, CAT scans would allow for the manipulation of raw data, for example. The production of such images also reflects a certain cultural valuation.
[73] The epistemic authority of the photograph is similarly derived. See Daston and Galison, "The Image of Objectivity," 114.

create an image that exists apart from human subjectivity and has its origins with her brain. In the absence of holding her brain in one's hands, it is perhaps as close as one can get to it, thereby offering a substitute for the sort of contact Sugimoto desired. In a very important sense, the recalcitrant contact of x-rays with the tissues of the brain makes CAT scan images of the brain appear as glimpses inside the skull as opposed to representations of what is contained therein.

By and large, the average person lacks the opportunity to produce CAT scan images of the brain. Access to CT technology is restricted not only by the dangers of x-rays, but also by the fact that the technology is expensive, difficult to operate, cumbersome and so forth. However, though deprived of the means to send x-rays hurtling toward brain tissues in order to produce this powerful form visual discourse about the brain/mind/self, the lay person actively participates in another realm of rhetorical invention: the generation of interpretations. CAT scan images are most often interpreted within the contexts of their production, yet they also make their way into public interpretive spaces. Given contemporary conceptions of the cerebral self, CAT scan images offer a seeming revelation of the self and promise great insight. The cerebral self therefore draws considerable attention to such images and motivates the generation of a good deal of interpretive work.

4.5 RECALCITRANCE MEETS INTERPRETATION

Don Ihde characterized the late twentieth century proliferation of imaging technologies as "the emergence of a unified and specialized mode of *thing interpretation* through imaging

instruments."[74] He suggested, in other words, that scientific images are interpretations of the natural world, referring to imaging technologies as "hermeneutic sensory translation devices."[75] However, even as interpretations, scientific images demand yet further exegesis; their meaning is not self-evident.[76] When CT technology was first developed, CAT scan images "were a puzzle to the physicians and surgeons who would be expected to use them."[77] Leaders in radiology, who had never seen images of the brain, failed to appreciate their significance, dramatically underestimating the world market for CT scanners.[78] People had to learn how to read CAT scans in order to appreciate their significance. As Daston and Galison suggest, "Only through individual, subjective, often unconscious judgment could pictures transcend the silent obscurity of their mechanical form."[79] In other words, the mechanically produced image says nothing without being interpreted.

To interpret a CAT scan image for meaning is to engage in a number of related activities: recognizing features and patterns, identifying differences between the image at hand and other examples of its type, and measuring it against an abstract norm. One might also consider the image's implications for concerns outside of itself, such as what it means for an end-of-life case, thereby discerning its significance. While CAT scan images are a familiar part of the visual landscape today, both to scientists and to the general public, any given CAT scan image still must be interpreted, and sometimes clinical significance can be quite difficult to discern. Even a gravely damaged brain does not always lend itself to straightforward interpretation. For

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[74] Don Ihde, *Expanding Hermeneutics: Visualism in Science* (Evanston, IL: Northwestern University Press, 1999), 8.
[75] Ibid., 160.
[76] See Françoise Bastide, "The Iconography of Scientific Texts: Principles of Analysis," in *Representation in Scientific Practice*, eds. Michael Lynch and Steve Woolgar (Cambridge, MA: MIT Press, 1990), 207.
[77] Kevles, *Naked to the Bone*, 162.
[78] Joe Dumit, "Objective Brains, Prejudicial Images," *Science in Context* 12 (1999): 181. When x-rays first appeared, people similarly had to learn how to see them, Pasveer, "Knowledge of Shadows."
[79] Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007), 344, 346.

instance, while Terri Schiavo's scan showed evidence of a remarkably abnormal brain with large fluid-filled spaces, remarkably damaged brains are sometimes capable of great mental capacity. Persons with Dandy Walker syndrome have brains that are filled with fluid, and their CT scans appear highly abnormal with gaping spaces where brain tissue should be. Yet, it is possible for persons with this syndrome to suffer few if any symptoms. In a story entitled "Man with Almost No Brain has Led Normal Life," a story of a man with Dandy Walker syndrome, Fox News dramatically highlighted the possibility that mental deficit many not always accompany striking brain abnormality.[80]

Lorraine Daston and Peter Galison argue that images produced by mechanical modes of reproduction place a particularly high interpretive burden on their readers. When a scientist creates a diagram to explain a particular phenomenon, such as photosynthesis, the image is a manifestation of his or her 'read' of that process; he or she interprets it for the viewer. Images produced out of highly recalcitrant modes of reproduction, however, should in principle result exclusively out of contact with the physical world with little influence from the meddling, interpreting fingers of the scientist. Therefore, at least in principle, the scientist's interpretation of the process is absent from the image that represents it. As Daston and Galison explain, this does not eliminate interpretation, it simply transfers responsibility for it to the reader of that image. As a result, they suggest, mechanization "shifted rather than eliminated the suspected sources of subjectivity."[81] In other words, since the scientist does not engage in interpretation during the process of production, the scientist merely "hands over" a depiction of that process, and a person viewing the image must bear the full burden of discerning meaning. This is an

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[80] "Man with Almost No Brain Has Led Almost Normal Life," *Fox News*, July 25, 2007, http://www.foxnews.com/story/0,2933,290610,00.html [accessed June 6, 2010]. See also Adrian Dixon, "Pitfalls in CT," in *CT Review*, ed. Janet E.S. Husband (Edinburgh: Churchill Livingstone, 1989): 249-259.
[81] Daston and Galison, "The Image of Objectivity," 110.

inevitably subjective task and, as we will discuss at some length, one that the average person may lack technical competence to engage in successfully.

Interpreting scientific images, such as CAT scans of the brain, can be understood as an act of rhetorical invention. Michael Leff has written insightfully about the relationship between interpretation and invention, identifying what he calls a "hermeneutical rhetoric," which is "how interpretive processes become inventional resources."[82] Leff suggests that a sharp distinction between production and interpretation is impossible to sustain given that the two merge in communication: interpretation is always productive and production always interpretive. Hans-Georg Gadamer makes a similar point regarding the productive dimension of interpretation, suggesting that "the grasping of the meaning of the text takes on something of the character of an independent productive act."[83] We do not simply happen upon meaning and significance, we play a role in creating them. Clayton Koelb discusses a particularly strong form of interpretive invention, introducing the term "rhetorical construction" to identify a mode of invention in which critics read texts aggressively without regard for the intention of the text.[84] As a site of invention, interpretation exists beyond the control of natural recalcitrant production. Therefore, once production has ceased, even images produced out of the most tightly constrained process imaginable become sites for possibly unbounded and unfettered interpretive invention.

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[82] Michael Leff, "Hermeneutical Rhetoric," in *Rhetoric and Hermeneutics in Our Time: A Reader*, eds. W. Just and M.J. Hyde (New Haven: CT: Yale University Press), 198. See also Michael Leff, "The Idea of Rhetoric as Interpretive Practice: A Humanist's Response to Gaonkar," *Rhetorical Hermeneutics*, ed. Alan Gross and William Keith (Albany: State University of New York Press, 1997); see also Arabella Lyon, "Rhetoric and Hermeneutics: Division Through the Concept of Invention," in *Perspectives on Rhetorical Invention*, ed. Janet M. Atwill and Janice M. Lauer (Knoxville: The University of Tennessee Press, 2002).
[83] Hans-Georg Gadamer, "On the Scope and Function of Hermeneutical Reflection," trans. G.B. Hess and R.E. Palmer, in *Philosophical Hermeneutics*, ed. David E. Linge (Berkeley: University of California Press, 1976), 24.
[84] Clayton Koelb, *Inventions of Reading: Rhetoric and the Literary Imagination* (Ithaca: Cornell University Press, 1988).

Post-production, the Schiavo scan was the site of a considerable interpretive invention, which occurred across multiple, multilayered, and sometimes overlapping contexts. The scan stuck a chord, it would seem, because of the contemporary belief in a cerebral self, which draws attention to the brain and motivates interpretive invention with respect to it. The scan was the subject of discussion in medical, legal, and political arenas, made its way into mainstream media, where talking heads dissected its implications, and also circulated in informal public spaces, such as online discussions of the case. For example, the owner of a blog called Alas, A Blog posted the image of Schiavo's deteriorated brain on his blog alongside an image of a normal brain together with a brief analysis.[85] The scan prompted an avalanche of commentary, and one commenter's post in particular reflects profound anxiety regarding the potential unruliness of interpretation. A commenter posting under the name of Barry Freed wrote, "Upon closely examining that CT scan of Ms. Schiavo's brain, or what remains of it, I do believe that I can discern an [*sic*] miraculous image of the infant Baby Jesus. Do the husband and the parent's [*sic*] know about this? They could put it up on eBay and recoup their medical expenses and then some."[86] Sarcastic as it is, his statement, suggesting that the CT scan of Schiavo's brain might reveal an image of the infant baby Jesus, reflects anxiety about the unruliness of interpretation. It introduces the frightening possibility that we can see anything we want to in the image and that Schiavo's CAT scan may be no better than a bit of toast with the lord's visage for sale on ebay.

Barry Freed's comment introduces the troubling spectre of unbounded interpretive invention. Lest the concern seem totally outlandish, a few years after the Terri Schiavo case, a

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[85] Ampersand [pseud. for Danny Deutsch], "Terri Schiavo News," Alas, a Blog!, entry posted March 18, 2005, http://www.amptoons.com/blog/archives/2005/03/18/terri-schiavo-news/ [accessed June 6, 2010]. Alas, a Blog is a weblog Barry Deutch runs in conjunction with his website amptoons.com. Deutch is a cartoonist living in Portland, Oregon and his website includes links to his work. The blog, however, is of general interest in that he and his co-authors write posts about a wide range of issues, often social and political.

[86] Barry Freed [pseud.], comment on "Terri Schiavo News," Alas, A Blog, comment posted March 19, 2005, http://www.amptoons.com/blog/archives/2005/03/18/terri-schiavo-news/ [accessed June 6, 2010].

woman did in fact attempt to sell a scan of her brain, which she claimed showed a vision of the Virgin Mary, on ebay.[87] Yet the concern is not merely with the wantonness of seeing whatsoever one wants in an image, it is that we can arrive potentially incorrect, invalid, or erroneous interpretations that are at best useless, and at worst misleading. Seeing the Virgin Mary in a brain scan instead of a growing, but operable tumor can be hazardous to one's health. The question of unruly interpretation goes hand in hand with the question of technical competence, and Kenneth Burke offers what may serve as a rejoinder to both concerns. The universe, Burke explains, is not the product of our interpretations "for the interpretations themselves must be altered as the universe displays various orders of recalcitrance to them."[88] While one can read a CAT scan image any way one likes, interpretations do meet with forms of recalcitrance, and the universe may well reject that read. As the remainder of this chapter will discuss, expertise is one type of social recalcitrance that governs interpretation. It is a means to incorporate recalcitrance into the interpretive process, thereby taming anxieties regarding the potential wantonness and erroneousness of interpretation.[89]

Expertise exists as an institutional form of recalcitrance that governs who is and who is not permitted to introduce interpretations. In the context of the medical profession, for example, one must possess certain credentials in order to provide an officially recognized interpretation. Your friend may sit at your hospital bedside and offer an account of what your symptoms and scans mean for your health, but it cannot gain entry into the official records and cannot be the

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[87] Hillary Copsey, "Vision of Mary Could Help Foot Doctor's Bill," *Chicago Sun-Times*, December 6, 2008 http://www.suntimes.com/lifestyles/health/1317095,CST-NWS-mary06.article [accessed October 12, 2008]
[88] Burke, *Permanence and Change*, 256.
[89] John Lyne and Henry Howe explain that we might think of expertise in either a structural or rhetorical manner. A structural account of expertise considers how disciplines, institutional practices, and professional practices shape discourse. A rhetorical account focuses on how the expert uses "paradigms as strategies rather than as constraints," "The Rhetoric of Expertise: E.O. Wilson and Sociobiology," *Quarterly Journal of Speech* 76 (1990): 134-151. This analysis exists at the intersection of the two, considering constraint as rhetorical.

basis on which treatment is provided. Should he or she try to insert an interpretation into deliberations between doctors, recalcitrance may well come in the form of a withering stare. Even a nurse lacks the institutionally granted interpretive authority to provide an official medical diagnosis. And this is true not only of the medical field, but of science more generally. As Gyorgy Marcus explains, "The layman and the non-specialist are posited in the natural sciences as ones whose interpretation of, and opinion about, the works of science *ought* not intrude into the relevant discussions at all."[90] In medical contexts, those with the institutional authority to put forth interpretations of brain CT scans include radiologists and neurologists – or those with specific training to do so.[91]

Expertise is grounded in the recalcitrance intrinsic to the process of gaining interpretive competence. Through seeing many different images of one kind, experts develop a "trained eye" that enables them to recognize patterns and distinguish the abnormal from the normal, a process that cannot be reduced to a simple set of rules. Atlases containing a set of different image variations can aid in this process. As Daston and Galison explain, "Atlases exist to teach the range of what is known in order to highlight the unusual."[92] We might say that expertise allows one to derive an interpretation through contrast. Recalcitrance exists in this comparative move, channeling invention within the interpretive process by managing or guiding exegesis. Yet proper comparison requires not only experience, but also training.

Formal credentials, such as an MD or an RN degree, are earned through a process that includes more than exposure to a wide range of images, important though that is. One must be

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[90] Gyorgy Markus, "Why is There No Hermeneutics of Natural Sciences? Some Preliminary Theses," *Science in Context* 1.1 (1987): 22.

[91] On the development of interpretive specialization see Laura Khoshbin and Shahram Khoshbin, "Imaging the Mind, Minding the Image – An Historical Introduction to Brain Imaging and the Law," *American Journal of Law & Medicine* 33 (2007): 181-182.

[92] Daston and Galison, *Objectivity*, 344. On the development of trained judgment see, ibid., 318; 344-345; 369. See also Daston and Galison, "The Image of Objectivity," 109.

trained in one's profession, meaning that someone else, a superior, checks an apprentice's assertions. So, for example, a young medical student will read CAT scans under the supervision of an attending physician who evaluates his or her interpretations, pushing back against those that are incorrect in a recalcitrant manner. The supervisor normalizes interpretations until the student reliably produces those that would be accepted by a professional body as correct. Over time, as the student becomes an MD, all of this training is internalized and supervision is no longer necessary. The hermeneutic authority of expertise, therefore, gained through a process designed to involve recalcitrance.

In expertise, one finds both the enabling and disabling consequences of recalcitrance. When an expert reads a CAT scan image, her interpretation is constrained in some ways by her interpretive competence. Given her experience and training, a neurologist is unlikely to see visions of baby Jesus or the virgin Mary in the CAT scans she analyzes. She will not see a picture of a knee and interpret it as a severely damaged brain. Ignorance, in some ways, allows for a broader range of interpretive possibilities than expertise since there is no rigorous training to channel interpretations toward a particular end. On the other hand, however, it is clear that interpretive competence enables one to generate robust interpretations. When reading a CAT scan of the brain, the neurologist identifies more details, recognizes more patterns, and draws more comparisons to other brains than does the non-expert, who sometimes finds that he or she has little or nothing to say about the brain image, which simply appears as incomprehensible.

With respect to CAT scan images, the medical expert holds the ultimate interpretive authority. As a result, his or her interpretations gain entry beyond the field of medicine - into legal contexts, for example. In the court trials surrounding the Terri Schiavo case, expertise determined who was sanctioned to interpret CAT scans and other neurological tests. That is, as

in medical contexts, credentials, as a mark of expertise, both enabled some to speak while preventing others from doing so. For instance, an evidentiary hearing regarding Schiavo's neurological status was held in October, 2002, which included discussion of the 1996 and 2002 CT scans of Schiavo's brain. During this hearing, six different physicians offered testimony, including Schiavo's attending physician, a radiologist, and four neurologists. Each was granted a day on which to present his or her testimony and to answer questions from attorneys in the case. The order following the hearing specified the participation of "board-certified expert physicians;" they were granted this important platform from which put forth interpretations precisely because of their institutionally-sanctioned expertise.[93]

Laypersons are charged with engaging in interpretive activities in the legal context of the courtroom trial as members of the jury. In contrast to the expert, however, the layperson's hermeneutic acts are sometimes regarded as inferior, misguided, and even potentially dangerous, a suspicion that is particularly pronounced when it comes to scientific images. Given their dubious abilities, jurors are not tasked with interpreting CAT scans directly, but instead with weighing the analyses and arguments provided by expert witnesses. Yet the fear sometimes remains that jurors will engage in rogue interpretive behavior and potentially overestimate the images' strength as evidence, given the both visually striking and deceptively simple appearance of such images. Because of such reservations, the judge in the case against John Hinckley, who was accused of shooting Ronald Reagan in order to impress Jody Foster, only reluctantly

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[93] *In Re the Guardianship of Theresa Marie Schiavo, Incapacitated*, file no. 90-2908-GB-003, order, November 22, 2002. Available under the timeline entry for November 22, 2002, at http://www.miami.edu/ethics/schiavo/schiavo_timeline.html [accessed June 12, 2010]. The transcript of the hearing is available at http://www.northcountrygazette.org/documents/2002trialpart1.txt [accessed June 12, 2010] and http://www.northcountrygazette.org/documents/2002trialpart2.txt [accessed June 12, 2010]. For a description of what took place during the hearing see, Rev. Donald E. Henke, "Consciousness, Terri Schiavo, and the Persistent Vegetative State," *The National Catholic Bioethics Center* 8.1 (2008): 69-85 and Ronald E. Cranford, "A Common Uniqueness: Medical Facts in the Terri Schiavo Case," in *The Case of Terri Schiavo: Ethics, Politics, and Death in the 21st Century*, ed. Kenneth W. Goodman (New York: Oxford University Press, 2010), 112-136.

allowed CAT scans to be shown to the jury as evidence of Hinckley's mental status.[94] He then attempted to mitigate their potential impact by minimizing their visual presence, allowing them to be shown only in a brightly lit room as opposed to one dimmed to highlight the images. Joe Dumit, who has written a good deal about the sociology of brain imaging, suggests that the lay person's interpretation of certain expert images is so fraught with pitfalls that the use of images in courts may ultimately be prejudicial.[95] Given that it never saw jury trial, the Schiavo case avoided the question of lay interpretation in the legal context.[96]

So what did experts who were given leave to present an interpretation of the CAT scan of Terri Schiavo's brain in a professional context say about it? What constituted expert exegesis of the scan? Dr. Ronald Cranford, a PVS expert who was one of the neurologists chosen to speak during the evidentiary hearing, was outspoken, both in the courtroom and in the media, about his view that "the CT scans demonstrated massive atrophy of the cerebral hemispheres, indicating irreversibility (permanency) of the patient's clinical condition."[97] Cranford concluded that "the laboratory studies helped to confirm, with the highest degree of medical certainty, the clinical diagnosis of the permanent vegetative state."[98] In other words, Cranford read Schiavo's scan as strongly confirmatory of a PVS diagnosis. Cranford moreover observed that there existed widespread agreement among medical professionals involved in the Terri Schiavo case, explaining that there was "nothing in the medical records to suggest any disagreement among

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[94] See Dumit, "Objective Brains, Prejudicial Images," 174-175.
[95] Ibid. George J. Annas expresses a similar anxiety, "Foreword: Imagining a New Era of Neuroimaging, Neuroethics, and Neurolaw," *American Journal of Law & Medicine* 33 (2007): 168, as do Khoshbin and Khoshbin, "Imaging the Mind." For more on brain imaging in legal contexts, see additional articles in the special issue of *American Journal of Law & Medicine* on the subject, in which these articles appear.
[96] Unless, of course, one regards judges as lay persons when it comes to CAT scans.
[97] Crawford, "Facts, Lies, and Videotape," 365.
[98] Ibid., 365.

Terri's attending and consulting physicians about the underlying diagnosis and prognosis for recovery."[99] Yet, things were not quite so simple.

Despite Cranford's suggestion that the CT scan definitively indicated PVS, and although many experts indeed did agree with this diagnosis, contradictory expert exegesis yet existed. The two experts those on the side of Schindler family chose to present at the 2002 evidentiary hearing testified that Terri Schiavo was not in a PVS state. The radiologist Dr. William Maxfield argued that comparison between the 1996 and 2002 scans indicated that Terri Schiavo's brain matter had improved in the interim.[100] After the evidentiary hearing, and as the case progressed through other courts, Dr. William Cheshire, a neurologist and fellow at the Center of Bioethics and Human Dignity, submitted an affidavit stating that "the structural studies have shown substantial loss of cerebral cortex which was deprived of blood supply for more than 40 minutes in 1990, but there does remain some cerebral cortex," and observing that "there still is a great deal we do not know about what previously unsuspected cerebral cortex functions may yet be occurring the minds of persons who have sustained profound brain damage and are no longer able to communicate outwardly what their thoughts may be." Dr. Cheshire concluded that it is more likely that Terri Schiavo was in a minimally conscious state than a persistent vegetative one.[101]

Disagreements among experts regarding the CAT scan of Terri Schiavo's brain points again to the existence of an inescapable tension between the power of expertise to limit and enable interpretive work, as well as to its frequent failure to do so in a manner that results in

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[99] Ibid., 365.
[100] Dr. William Hammesfahr, the second expert chosen by the Schindlers to speak at this evidentiary hearing, focused on Terri Schiavo's "behaviors."
[101] "Affidavit," by William Polk Cheshire, MD, State of Florida, County of Duval, March 23, 2005. Available under the timeline entry for March 23, 2005, http://www6.miami.edu/ethics/schiavo/timeline.htm [accessed August 12, 2010].

unanimity. The doctors who argued during the evidentiary hearing that Terri Schiavo was not in a persistent vegetative state met with resistance, in the form of challenges to their interpretive credentials, skepticism of their motives, and most powerfully, by the judge's ruling in favor of Michael Schiavo.[102] Nonetheless, their interpretations still gained entry into the official space of the courtroom where they existed alongside expert interpretations greatly at odds with them. Their interpretations also made their way into, and circulated among, public contexts where they exerted a continued influence.

Medical and legal contexts are only two of the spaces in which CAT scans are interpreted, and brain scan images circulate far outside of expert-driven spaces, in mainstream public culture, where institutional restrictions no longer prevent those with no experience or training from offering their interpretations. Barry Freed's comment, introduced as it was in a blog post, appears to have been motivated specifically by a wariness of interpretation in such spaces. The interpretation of scientific images in public culture does seem to introduce a quandary: these images mean something to non-experts, but there exists considerable uncertainty about whether or not these meanings are valid, and no one holds the official authority to adjudicate. However, it is yet the case that expertise performs structuring work beyond institutional edifices themselves. As the analysis that follows will illustrate, expertise is still evoked as a rhetorical constraint and employed as a rhetorical strategy in places where institutions no longer hold official control, spaces that are as seemingly unregulated as a blog. [103]

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[102] See Cranford, "A Common Uniqueness," 118-119. On allegations that the doctors who spoke on behalf of the Schindlers, suggesting that hyperbaric treatments might improve her condition, were motivated by financial interest see Pence, "Terri Schiavo: When Does Personhood End," 157-158.

[103] In doing so, this analysis responds to recent calls for science studies to further examine what has been called the "Problem of Extension," or how nonscientists use science in decision making. See H.M. Collins and Robert Evans, "The Third Wave of Science Studies: Studies of Expertise and Experience," *Social Studies of Science* 32.2 (2002): 235-296.

In the discussion of Schiavo's CAT scan that unfolded on Alas, A Blog, appeals to expertise were regulatory, serving as a form of recalcitrance that exerted a palpable influence over the expression of interpretations. The response to the post about Schiavo's scan was tremendous, resulting in well over a thousand comments within a few weeks. The discussion ultimately unfolded in a number of different directions, addressing legal, ethical, and religious implications, for example. The longer the discussion continued, the less closely trained to the images it became. The focus here, therefore, is specifically on the discussion of the images that occurred within the first five hundred comments. Surprisingly, in the relatively unregulated space of Alas, a Blog, where laypersons lurk alongside experts, and where each finds a platform to speak, one finds some of the same dynamics of expertise that characterize official spaces, albeit imposed in a less rigorous fashion.[104]

Attention to expertise is evident from the outset. The blog's proprietor prefaced his interpretation of the image by acknowledging his lack of expertise. He wrote,

> As I understand it – and goodness knows, I'm no doctor – the sparsely detailed dark areas in Terri's CT scan . . . are where Terri's brain has been replaced with brain fluid . . . her cerebral cortex has basically turned to liquid . . . Without a cerebral cortex, it is impossible for a human being to experience thought, emotions, consciousness, pain, pleasure, or anything at all; nor, barring a miracle, is it possible for a patient lacking a cerebral cortex to recover.[105]

Therefore, while he proffered an interpretation of the image, he did so only after a caveat regarding his failure to meet some standard of expertise ("goodness knows, I'm no doctor").

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[104] Alas, a Blog is moderated. For details regarding the moderation policy, see ampersand [pseud. for Danny Deutsch], "Alas, A Moderation Policy," Alas, A Blog!, entry posted December 22, 2005, www.amptoons.com/blog/archives/2005/12/22/moderation-faq-and-policy/ [accessed July 8, 2010]. In some ways, we might understand analysis of online comments is an extension of real readers research; see Ronald J. Zboray and Mary Saracino Zboray, "Have You Read? Real Readers and their Responses in Antebellum Boston and Its Region," *Nineteenth Century Literature* 52 (1997): 139-170.

[105] Ampersand [pseud. for Danny Deutsch], "Terri Schiavo News," Alas, a Blog!, entry posted March 18, 2005, http://www.amptoons.com/blog/archives/2005/03/18/terri-schiavo-news/ [accessed June 6, 2010].

While it is true that anyone could tender an interpretation of the CAT scan image on Alas, A Blog, posters checked each other's assertions. For example, a few commenters challenged the blog owner's original post. One appeared to confront the blog owner on the basis of his admitted lack of expertise writing, "Are you sure it is brain fluid? You can't just make shit up, then go into a big rant about science."[106] The blog owner wrote in an imprecise and colloquial manner of Schiavo's brain having turned to liquid, and this poster challenged what he or she perceived as his failure to substantiate that interpretation. The challenger seems to have tried to rein him in, as though he had gone beyond the limits of what he was permitted as a non-expert. Some other individuals who launched into commentary about the images without mentioning their qualification to do so were similarly pressed on that account. Another challenge came in the form of a demand for sources. One poster rebuked another sternly, admonishing, "Crystal Clear, you also make a number of accusations, none of which you ack [*sic*] up. Please provide us with impartial sources for your statements."[107] This request presumes that the commenter does not possess the requisite expertise him or herself and must draw on that of others.

In the Alas, A Blog discussion of Schiavo's scan, the ability to claim some type of expertise appeared to be enabling, serving as a generative point of departure for discourse, and bolstering a person's authority to interpret the image. Several of the commenters on Alas, A Blog began their post by stating their qualifications. For instance, one wrote, "As a radiologist, I can tell you that I look at catscans all the time. The catscan which you are showing on your site . . . is very primitive and not very exact."[108] Another commenter prefaced his or her remarks with

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[106] Destruktor [pseud.], comment on "Terri Schiavo News," comment posted March 18, 2005, ibid.
[107] Kristjan Wagner [pseud.], comment on "Terri Schiavo News," comment posted March 19, 2005, ibid.
[108] Marge [pseud.], comment on "Terri Schiavo News," comment posted March 23, 2005, ibid.

the phrase "as a neuroscientist," while a third offered the more detailed, "as a neurologist with extensive experience in end-of-life decisions…"[109] The qualifications claimed by commenters did not always reach the level required to offer an institutionally recognized interpretation in medical or legal contexts. For example, one commenter cited his or her experience as an MRI operator noting, "I have worked in medical for 30+ years in the area of radiology, CT, and I am the operator of MRI," concluding that "she has sustained brain damage, and it appears quite significant."[110] While an MRI operator would hardly qualify as an expert witness in a court case, his or her interpretation is based upon a not insignificant form of expertise. The same might be said to be true of another commenter, who marshals a bevy of relevant experience in order to ground his or her claim: "My training as a doctor in clinical psychology with study and work in the neurosciences coupled with a graduate degree in Christian philosophical theology leads me to conclude that the 'personhood' of Terry [*sic*], in the most true human sense, no longer exists."[111] Therefore, while the expertise threshold may have been lower in the blog discussion, and while it did not prohibit individuals from writing, expertise still certainly served an enabling and authorizing function.

Alas, A Blog's proprietor was not alone in acknowledging his interpretive limitations, and perhaps the most intriguing references to expertise came from those who had little claim to it. For example, one person followed his interpretation with the caveat, "I'm not a doctor or a medical imaging technologist; this is just what I've been told. It seems reasonable."[112] Others cited related expertise, but signaled its inadequacy. One commenter wrote, "I thought I'd give

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[109] Ted [pseud.], comment on "Terri Schiavo News," comment posted March 24, 2005, ibid.; and AFGriffith [pseud.], comment on "Terri Schiavo News," comment posted March 25, 2005, ibid.
[110] Christine [pseud.], comment on "Terri Schiavo News," comment posted March 24, 2005, ibid.
[111] Mark [pseud.], comment on "Terri Schiavo News," comment posted March 21, 2005, ibid..
[112] Robert [pseud.], comment on "Terri Schiavo News," comment posted March 19, 2005, ibid.

you my impression – for what it's worth. I'm a veterinarian, and thus not qualified to interpret the results of a human CT scan."[113] Before embarking on an analysis, yet another explained, "What little I know of the relevant issues I've learned from philosophers instead of neurologists," and in a subsequent post acknowledging an error in that analysis concluded, "Someone with better knowledge of the subject or research avenues really ought to take over from here lest I should make a (bigger?) fool of myself."[114] Such comments illustrate that like one's expertise, one's relative lack of proficiency serves as a point of departure from which to generate discourse. Commenters' efforts to situate their analysis of the image with respect to expertise also demonstrates how their interpretations are not merely a free-floating exercise in solipsistic rambling, but have some contact, however slight, with the social recalcitrance of expertise.

In the unregulated space of Alas, A Blog, where official gatekeeping was minimal and no one checked credentials as institutions do when hiring experts, the reliability of claims to expertise comes into question. Given that the possession of expertise is authorizing and adds rhetorical force to one's assertions, there may be reason to exaggerate, or even fake, credentials in order to persuade others of a particular interpretation of the CAT scan image. There certainly existed individuals firmly decided on their position with respect to the Terri Schiavo case and fully invested in its outcome, who actively sought means to persuade others of it. Bloggers for Terri, for instance, was a vocal group whose members frequented blogs in order to promote the cause of keeping Terri Schiavo alive. At least one commenter on Alas, a Blog self-identified as

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[113] Anniebird [pseud.], comment on "Terri Schiavo News," comment posted March 20, 2005, ibid.
[114] Philip Brooks [pseud.], comment on "Terri Schiavo News," comment posted March 19, 2005, ibid.; and Philip Brooks [pseud.], comment on "Terri Schiavo News," comment posted March 20, 2005, ibid.

a Blogger for Terri.[115] It is possible other Bloggers for Terri, or others invested in the case, claimed expertise that they did not in fact possess. At least one commenter's professed credentials seemed highly dubious, although one cannot know for sure if that person was lying.[116] In this case, a powerful act of social recalcitrance would be the potential "calling out" of the person misrepresenting him or her self.

A striking feature of the discussion on Alas, A Blog is that in contrast to the discussion of the CAT scan images, the legal and religious digressions included considerably fewer references to expertise. It appears that expertise is of particular concern in discussions of science, and that in the Alas, A Blog discussion, it played an important role as a source of recalcitrance that acted as a check, imposed by individuals on themselves as well as others, on interpretations. Acknowledging that expertise acts as a constraint that influences how people interpret scientific images is not saying anything particularly novel, though it is interesting to see it play a significant role in such a modern, unruly space as a blog. What is most valuable, perhaps, is the connection forged between the natural recalcitrance of image production and the social recalcitrance of expertise. Connecting the two enables us to better recognize how natural recalcitrance loses its hold once it comes to interpretation, and helps us to appreciate how expertise is a way to deal with the problems this creates. These efforts to regulate interpretation, however, do not always succeed, and sometimes people really do end up seeing Baby Jesus in a brain scan. Yet, at the same time, they are quite successful given that this sort of wanton interpretation is the exception rather than the rule.

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[115] Crystal Clear [pseud.], comment on "Terri Schiavo News," comment posted March 18, 2005, ibid.
[116] Marge [pseud.], comments on Terri Schiavo News, "comments posted March 23, 2005, ibid.

4.6 CONCLUSION: TURN TO FUNCTION?

While CAT scans and other laboratory tests are useful in the diagnosis of PVS, they are not sufficient, and clinical judgment is imperative. Medical professionals must observe a patient and interact with him or her, preferably over a period of time, in order to discern whether he or she shows awareness. Clinical tests are often used, including tasks to determine whether a patient can visually fixate on or track objects in a purposeful manner, behaviors indicative of at least some modicum of conscious thought. In other words, in order to diagnose PVS, physicians do what each of us does innumerable times a day, just about every single day of our lives: interpret another person's behaviors in order to arrive at inferences about his or her mental state. Doctors did not rely on the CAT scan exclusively, or even predominantly, but of necessity interpreted Schavo's behaviors in order to draw conclusions about her condition. Moreover, as the case made headline news, video footage of Terri Schiavo similarly offered members of the public an opportunity to interpret her behavior in order to discern her mental status. One of the case's most memorable and widely circulated artifacts was a video of an awake, open-eyed Terri Schiavo who appeared to make eye contact with her mother.[117]

It is striking that despite the fact that CAT scan imaging enables the production of spectacular visual discourse about the organ that many presume to hold the key to human identity, this picture of the brain is not a magic bullet for the diagnosis of PVS. This highly sophisticated image stands alongside what is perhaps the most fundamental, frequently used, oldest and least technical means that humans have to assess each other's minds: the interpretation of behaviors. Though forged out of recalcitrant contact, images of the living human brain are

[117] A future project will examine arguments about this video of Terri Schiavo as a sign of her mental status.

ultimately just a set of signs regarding another's mind and self, the meaning of which is not self-evident and which must be read and interpreted. It would seem, therefore, that CAT scan technology does not offer privileged access into the core of a person's being, but instead makes available a previously unavailable type of discourse about mind and self. Much of the time we end up like Sugimoto, holding the brain – or its image – in our hands and believing that it holds profound secrets, if we could only figure out what those are.

Some may respond by suggesting that although it is true that CAT scans do not definitively reveal the mind, is only because CT is not the right technology to do so. If one wants direct access to mind and self, they might say, if one wants them to be unveiled, one must use technologies that assess function instead of structure. Over the last two decades, many have heralded functional brain imaging as the technology that will finally allow for direct access to personhood.[118] Brain imaging technologies such as fMRI (functional magnetic resonance imaging) and PET (positron emission tomography) incorporate a high degree of recalcitrance in the production of brightly colored images that show where the brain is working while performing given tasks. In popular parlance, they show where the brain "lights up" when one is engaged in various cognitive activities. In a passage representative of the tenor of much of the discussion of functional brain imaging, a recent *60 Minutes* segment about these technologies began,

> The contents of our thoughts are our own, private, secret, unknowable by anyone else until now, that is . . . Neuroscience research into how we think and what we're thinking is advancing at a stunning rate, making it possible for the first time in human history to peer directly into the brain to read out the physical makeup of our thoughts. Some would say, to read our minds.[119]

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[118] On their proliferation, see Illes, Kirschen, and Gabrieli, "From Neuroimaging to Neuroethics," 205.
[119] "How Technology May Soon 'Read' Your Mind," report by Lesley Stahl, *60 Minutes* [originally aired January 4, 2009]. The video is available at http://www.cbsnews.com/stories/2008/12/31/60minutes/main4694713.shtml [accessed June 9, 2010].

If this is the case, then these technologies have profound implications for the determination of one's mental status, the crux of a PVS diagnosis.

No functional imaging scans of Terri Schiavo's damaged brain were ever performed, to the dismay of some experts and laypersons. In an affidavit, Dr. David Cheshire suggested that given the ambiguities in the case, a functional MRI may have been valuable.[120] On Alas, A Blog, some commenters expressed the same sentiment.[121] Given that she had had a metal stimulator planted in her brain, an fMRI scan (or an MRI scan for that matter) was contraindicated. However, this stimulator could potentially have been removed, and it did not preclude her from having a PET scan. One reason Schiavo did not undergo such scans is that some doctors felt that nothing more would be learned from them. Terri Schiavo had had an EEG, which showed no measurable electrical activity in the brain, and the CAT scan gave a comprehensive view of her brain structure. What more was to be learned, these doctors felt, from additional images?[122]

A 2010 *New England Journal of Medicine* article suggests that the answer to that question, at least potentially, is something. Martin Monti et. al. examined 54 patients who were either diagnosed as vegetative or minimally conscious. Patients underwent fMRI scanning, which was designed to measure awareness through brain activity (in contrast to clinical behaviors). Among other things, they found that two patients who were diagnosed as being in a persistent vegetative state, and who showed absolutely no clinical signs of awareness, were

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[120] "Affidavit," William Polk Cheshire. See also Steven G. Calabresi, "The Terri Schiavo Case: In Defense of the Special Law Enacted by Congress and President Bush," *Northwestern University Law Review* 100.1 (2006): 154-155.

[121] See, for example, Anniebird [pseud.], "Terri Schiavo News," Alas, a Blog!, entry posted March 20, 2005, http://www.amptoons.com/blog/archives/2005/03/18/terri-schiavo-news/ [accessed June 9, 2010].

[122] See Dr. Cranford's interview with Dan Abrams, "The Abrams Report – Terri Schiavo's 2002 CT Scan," *MSNBC* television broadcast [originally aired March 29, 2005], available at http://www.msnbc.com/id/7328639/ [accessed July 12, 2010].

nonetheless "able to modulate their brain activity by generating voluntary, reliable, and repeatable blood-oxygen-level-dependent responses in predefined neuroanatomical regions when prompted to perform imagery tasks."[123] The researchers concluded that this was clear evidence of an internal state of awareness, and furthermore evidence of the value of fMRI as a diagnostic tool in disorders of consciousness.

Despite the striking results of this study, we must not get carried away by the seeming potential for imaging technologies to reveal the inner depths of our personhood. Some of the claims made about new functional brain imaging technologies are eerily similar to predictions made about earlier failed technologies.[124] As Cornelius Brock recently wrote, "The neurosciences seem to thrive on the constantly postponed promise to herald a definitive understanding of the human mind."[125] Functional scans can provide good epistemic data, but they are not an unveiling of the self.[126] They are the result of a complex process whereby signals of brain activity, such as blood flow, are heavily processed and then represented in visual form.[127] Like behaviors and CAT scans, functional brain images are simply another type of discourse about the mind/self, which requires interpretation by those who encounter it.

Let us suppose that Schiavo had had a functional brain scan, which revealed not the slightest inkling of activity. Assume moreover, she was unequivocably diagnosed as being in a

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[123] Martin M. Monti et. al. "Willful Modulation of Brain Activity in Disorders of Consciousness," *The New England Journal of Medicine* 362.7 (2010): 579-589. See also Adrian Owen, et. al., "Detecting Awareness in the Vegetative State," *Science* 313.5792 (2006): 1402.

[124] A *New York Times* article describing early 20th century efforts to x-ray the brain, for example, echoes the 60 Minutes piece on brain imaging, suggesting that now, "the man of science will be able to suggest an idea to his patient, and then observe the infinitesimal changes of brain tissue which result upon thinking," "Brain Imaging Moving Picture Machine Shows Brain at Work, *The New York Times*, September 4, 1910.

[125] Cornelius Borck, "Though the Looking Glass: Past Futures of Brain Research," 329-338.

[126] On the epistemic value of imaging technologies see Megan Delehanty, "Empiricism and the Epistemic Status of Imaging Technologies," (PhD diss, University of Pittsburgh, 2005).

[127] See Joe Dumit, *Picturing Personhood: Brain Scans and Biomedical Identity* (Princeton: Princeton University Press, 2004); Gibbons, "Seeing the Mind in the Matter."

persistent vegetative state. One still needs to determine the consequences of that diagnosis for medical, legal, and ethical concerns, and the crucial issue of whether or not to remove her from life support remains unresolved and open for debate. Much remains beyond the purview of recalcitrance, which cannot generate answers to some of our most difficult questions about the meaningfulness of life. While some believe that the mind/brain constitute personhood, others disagree. In his comments on the Schiavo case, Pope John Paul II, for instance, asserted that "the intrinsic value and personal dignity of every human being do not change, no matter what the concrete circumstances of his or her life. *A man, even if seriously ill or disabled in the exercise of his highest functions, is and always will be a man*."[128] The pope believed that a person is not isomorphic with his or her cognitive activity, and that being a person means more than having an intact mind/brain. And even if one does not share the pope's religious motivations, one must wonder if Sugimoto did not feel at least some disappointment when holding the cold, inert fragment of Einstein's brain in his hands.

Given the cerebral self, however, one does not respond to the disappointment of the inert flesh by turning elsewhere, to Einstein's clothes, his words, his hair, his history, or the house in which he was born, in order to establish some contact with him and his greatness. The cerebral self drives one's attention relentlessly toward the brain, setting one on an incessant quest to develop new technologies to make it present in a way that will finally disclose its secrets. Thus an inventional process is set in motion by the cerebral self, one in which recalcitrance is repeatedly used to channel invention in order to generate discourse that has some contact with the cerebral organ, and that discourse is forever needing further inventional work in the form of

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[128] Address by John Paul II to the Participants in the International Congress on "Life-Sustaining Treatments and Vegetative State: Scientific Advances and Ethical Dilemmas," March 20, 2004. Available at http://www.vatican.va/holy_father/john_paul_ii/speeches/2004/march/documents/hf_jp-ii_spe_20040320_congress-fiamc_en.html. Emphasis in the original [accessed July 28, 2010].

interpretation, which never seems to fully suffice, removed as interpretation is from the thing itself.

Moreover the process whereby one channels recalcitrance in order to produce discourse that is valued precisely because it is produced in that manner has considerable implications. It suggests that the process of rhetorical invention, the means by which discourse is generated, can be a powerful component of rhetorical strategy. While a neurologist's drawing of what he or she presumes Terri Schiavo's brain will look like given her clinical symptoms may provide precisely the same information as a CAT scan, it is unlikely to have the same persuasive force. Though the doctor may find the CAT scan clinically unnecessary, he or she may find it rhetorically necessary and order a CAT scan in order to convince a given audience, be it family members, legal professionals, or the public, of a patient's condition.

5.0 CHAPTER FIVE – CONCLUSION

Obviously, no one book could deal with everything pertaining to the mind, a subject that has preoccupied human beings since the beginning of recorded history. Mind is an encompassing subject, so selectivity, emphasis, and 'point of view' were needed from the start – Richard M. Restack, M.D., *The Mind*[1]

5.1 A REVIEW OF THE TERRAIN

In contemporary Western culture, a loose collection of associated beliefs circulates widely, and often beyond our notice: that we have something called a mind, that it is the inner thinking self, the seat of consciousness and higher cognitive function, and has its location in the brain. We are not alone in these ideas. As Richard Restack, the noted neuroscientist and prolific author on cognition, observes in the quote that opens this chapter, people have held conceptions of either the mind or something like it across times and cultures. It is a pervasive and culturally salient collection of ideas and one, moreover, that configures one's understanding of oneself and one's interactions with other people. Given that, beliefs about the mind would appear to have considerable import for rhetoric. Yet rhetoric has often neglected the subject, and academic study of the mind occurs primarily in fields such as psychology, cognitive science, and

[1] Richard Restack, *The Mind* (Toronto, Bantam Books, 1988), xiii.

philosophy. As befits their disciplinary stakes, these fields strive to discern precisely what the mind is, concerning themselves with evaluating the validity of our existing beliefs about it. They typically do not focus their attention on rhetorical questions, such as: How do beliefs about the mind structure rhetorical encounters? Do shared beliefs about the mind come into existence through a rhetorical process? What role does the mind play in rhetorical analysis? How do people use beliefs about the mind in arguments? Considerations such as these are important to rhetoric, and a more robust account of how the mind figures in rhetorical studies would enrich the discipline considerably.

"Made Up Minds: Rhetorical Invention and the Thinking Self in Public Culture" offers a rhetorical perspective on this construct known as the mind. Yet, as Richard Restack notes in the opening quote, the subject extends in so many directions, is so complex and encompassing, that we are forced to be selective rather than comprehensive in our consideration of it. This project does not try to, nor could it possibly begin to, address the full array of all of the rhetorical implications of our beliefs about the mind. Instead, it focuses on a particular way in which the mind has relevance to rhetoric – in its role as what Kenneth Burke might call equipment for living. Kenneth Burke argues that cultural resources such as literature and myth enable us to confront the challenges of our daily lives, providing a means to understand and respond to various situations we encounter. A novel, for example, may identify a common situational pattern, organizing thoughts regarding it and preparing one to encounter it oneself.[2] As this dissertation has suggested, popular science also constitutes a type of equipment for living, material that helps us to navigate the complexities of everyday life. For instance, ideas about the

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[2] Kenneth Burke, "Literature as Equipment for Living," in *Philosophy of Literary Form: Studies in Symbolic Action* (Berkeley: University of California Press, 1973), 293-304.

mind constitute a set of principles we can use to account for the behavior of ourselves and others, enabling us to formulate strategies for action, interaction, and argument.

In "Made Up Minds," I examined how conceptions of the mind serve as equipment for living in a particular manner, as an inventional resource. I anchored this project's discussion of rhetorical invention by a definition of invention introduced by G.P. Quackenbos, who characterized rhetorical invention as "the process of evolving thoughts in connection with any particular subject."[3] Quackenbos's definition is fitting because it allows for the coexistence of two distinct senses of invention. The "evolution of thought" can refer to an epistemic process by which one makes sense of the world, but it can also indicate a process by which one simply generates content for discourse. As this project has demonstrated, ideas about the mind are a powerful resource both for making sense of the world and for producing discourse about it. Each chapter provided insight not only into the mind, but also into a particular type of rhetorical invention. Therefore, just as "Made Up Minds" is a study of the rhetorical dimensions of the mind, it is also just as importantly a study of rhetorical invention. As a result, as I review the terrain of this project, I will not only summarize each chapter's insights, but I will also suggest how the mode of rhetorical invention each case study identifies might be generalized to the conceptions of the mind discussed in the other case studies.

Chapter Two – Phrenological Invention and the Mind as Ouija Board demonstrated how the mind can serve as an apparent point of origin through which preconceptions can be channeled. In the case of phrenology, I believe you are a bad person, but rather than assert this judgment as a result of my intuitions about you, I explain that you have an overly large acquisitiveness organ and a woefully inadequate benevolence bump. The first case study

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[3] G.P. Quackenbos, *Advanced Course of Composition and Rhetoric: A Series of Practical Lessons* (New York: American Book Company, 1854), 325.

suggested that channeling discourse through a new conceptual origin while occluding prior origins, a process it refers to as "resourcing," constitutes an act of rhetorical invention. In the case of phrenology, resourcing quite problematically enables a form of scientific racism in which preconceptions about a race can be presented as the "objective" results of phrenological analysis. While I focused on the phrenological case, the significance of this form of invention extends beyond the particular pseudoscience. We can resource judgments through conceptions of the mind other than the phrenological, including those that were the subject of this dissertation's other case studies, Freudianism and the contemporary cerebral self.

Just as phrenologists often reiterated preexisting beliefs "through" phrenology, it would appear that Freudianism was a point of origin through which beliefs could similarly be channeled. Elaine Showalter's work has shown how during the nineteenth and twentieth centuries women were disproportionately diagnosed as hysterical, and she argues that women used hysteria as a form of expression or even protest in an oppressive cultural environment.[4] However, it might also be possible to read the over-diagnosis of female hysteria as the rhetorical act of resourcing. Though a comprehensive argument for this position is beyond the scope of the conclusion, it is not difficult to see how, in a manner quite similar to phrenology, people may have used Freudian theory to read the female body and its symptoms as an "objective" articulation of the already-believed weakness and inferiority of women. Showalter even describes how, "during an era when patriarchal culture felt itself to be under attack by its rebellious daughters, one obvious defense was to label women . . . as mentally disturbed."[5]

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[4] Elaine Showalter, *The Female Malady: Women, Madness, and English Culture, 1830-1980* (New York: Pantheon Books, 1985).
[5] Ibid., 145.

Interestingly, this suggests that phrenological racism and Freudian sexism may have involved comparable forms of rhetorical invention.

Some criticisms of contemporary cognitive neuroscience, and particularly brain imaging technologies, point toward the possibility that today's cerebral self might similarly serve as a site for resourcing, something that may be more difficult to fully appreciate than the phrenological or Freudian cases given our relative lack of historical distance. In his book about brain imaging technologies, *The New Phrenology*, William Uttal explains how schemes for classifying cognitive processes have changed across time and cultures, never seeming to move toward any sort of stability or consensus. In fact, he observes, taxonomies appear to reflect what is salient in a given culture, with character appearing in early systems and executive processes surfacing in today's.[6] And while an exploration of this also remains beyond the scope of the conclusion, given the taxonomic reflection of contemporary interests, it appears quite possible that the cerebral self may also enable resourcing.

In Chapter Three – Insidious Minds: Freud as Psychodoxa in Spock's *Baby and Child Care*, I analyzed Benjamin Spock's use of Freudian ideas about the mind in his bestselling child-rearing manual, *Baby and Child Care*. This chapter argued that ideas about the mind constitute a distinctive category of doxa, which I termed "psychodoxa." I afforded this category of cultural beliefs a specific label for two primary reasons. For one, ideas about the mind are exceptionally pervasive, circulating across times and cultures, and they are also unusually generative; one can explain almost anything in their terms. Secondly, given that doxa constitutes material for rhetoric, identifying beliefs about the mind as a type of doxa strategically positions them as a rhetorical concern, and points toward their inventional utility: psychodoxa is a powerful resource

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[6] William R. Uttal, *The New Phrenology: The Limits of Localizing Cognitive Processes in the Brain* (Cambridge: MIT Press, 2001), 92.

for the "evolution of thought" in both senses of that phrase. While the second case study focused on widely popularized Freudian ideas that became psychodoxa, it is undeniably the case that non-Freudian ideas about the mind also constitute psychodoxa. Indeed, in their examination of popular conceptions of the mind, each of this dissertation's case studies might be said to have considered distinctive classes of psychodoxa.

During the nineteenth century, phrenology infiltrated numerous branches of American public culture. In a well-documented account of its impact on a particular domain, Charles Colbert detailed phrenology's subtle, yet pervasive, effect on the fine arts of the period. Phrenological doctrine, for example, influenced both the creation and reception of Hiram Powers' sculpture, "The Greek Slave." [7] But as the first case study suggested, phrenology influenced numerous other domains in addition to the fine arts, ultimately forming part of a broadly shared nineteenth-century psychodoxa. Moreover, during the nineteenth and twentieth centuries, scientific ideas about the mind in addition to phrenology and Freudianism also infiltrated popular culture, shaping psychodoxa in meaningful ways. These include behaviorism and the computational mind, among others. One can also say that researchers who herald the emergence of today's cerebral self are, in fact, pointing toward a shift in psychodoxa, one which is increasingly training our attention on the brain as the locus of personhood.

In the final case study, Chapter Four – Is Anyone in There? Terri Schiavo and the Brain-Begotten Mind, I focused on today's cerebral construal of the mind and self. It appears that today, more than ever, we are trained to the brain-basis of the mind; for many contemporary Americans, the mind is not merely located in the brain, it is the brain. I considered the cerebral self in relation to the Terri Schiavo case, focusing on a CAT scan image of Terri Schiavo's brain

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[7] Charles Colbert, *A Measure of Perfection: Phrenology and the Fine Arts in America* (Chapel Hill: University of North Carolina Press, 1997), 282-288.

together with discussions of its implications. In particular, I considered recalcitrance as a channel of rhetorical invention that enables the production of brain scans, a type of visual discourse about the mind/self. In the form of expertise, recalcitrance also structures discussions of such discourse. As with the other inventional terms with which this dissertation engages, recalcitrance is not a channel of invention exclusive to the conception of mind in relation to which I discuss it, and it is certainly the case that expertise also structures the interpretive application of phrenological and Freudian theories of the mind. But the generalizability of this chapter's insights is not limited to its account of expertise, and also extends to its discussion of natural recalcitrance.

Chapter Four – Is Anyone in There? Terri Schiavo and the Brain-Begotten Mind analyzes how natural recalcitrance serves as an inventional channel in brain imaging's generation of visual discourse. This account constitutes a particularly valuable contribution to our understanding of rhetorical invention given that natural recalcitrance is essential to a number of other generative processes as well. Though conceptually misguided, practitioners of phrenology successfully developed technologies that utilized recalcitrance to enable phrenological analysis. In 1904, for example, Henry C. Lavery, submitted a patent to the U.S. Patent Office for an "Anatomical Measuring and Recording Machine."[8] Lavery's device was a large helmet-like contraption that a person put on his or her head. Twelve adjustable pins measured the head at various points of phrenological interest along a scale that ranged from above to below normal. Most simply, with this machine, a measure of the size of one's phrenological organs was determined not by the eye and hand of the phrenologist, but by how far various pins moved

[8] H.C. Lavery, 1905, "Anatomical Measuring and Recording Machine," USA, no. 788,362, July 14, 1904, April 25, 1905. Lavery's was not the first machine of this sort; George Combe's *Elements of Phrenology* discusses one from the early 1800s.

before meeting recalcitrance in the form of the hard bony skull. The helmet was coin operated and connected to a recording device such that a person could drop a coin into a slot and pull a handle to receive a printed phrenological reading without ever meeting a phrenologist. One of the psychograph's "advancements" over traditional phrenological analysis was therefore that it allowed for the automated generation of phrenological discourse, which appeared as more objective than the results of traditional analysis. Yet, as my analysis demonstrated, while one may use recalcitrance to channel invention, doing so does not allow one to elude human subjectivity, and Lavery's machine most certainly did not produce objective measures of character.

While each of this dissertation's case studies offers insights into the inventional utility of the conception of mind discussed by the others, the chapters also hint at points of disjuncture, the consideration of which may also be productive. I would like to call attention to one of these, in a purely speculative manner, as a potentially instructive site for study. In contrast to both phrenology and Freudianism, it would appear that the cerebral self offers a markedly thin interpretive framework. Whereas both phrenology and Freudianism are fully elaborated interpretive systems that offer numerous guidelines for deriving meaning, the cerebral self, as a popularized conception of mind, appears to offer few strategies for doing so. The cerebral self identifies the brain as the organ of mind and self, with location being a key feature, but it offers few interpretive strategies through which to elaborate discourse on this basis. I doubt one could provide as rich an analysis of an individual's character on the basis of the cerebral self as one could by using phrenology or Freudianism. Future research might productively consider this issue.

5.2 CONTRIBUTIONS TO THE FIELD

In its early years, the rhetoric of science's principal task was demonstrating that science, even in the hands of scientists, is rhetorical, focusing on the hardest of cases and the most difficult of epistemological questions. Though it is not without its critics, the field has been highly successful in accomplishing that goal. It has demonstrated in convincing fashion that individual scientists act as rhetors when they make arguments for their theories. It is now clear, for example, that Charles Darwin was a masterful rhetorician.[9] Scholars have also delineated the distinctive rhetorical structure of scientific articles.[10] Moreover, they have shown that rhetoric pervades the scientific endeavor, from laboratory practices, to the drafting of grants, to the final published article.[11] Rhetoricians of science have even successfully demonstrated that the hardest of sciences, such as mathematics, have their rhetorical elements.[12]

Precisely because of this success, in 1994 Charles Allen Taylor suggested that the rhetoric of science set its sights elsewhere. Taylor argued that the rhetoric of science should "move beyond the traditional exemplary texts of science, for example, journal articles or 'revolutionary' documents such as Darwin's *Origin*," in order to "begin to come to grips with science as a complex network of cultural practices rather than simply laboratory practices and the claims issuing from them."[13] The discipline has "moved on" in a number of ways, which is not

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[9] John Angus Campbell, "Charles Darwin: Rhetorician of Science" in *The Rhetoric of the Human Sciences*, ed. John S. Nelson, Allan Megill, and Donald N. McCloskey (Madison: University of Wisconsin Press, 1987), 69-86.
[10] Charles Bazerman, *Shaping Written Knowledge: The Genre and Activity of the Experimental Article in Science* (Madison: University of Wisconsin Press, 1988); J.M. Swales, *Genre Analysis: English in Academic and Research Settings* (Cambridge: Cambridge University Press, 1990).
[11] Greg Myers, *Writing Biology: Texts in the Social Construction of Scientific Knowledge* (Madison: University of Wisconsin Press, 1990).
[12] Philip J. Davis and Reuben Hersh, "Rhetoric and Mathematics," in *The Rhetoric of the Human Sciences*, ed. John S. Nelson, Allan Megill, and Donald N. McCloskey (Madison: University of Wisconsin Press, 1987), 53-68.
[13] Charles Taylor, "Science as Cultural Practice: A Rhetorical Perspective" *Technical Communication Quarterly* 3 (1994): 69.

to suggest that it has abandoned study of the prototypical scientific tract in the hands of scientists, which remains important to the field, but that it has expanded in a number of directions and become an even more wide-ranging subfield of rhetoric than it was at its inception.

This dissertation joins contemporary work in the rhetoric of science in moving the field in new directions. One of its primary contributions is to our understanding of the rhetoric of science in public/popular culture. It examines artifacts that though potentially mappable as science are also potentially condemnable as popular science. Two of its focal texts were written for laypersons, one of which is a pseudoscientific tract about phrenology, the other of which provided "common sense" advice to mothers. In its examination of blog comments about the scan of Terri Schiavo's brain, this dissertation also considered writing about science by laypersons. Each of the artifacts it considers also circulated widely as part of public culture. In its focus on public/popular science, this dissertation joins some notable recent work in the rhetoric of science that has looked beyond the prototypical scientific text, and toward artifacts that had influence beyond a particular scientific discipline. This work includes Leah Ceccarelli's *Shaping Science with Rhetoric*, which considered texts that inspired cross-disciplinary collaboration, and Celeste Condit's *The Meaning of the Gene*, which examined popular articles about genetics. Its theoretical stakes are distinct from these, however, in its focus on rhetorical invention. As a result, it offers unique insight into how science serves as a generative resource in public culture.

One of this project's other aims has been to draw attention to an area with considerable implications for the rhetoric of public/popular science: the mind. Certain scientific subjects have garnered a good deal of interest from rhetoricians. A number of rhetorical studies have focused

on popular accounts of genetics and evolution, for example, with the latter including examinations of creationist challenges to evolutionary theory.[14] But the public understanding of the mind, or psychodoxa, has received relatively little attention, a surprising fact given its import for practically every arena of social interaction. One possible explanation is the messiness of the subject; in public discourse, scientific theories mesh with and sometimes become implicit popular understandings of the mind in ways that can be difficult to discern, presenting a challenge to work in this area. Recently, however, brain-imaging studies, with their familiar and easily locatable place in the contemporary cultural landscape, have provided a focal point for rhetorical studies of the mind in public/popular culture. In "Made Up Minds," I hope to have contributed to this burgeoning area of study in part by situating the study of brain imaging in a wider domain of inquiry. In doing so, I hope to have shown the potential for a more extensive landscape of research regarding the rhetoric of the mind in public/popular culture.

Leah Ceccarelli has suggested that among other things, moving the rhetoric of science beyond the study of traditional scientific texts enables connections with other areas of rhetoric to emerge, resulting in a less isolated subfield. For example, the rhetorical study of science in popular culture traverses some of the same intellectual terrain as rhetorical examinations of other dimensions of popular culture. In addition to being a study of popular rhetorics of science, this project contributes to other emergent areas in the rhetoric of science and the rhetorical subfields associated with them. By demonstrating how conceptions of the mind can serve as an instrument of power and ideology, for example, this dissertation enhances our understanding of the critical rhetoric of science. In "Made Up Minds" I also offer insight into the visual rhetoric of science,

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[14] John Lyne and Henry Howe, "Punctuated Equilibria: Rhetorical Dynamics of a Scientific Controversy," *Quarterly Journal of Speech* 72 (1986): 132-47.

particularly in the final chapter, which offers an extended account of how technologies of visualization can and do employ recalcitrance to channel rhetorical invention.

Perhaps the most influential critique of the rhetoric of science in recent years has been Dilip Gaonkar's "The Idea of Rhetoric in the Rhetoric of Science." Gaonkar claimed that rhetoric is inadequate to the task of analyzing science and that rhetoricians must therefore reach into the theoretical coffers of other disciplines, such as the philosophy of science, in order to provide meaningful accounts of science. He claims that as a result the rhetoric of science either ends up as the trivial application of a rhetoric unequipped for the task, or no different from the rest of science studies. On the one hand, in its study of popularized science this project potentially avoids this critique. Its artifacts have become assimilated into public culture to such an extent that they lose some of the distinctiveness one finds in more traditional scientific texts, such as the physics report; Gaonkar's critique simply does not apply. But this project also responds to the critique in another fashion, one which is perhaps more useful for the discipline.

Though its concern is with rhetorical invention, this project did not bring a specific rhetorical framework to bear. I made use of a generative method of criticism, allowing the selected artifacts to drive interpretation. In doing so, I found classical and modern rhetorical concepts useful in accounting for the mind's inventional utility. For instance, the first chapter's analysis considers topoi, the second focuses on doxa, and recalcitrance is central to the third. Yet, this project also introduces theoretical constructs and/or modifies existing ones in ways that constitute a theoretical contribution to the rhetoric of science, and one that is potentially generalizable. For instance, the perspectives on invention introduced in these chapters may provide insight into how certain other popularized sciences, such as genetics and evolution, serve as explanatory resources. These constructs, moreover, are not only useful when thinking about

popularized science; as the first chapter suggests, resourcing may be fundamental to the scientific method itself. Therefore, as Leah Ceccarelli did in formulating her account of the interdisciplinary inspirational text in *Shaping Science with Rhetoric*, this dissertation supplies some new frameworks for the rhetoric of science.

"Made Up Minds" demonstrates some of the means by which science serves as an inventional resource outside of the official institutions of science and for ordinary lay persons. In doing so, it offers a perspective that rhetoricians of science, whose studies of rhetorical invention typically focus on the evolution of thought within the edifices of institutionalized science itself, have neglected to some extent. The study of science in public culture is important for the insight it provides into how the rhetorical dimensions of science matter for everyday lives. The study of rhetorical invention in particular helps us to understand what people *do* with science, how they use it as equipment for living. The scientific ideas that circulate in public/popular culture can be put to use in ways that have tremendous implications for our social and political affairs. And there is no better demonstration of this than scientific ideas about the mind.

However, this dissertation does not merely contribute to our understanding of how scientific ideas can serve as a resource for rhetorical invention. Though popularized science serves as its site for analysis, this project provides avenues for thinking about rhetorical invention in relation to the non-scientific. Resourcing, for instance, is not limited to science and neither is the generative power of recalcitrance. As the case studies focusing on those concepts observed, argument by authority may be a form of resourcing and protesters sometimes use recalcitrance to generate spectacle, to give just two examples. It is certainly the case, as the chapter on psychodoxa emphasized, that there is something distinctive about the mind's use as a

resource for making sense of the world. Conceptions of the mind are not like conceptions of saucepans, for example, the explanatory power of which is quite limited. We cannot use our understandings of saucepans to evolve thoughts in relation to many subjects in the world, and there is no need to identify "saucepandoxa" as a significant category for rhetorical study. Yet it is also the case that "psychodoxa" and "stereotypes" are not the only categories of doxa that deserve sustained attention, and it may be useful to more closely consider some of the other categories of shared beliefs that fundamentally shape our social world, particularly from an inventional perspective.

Charles Bazerman wrote that, "What all the varieties of rhetoric hold in common is a practical concern for improving our mastery of language, so that we can see what others are doing to us though language and can use language to greater effect ourselves."[15] In "Made Up Minds" I hope to have advanced the practical aim that Bazerman identifies as integral to the rhetorical tradition. Being aware of the ways in which the mind is engaged as an inventional resource enables us to be more cognizant of how unspoken conceptions of the mind can do powerful discursive work. This is important not only to our use of language to advance our own interests, but applies in important ways to the verbal and visual discourse that others produce, and which we must negotiate every day. We are more adept at navigating our communicatively rich social world when we are aware of the rhetorical dimensions of the mind in public culture.

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[15] Charles Bazerman, "Introduction: Rhetoricians on the Rhetoric of Science," *Science, Technology & Human Values* 14 (1989): 4.

5.3 AVENUES FOR FUTURE RESEARCH: ADDITIONAL CASE STUDIES

As Richard Restack observed in the quote that opened this conclusion, the mind is such an encompassing subject that one's efforts to investigate it must begin with deciding precisely where to direct one's attention. And even though this project focused specifically on the question of the mind's utility as an inventional resource, it was necessary to narrow the focus considerably further from there. One of the initial challenges of this dissertation was to select a handful of case studies from the vast, almost limitless, range of intriguing possibilities. While I selected cases on the basis of a rationale outlined in the introduction, focusing on conceptions of the mind that were popular in relatively recent American history and analyzing typical (rather than unusual) artifacts that circulated widely, many other case studies satisfying these criteria could also be written. Phrenology, Freudianism, and the cerebral self were and/or are so widely known and so frequently engaged as inventional resources that each of these conceptions of mind served as equipment for living in public culture in many different contexts. But analyzing how each of these conceptions of mind serves as an inventional resource through the study of additional artifacts is just one avenue for future research. Many other directions for further study also suggest themselves.

Each of this dissertation's chapters examined a single conception of mind, and it would be illuminating to draw together differing envisionings of the mind in the same analysis. Mental illness would serve as a particularly useful organizing concept through which to do so. Conceptions of mind have long been engaged as a means to explain behavior that deviates from the norm, and the term "mental illness" identifies a whole category of conditions for which the mind is regarded as the primary explanatory principle. An essential part of developing this project into an even more fully elaborated account of the mind's utility as an inventional

resource would be to extend its treatment of mental illness. A potential case study of this sort could address the rise of autism and attention deficit disorder as diagnoses that allow one to explain a range of different childhood behaviors. This sort of study might not only discern the conception of mind underlying contemporary autism and ADD diagnoses, but could take a diachronic view, considering the conceptions of mind that have guided explanations of the same behaviors at various times in history. News reports and/or handbooks for parents might serve as the entry point for this type of analysis.

Public interest in war-related psychological conditions, which spans a number of different wars, suggests another interesting study of this type. During World War One, for example, a strange new affliction appeared to emerge. Soldiers who had previously acted in a normal fashion suddenly started exhibiting unusual behavior. They stared off into space, walked with a strange gait, appeared unable to speak and/or experienced panic attacks. Sometimes they fled from the battlefield.[16] Not only army officials, soldiers, and medical personnel, but also the general public struggled to make sense of what was happening. Were these men unable to fight or unwilling to fight? Were they malingerers or did they suffer from legitimate illness? Should they be treated with sympathy or punished for cowardice? At this time, Freud's then relatively new theories regarding the unconscious served as a construct that enabled people to explain shell shock as something outside of the soldier's control, construing him as sick rather than cowardly.[17]

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[16] Elmer E. Southard, *Shell-Shock and Other Neuropsychiatric Problems: Presented in Five Hundred and Eighty-Nine Case Histories from the War Literature, 1914-1918* (New York: Arno Press, 1973); Ben Shephard, *A War of Nerves: Soldiers and Psychiatrists in the Twentieth Century* (Cambridge, MA: Harvard University Press, 2003).
[17] See Chris Feudtner, "'Minds the Dead Have Ravished:' Shell Shock, History, and the Ecology of Disease-Systems," *History of Science* 31 (1993): 377-420.

The Freudian conception of the mind, however, was not the only one available to explain the psychological conditions of war, even during the WW1 era. A prominent competing paradigm emphasized the role of willpower. In a chapter of his popular *Health Through Will Power*, James Walsh suggested that shell shock resulted from a failure of will.[18] By this view, the solider was a culpable coward who deserved to be punished. Ideas about shell shock, moreover, belong to a long history of related war sicknesses and strategies for making sense of them. During the Civil War, a number of soldiers exhibited a set of symptoms that included palpitations, shortness of breath, and sweating; their condition, which was identified as a heart problem, was generally referred to as "Soldier's Heart." And in contemporary culture, we speak of post-traumatic stress disorder.[19] A case study that investigates how different conceptions of mind structure accounts of the psychological consequences of warfare, particularly in newspaper reports and other popular media, would enable us to understand how various conceptions of mind and self can account for similar phenomena.

A case study comparing iterations of the Diagnostic and Statistical Manual of Mental Disorders (DSM) might provide a similarly broad view of mental illness and the mind's inventional utility. First created in 1952, and revised and updated numerous times since, the DSM is a catalogue of what a time period regards as the various categories of mental illness. Binge eating has been proposed for inclusion in the 2013 edition of manual, for example, signaling current attention to the psychological dimensions of eating. In detailing what it entails for minds to be regarded as disturbed, the DSM also tells us what it means for them to be healthy and intact. It offers a framework for generating accounts of a broad range of behaviors and as

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[18] James Walsh, *Health Through Willpower* (Boston: Little, Brown, and Company, 1919).
[19] Edgar Jones and Simon Wessely, *Shellshock to PTSD: Military Psychiatry from 1900 to the Gulf War* (London: Psychology Press, 2005).

such, it provides directions for the mind's use as an inventional resource in a way that has had and continues to have an impact on public culture. In addition to the medical establishment's concern for categorizations of mental illness, the legal field has established a set of criteria that apply in certain circumstances. Yet another case study might examine the legal principle of being "Of Sound Mind." This principle structures discussions not only in highly publicized legal cases, but also in the discourse of everyday lives given its pervasive presence in wills, contracts, and so forth.

While it was necessary to select certain conceptions of mind on which to focus for this project, namely phrenology, Freudianism, and the cerebral self, other ways of conceiving of the thinking self from the same historical span might also have provided productive sites for analysis. For example, in the mid-twentieth century the computer metaphor was a popular means by which to envision the mind, and one that had origins in science. The 1940s to the 1960s saw the rise of computer technology. A good deal of early newspaper coverage referred to computers as "electronic brains," "superbrains," or even "thinking machines." Comparisons to mental functions were common; in a 1955 article in *The New York Times*, William M. Freeman referred to computer operations as "substitutes by one means or another – mechanical, hydraulic, pneumatic, electrical or electronic – for the human organs of observation, decision, and effort."[20] While machines were often viewed as giant minds, minds similarly began to be envisioned as computers. A Bufferin ad that appeared in a 1953 issue of *Life* showed the cross section of a human figure from the waist up; this figure's brain looks like an old-fashioned computer with circuit boards, resistors, capacitors, knobs, dials, and so forth.[21]

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[20] William M. Freeman, "Automation Aims at New Freedom: Devices that Run Factories Promise to Release Men for Richer Living," *New York Times*, January 3, 1955, 45.
[21] Bufferin Advertisement, *Life*, April 27, 1953, 10.

A case study on this subject might analyze how, by way of metaphor, the mind served as a means for evolving thoughts regarding new computer technology. For one, the mind metaphor appears to have been instrumental in the scientific process and played an inventional role in the development of computer technology. Just as importantly given this project's focus, the metaphor also had a pervasive cultural presence and played an important inventional role in public contexts. The mind as a computer/computer as giant mind metaphor in part influenced how computers were integrated into existing conceptual categories. For example, in his 1965 *The New Intelligent Man's Guide to Science*, the noted science popularizer, Isaac Asimov, did not include the section about computers where one would expect today, in the chapter about machines (called "The Machine"). Instead, he included his discussion of computers in the chapter titled "The Mind," in the Biological Sciences volume.[22] In addition to deciding to which existing categories computers belonged, when they first appeared in public culture, people also had to come to conclusions about whether they constituted a positive or negative social development. The mind metaphor played an instrumental role in discerning whether computers were something to fear or celebrate, cause for concern or admiration, or something else entirely.

It deserves note that the visual component of this metaphor was quite significant. Pictures of room-sized computers often accompanied the aforementioned newspaper articles, and as images of giant minds, these pictures meant something very different than they would have as images of mindless machinery. An article that appeared in the *New York Times* in 1950 explained how "machines that think and do the hard work will free men to develop their real talents."[23] The accompanying illustration was a photographic depiction of a large IBM computer

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[22] Isaac Asimov, *The New Intelligent Man's Guide to Science*, vol. 2, The Biological Sciences (New York: Basic Books, 1965).
[23] Edward C. Berkeley, "Preview of the Robot Age," *New York Times*, November 19, 1950, 19, 71-73.

system. It appears tidy, fully contained, and under control while the people who work with it look relaxed and at ease; two even stand chatting in a large spacious region at the forefront of the image. Another story that appeared in *Popular Science* in 1944 entitled "Robot Mathematician knows all the Answers" impresses the extraordinary power of these machines upon the reader. The images that accompany this story are much more chaotic; in one, we see a man standing unsteadily in the midst of a computer, reaching up to work at some equipment above him. In another, a man puzzles over messy reams of output paper. In a third, a man climbs up a ladder that stands among a jumbled mass of computer parts. In each of the pictures accompanying the *Popular Science* article, the computer appears to confuse and crowd, forcing men to adapt their bodies in accommodation. These are just two examples in which visual representations test out positions regarding how we should feel about new computer technology. Therefore, a case study addressing the inventional (as opposed to stylistic) role of metaphor in the reception of new computer technologies would also enhance our understanding of the visual dimension of the mind as inventional resource in a significant manner.

In order to delimit this dissertation's scope, I focused on conceptions of the mind that have predominated in the United States during the last century and a half or so. Of course, a vast array of conceptions of mind with equally compelling implications exist outside of those confines and comprise another set of potential case studies. One that immediately suggests itself is John Locke's construal of the mind as a blank slate. As I discussed in Chapter Three – Insidious Minds: Freud as Psychodoxa in Spock's *Baby and Child Care*, Locke's blank slate was a conception of mind with powerful social and political entailments. My brief treatment in that chapter, however, could not fully address the revolutionarily nature of the shift from believing that ideas are divinely given to the construal of all minds as equally blank at birth. Locke's

formulation offered a new inventional framework through which to advance a democratizing political philosophy, and one that deserves sustained consideration. In addition to looking further back in history, another avenue for future research would involve reaching beyond the conceptions of mind found in American or even Western culture to radically different non-Western understandings of the mind. For example, it would be instructive to consider the inventional implications of something like a Zen-like perspective on mind and mindlessness.

While the mind identifies the inner thinking self, other culturally salient concepts that classify different dimensions of our being also exist, and these suggest yet a final possibility for additional case studies. The soul, of course, stands on par with the mind in terms of historical significance; as was noted in the introduction, the two cannot always be clearly distinguished and there is often considerable overlap between conceptions of mind and soul, particularly the further back we look in history. Though its centrality has receded somewhat in contemporary American culture, the concept of the "soul" still persists and generally refers to some aspect of the religious or moral self, which is believed to persist after death. The soul moreover has served as an explanatory resource in ways that would appear to both parallel and diverge from the mind's utility as such. While the soul constitutes one possibility for future research, other notable concepts that identify some aspect of the inner self and are put toward inventional ends include temperament, spirit, and blood; each of these might make for fruitful investigation.

5.4 AVENUES FOR FUTURE RESEARCH: INVENTIONS OF THE THINKING SELF IN ACADEMIC CULTURE

While this project focused on the mind in public culture, it is undoubtedly the case that conceptions of mind have relevance elsewhere. Not only can we understand the mind's role in public discourse rhetorically, but conceptions of the mind also serve as an inventional resource in academic cultures or, as we typically call them, disciplines. Of the field of history, Peter Gay wrote,

> The professional historian has always been a psychologist – an amateur psychologist. Whether he knows it or not, he operates with a theory of human nature; he attributes motives, studies passions, analyzes irrationality, and constructs his work on the tacit conviction that human beings display certain stable and discernible traits, certain predictable, or at least discoverable, modes of coping with their experience. He discovers causes, and his discovery normally includes acts of the mind.[24]

Of course Gay might just as well as have been writing about rhetoric, which is a field that has often relied on theories of human nature, considers motives, passions, and rationalities, and even strives at times to discern mental acts. In other words, conceptions of the mind are doubly important to rhetoric; they not only constitute sites we can understand rhetorically, but also serve as a resource for rhetoric itself. Though it falls outside of the bounds of this dissertation, a study of the mind as resource for rhetoric would promise considerable insight into the discipline. In what follows, I will sketch some of the terrain such an analysis might cover, ending by addressing the implications for this particular project.

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[24] Peter Gay, *Freud for Historians* (New York: Oxford University Press, 1985), 6.

Rhetoric is a discipline most famously defined by Aristotle as "the faculty of discovering the possible means of persuasion in reference to any subject whatever."[25] By this definition, it would seem that any art of rhetoric must inevitably concern itself with psychology. Ideas about how another's mind works are fundamental to attempts to persuade him or her or, as Aristotle explained, the speaker should know how to put audiences "into a certain frame of mind."[26] In the *Art of Rhetoric*, Aristotle delineated the mindset of various audiences.[27] He explained, for instance, that the old

> always 'think,' but 'know' nothing; and in their hesitation they always add 'perhaps' . . . Further, they are always suspicious owing to mistrust, and mistrustful owing to experience . . . And neither their love nor their hatred is strong for the same reasons . . . And they are little-minded, because they have been humbled by life; for they desire nothing great or uncommon.[28]

Aristotle based his rhetorical advice on intuitions about how minds work, which seems to reflect his psychological theories, which he wrote about at length, as well as commonsense beliefs about the mind. Therefore, at least in part, Aristotle's *Rhetoric* is an attempt to systematize the implications of his understanding of the mind for persuasive ends.

Some rhetoricians draw upon formalized sets of beliefs about the mind that are developed independently of their own work, that is they apply established psychological frameworks to the task of rhetorical theory and analysis. George Campbell's work on rhetoric, for example, was grounded in psychological theories that predominated during the eighteenth century. Campbell believed that rhetoric and our understanding of the mind are closely aligned, writing that "there is no art whatever that hath so close a connexion with all the faculties and powers of the mind, as

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[25] Aristotle, *Art of Rhetoric*, trans. J. H. Freese (Cambridge, MA: Harvard University Press, 2000), 1355b.
[26] Ibid., 1356a.
[27] See Ray Dearin, "Aristotle on Psychology and Rhetoric," *Communication Studies* 17.4 (1966): 277-282.
[28] Aristotle, *Art of Rhetoric*, 1389b.

eloquence, or the art of speaking, in the extensive sense in which I employ the term."[29] He argued that one had to know how minds work in order to archive particular ends with respect to them. In *The Philosophy of Rhetoric*, he used the then-popular faculty psychology to derive a theory of rhetoric, asserting that one of his aims was to provide "a tolerable sketch of the human mind."[30] Faculty psychology identified five principal mental powers, understanding, memory, imagination, will, and passion, and Campbell believed that rhetoric had to address each of these categories, developing his rhetoric on this basis.

In the nineteenth century, the psychologist and rhetorician, Alexander Bain, took a similar approach, applying theories of association psychology to rhetorical theory.[31] While Campbell had drawn upon association psychology as well as faculty psychology to some extent, Bain's application was considerably more thorough. Bain argued that similarity was the fundamental basis of persuasion, suggesting that "the orator has to make out an identity between his end and the views, opinions, and motive forces of his hearers . . . all reconciliation proceeds on the perception of points of agreement, real or supposed; hence a mind fertile in discoveries of identification is so far fitted for the task of persuasion."[32] Bain moreover classified figures of speech into categories on the basis of what he regarded as the fundamental intellectual processes, similarity, retentiveness, and discrimination, and he used principles of association psychology in order to account for the efficacy of these figures.

In more recent history, one also finds psychological theories applied to rhetoric. Psychoanalytic criticism offers one example, and though the practice is not as prevalent as one

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[29] Ibid., xlix.
[30] George Campbell, *The Philosophy of Rhetoric*, ed. Lloyd F. Bitzer (Carbondale: Southern Illinois University Press, 1963), xliii.
[31] This summary is drawn from Ned A. Shearer, "Psychology as Foundation to Rhetoric: Alexander Bain and Association Psychology's Relation to Rhetorical Theory," *Western Journal of Communication* 35 (1971): 162-168.
[32] As qtd. by Shearer, "Psychology as Foundation," 166.

might expect, some rhetoricians have engaged in explicitly psychoanalytic-rhetorical analyses. Moreover, in rhetorical studies, one finds not only attention to Freud, but also to psychoanalysts who did not gain nearly so much popular traction. Jacques Lacan, for example, has had a significant influence within the humanities, though neither he nor his work are widely known in public/popular culture.[33] Some contemporary scholars also draw upon empirical work in the field of psychology. Donal E. Carlston suggests that experimental social psychology can offer insight into "such rhetorical issues as the effects of labels and metaphor on human thought and the persuasivenss of overt argumentation."[34]

The psychological ideas that are popular at a given time are those that are typically applied to rhetorical analysis. For example, though its influence may still be felt indirectly, faculty psychology does not have a prominent place in the contemporary rhetorical field. Moreover, during the contemporary reign of the cerebral self, one finds an emergent interest in cognitive science's implications for rhetoric, as evidenced by an incipient body of work on the subject. Jeanne Fahnestock suggests that "ultimately an understanding of the brain should lead to a better understanding of language, and that in turn should lead to a better explanation of effective language, of persuasion, and hence of the complex behaviors and historical processes, mediated by language, that rhetoricians study."[35] Indeed, the cognitive sciences have begun to have an impact across a number of fields in the humanities, including one of Communication's close relatives, English. An article in *The New York Times* recently identified cognitive

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[33] On rhetoric and psychoanalysis, see Joshua Gunn, "On Dead Subjects: A Rejoinder to Lundburg on (a) Psychoanalytic Rhetoric," *Quarterly Journal Of Speech* 90.4 (2004): 501-513.
[34] Donal E. Carlston, "Turning Psychology on Itself: The Rhetoric of Psychology and the Psychology of Rhetoric," in *The Rhetoric of the Human Sciences*, ed. John S. Nelson, Allan Megill, and Donald N. McCloskey (Madison: University of Wisconsin Press, 1987), 156.
[35] Jeanne Fahnestock, "Rhetoric in the Age of Cognitive Science," in *The Viability of Rhetoric*, ed. Richard Graff (New York: State University of New York Press, 2005), 161. In November, 2008, the American Society for the History of Rhetoric held a symposium entitled "Thinking Through Rhetoric: A Symposium on Rhetoric, Cognition, and Culture," as part of the National Communication Association annual meeting, held that year in San Diego, CA.

approaches to literature as "The Next Big Thing" in literary studies. [36] As noted in the previous chapter, neuroscientific explanations have been shown to have a seductive appeal to lay readers, and it appears that this not only applies to the general public, but to academics as well.[37]

Aristotle, George Campbell, Alexander Bain, psychoanalytic critics, Donal E. Carlson, and those working today on cognitive rhetorics all took or take a decidedly and explicitly psychological approach to the study of rhetoric, and studying the open application of psychological ideas to rhetorical analysis would make for productive analysis. Ideas about the mind are not only applied to rhetorical studies in a formal fashion, however, but pervade rhetoric in more insidious ways as well. As psychodoxa, ideas about the mind can serve as a resource for rhetoric that parallels their engagement in public culture. To varying extents, rhetoricians may not acknowledge and/or may not be fully aware of how they draw upon taken-for-granted conceptions of mind in order to explain rhetorical phenomena, and the latter application of ideas about the mind may be the most intriguing to consider when trying to understand the mind's utility as a resource for rhetorical studies.

As has also been the case in many other humanities disciplines, the rhetorical tradition has been dominated by a humanist perspective that places the individual subject in a place of preeminent importance. As Robert L. Scott observes, "Traditionally, rhetorical theory has taken the intention of a speaker, either actual or potential, as the starting place of analysis and the focus for synthesis."[38] The humanist model of subjectivity, with its emphasis on intentionality,

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[36] Patricia Cohen, "Next Big Thing in English: Knowing they Know that You Know," *The New York Times*, March 31, 2010.
[37] Deena Skolnick Weisberg, Frank C. Keil, Joshua Goodstein, Elizabeth Rawson, and Jeremy R. Gray, "The Seductive Allure of Neuroscience Explanations," *Journal of Cognitive Neuroscience* 20.3 (2008): 470-477.
[38] Robert L. Scott, "Intentionality in the Rhetorical Process," in E.E. White, ed. *Rhetoric in Transition: Studies in the Nature and Uses of Rhetoric* (University Park: Pennsylvania State University Press, 1980). For an account of the humanist tradition in rhetorical studies, see James Jasinski, *Sourcebook on Rhetoric: Key Concepts in Contemporary Rhetorical Studies* (Thousand Oaks, CA: Sage Publications, 2001), 560-568; Pat Gehrke, *The Ethics and Politics of*

agency, and consciousness presupposes a decision-making subject, or a thinking self, that self-consciously engages in mental activities, such as planning, designing, strategizing, and so forth. It often serves as a resource for generating rhetorical accounts while remaining "suppressed." That is, though it drives analysis, it is not explicitly acknowledged as an explanatory framework. For example, claims of intentionality abound in rhetorical studies, but the fact that they hearken back to a certain conception of mind, and one that is neither inevitable nor universally agreed upon, is not always addressed. As in public culture, psychodoxa often serves as an unacknowledged generative resource without attracting attention because it consists of already commonly accepted beliefs.

In recent years, however, the humanist subject has met with sustained critique, both within and beyond rhetoric. These critiques have emerged in conjunction with scholarly approaches that emphasize broad social and cultural structures and downplay the status of the individual. David Paul Nord characterizes the disjunction between the humanist and anti-humanist approaches as follows, "On one side seems to stand the autonomous individual, the idiosyncratic mind, the Cartesian 'I." On the other floats a fictive Nietzchean 'I,' the child of language, the creature of culture, entirely suspended in webs of interpretation and intertextuality."[39] The mind is central to the former conception of the subject, while in the latter the individual mind recedes and even disappears, subsumed by broader cultural forces, the study of which is presumed to yield much greater insight. A full account of critiques of humanism is far beyond the scope of this conclusion, involving as it does a complex theoretical tradition that includes not only Nietzche, but a bevy of postmodern theorists. Yet, the central implication for

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Speech: Communication and Rhetoric in the Twentieth Century (Carbondale: Southern Illinois University Press, 2009).

[39] David Paul Nord, "Reading the Newspaper: Strategies and Politics of Reader Response, Chicago, 1912-1917," *Journal of Communication* 45 (1995): 86.

this study is clear – there is a contemporary move to suggest that the workings of the individual mind are at best insignificant, and at worst misleading, when it comes to understanding our cultural milieu.

Among the scholars who have brought anti-humanist critiques to bear on rhetorical studies, Dilip Gaonkar's work has been particularly influential. Gaonkar states that he is "skeptical about the utility of a critical strategy based on the ideology of human agency," advocating a strategy of rhetorical analysis that aims to avoid the humanist subject by seeking "to map the articulatory practices of a cultural conjecture and not that of an authorial cunning."[40] Yet, when Gaonkar states his preference for theories that are invested in larger social structures, he lists the preferred categories as "language, economy, and the unconscious."[41] In his identification of the unconscious as a valuable framework for analysis, we see that Gaonkar does not entirely abandon the mind as an explanatory category for rhetoric. Rather, Gaonkar rejects the mind that is at the heart of the humanist tradition, one over which the individual is presumed to be in firm control as he or she strategizes, plans, and so forth. He appears to prefer that rhetoric draw upon a more Freudian conception of mind. Therefore, in many ways, Gaonkar's turn away from the humanist subject appears to be less a turn away from using the mind as a resource in rhetorical study, as it is a turn toward a differing conception of the mind.

A compelling line of inquiry for future research would track how changes in the status and popularity of various scientific theories of the mind align with theoretical shifts in rhetorical studies. This would likely provide considerable insight into the mind as an inventional resource for rhetoric. For example, it would be interesting to examine not only the impact Freudian

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[40] Dilip Gaonkar, "Close Readings of the Third Kind," in *Rhetorical Hermeneutics: Invention and Interpretation in the Age of Science* (Albany: State University of New York Press, 1997), 337, 352.
[41] Ibid., 337.

theory had as an explicit approach to rhetorical analysis, but to discern the extent of its indirect impact via critiques of the humanist subject. Moreover, one might also consider the influence of other theories of the mind prevalent during the twentieth century, such as behaviorism. Although it did so on a very different basis than did Freudianism, it is likely that behaviorism too fostered skepticism regarding the utility of the individual intentional agent as a tool for humanistic inquiry.

It would be particularly interesting to consider the contemporary emergence of the cerebral self and its actual or potential impact on theoretical approaches within rhetoric. Some materialist approaches to rhetoric, for example, appear to share ground with a self reduced to brain activity. In her work on what she describes as a modal materialist rhetoric, Celeste Condit rejects the view that ideas are the ultimate causative force in the universe, instead focusing on "material flows of symbols and images circulating though social spaces (televisions, books, posters, radios, computers, families, churches, telephones, etc.) and human bodies (including their neural networks)."[42] In other words, though she does not wish to rely on ideas as an explanatory framework, she preserves cognition in the material form of neural network activity. The neural network, with its physicalist emphasis, is wholly compatible with a cerebral perspective on mind/self.

So what then about this dissertation? A number of scholars have identified invention as a domain of rhetorical studies that is particularly bound to the humanist subject. James Jasinski writes, "Alterations in how we think about the individual person or subject . . . have an impact on how the process of discursive invention can be conceptualized."[43] In other words, how we

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[42] Celeste Condit, "Race and Genetics from a Modal Materialist Perspective," *Quarterly Journal of Speech* 94 (2008): 385.
[43] Jasinski, *Sourcebook on Rhetoric*, 565.

conceive of minds shapes how we think about invention. As in the broader rhetorical field, some studies of invention begin with a clearly identified theory of mind, but most draw upon a theory of mind implicitly. [44] In its generative approach to rhetorical criticism, this dissertation did not bring a preconceived psychological framework to bear on its analysis. It deserves repeating that it did not begin with the subject and his/her cognitive apparatus, but rather with the text. It let the analysis of artifacts provide insight into the dimensions of rhetorical invention.

As should be clear now that we are at end of the project, in each case study, this dissertation discovered some of the ways in which rhetorical invention can be both individual and social, the result of intentional acts aimed toward persuasion as well as driven by forces outside of a given individual's control. Resourcing, for instance, can be the act of an intentional agent who decides to engage in duplicity. Yet resourcing can occur as social forces are channeled through a person who unknowingly iterates the normative judgments of a culture. Similarly, psychodoxa does not belong to the individual subject, and circulates between and among culture, though individuals can and do draw upon it in meaningful ways. Even recalcitrance follows this pattern; one can use it intentionally and purposefully in a generative manner, while it also shapes the communicative world in ways that are beyond the purview of any individual agent.

In their critique of subjectivity, George Kamberelis and Karla Danette Scott wrote that "subjectivity has been conceived as a transcendent consciousness that functions unencumbered by social and material conditions and that is the source of all knowledge and the agent of all

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[44] See, for example, Linda Flower, *The Construction of Negotiated Meaning: A Social Cognitive Theory of Writing* (Carbondale: Southern Illinois University Press, 1994).

action."[45] Viewing the intentional agent as the sole motivator of discourse is obviously problematic. Yet the subject can be decentered without necessarily being eliminated. As Anthony Giddens has suggested, one can acknowledge intentions in social and critical analysis without making them the preeminent concern.[46] And its generative mode of analysis would appear to have brought this project to this very place, to a decentered subject, but one who has not entirely disappeared and retains relevance to rhetorical invention.

5.5 FINAL THOUGHT

If we have learned anything from the history of ideas about the mind, it is that they change over time. And as this project concludes, it seems necessary to reflect on the possibility that today's cerebral self, and the brain imaging technologies that enable investigations of it, will one day become outmoded. So should the cerebral self fall out of favor, what is next? It is possible that we will see a reaction against the focus on physical matter, and a return to understanding the mind as an independent functional category, distinct from the brain. However, it might also be the case that that version of the mind has already been definitively displaced and will never regain its place. If so, it might sink into obsolescence, vanishing almost entirely from the social landscape and becoming a relic of history, as have constructs such as "leb" and "psyche." Or it might somewhat less dramatically continue to fade into irrelevance, relegated to the cultural background as other new and yet to be envisioned constructs rise to preeminence. And given

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[45] George Kamberelis and Karla Danette Scott, "Other People's Voices: The Coarticulation of Texts and Subjectivities," *Linguistics and Education* 4 (1992): 360.
[46] Anthony Giddens, *Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis* (Berkeley: University of California Press, 1979).

how it can become an instrument of dangerously misleading and essentializing discourses, perhaps the mind's obsolescence would not be such a terrible thing. Yet, it is hard to imagine that there will not always be something that assumes the mind's place, even in the wake of the cerebral self's reduction of self to matter, which is itself a manner of identifying the thinking self. We each spontaneously intuit its existence inside our heads, and as we read these words and ponder their meaning, we feel that some faculty inside us is accomplishing the task. Moreover, as this dissertation has shown, the mind, in whatever permutation it might take, is a useful abstraction, and one that is a tremendously powerful resource for rhetorical invention. While it may continue to change over time, possibly ultimately becoming unrecognizable as such, perhaps we will always have something that performs the mind's inventional work.

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