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Toward a Working Theory of Neurorhetorics

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Toward a Working Theory of Neurorhetorics

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
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Abstract

This piece makes the claim that rhetoric is—along with philosophy, epistemology, ontology, or any other field—at the very least, on equal footing as these fields because: 1. empathy—and thusly the impulse for communication—is physiologically hardwired into humans; 2. special distinctions privileging humans over the rest of the animal kingdom are largely artificial constructions, as is evidenced by neurosciences; 3. “hard” science, in the form of neurosciences, is providing entrance points & opportunities for rhetoric to raise its status within the academy; 4. and said neurosciences, in addition to empathy studies, have shown strong evidence supporting linguistic and evolutionary links between humans and other species, thereby supporting a “preoriginary rhetoricity,” in Diane Davis’s terms.

Davis’s *Inessential Solidarity*... serves as a stepping stone for this piece in the sense that the ethical relation as derived from the work of Levinas, originary rhetoricity, and rhetorics of the saying or of the address require the utmost attention for rhetorical scholars right now. I show how neuroscience research might help Davis’s project—in which she is far from alone—move forward by providing connections between rhetoric and current neuroscience work.

Section 0. Preface: Positioning¹

Rhetoric is poised at a very interesting point temporally speaking. It has struggled from the very beginning to find currency and power. And now, neurosciences are providing rhetoric with its feet, hands, and a big stick, with which to wield its true power. To explain, David Tietge, in *Rational Rhetoric: The Role of Science in Popular Discourse*, elaborates a specifically American “culture of science and capitalism” which places clear and distinct power with the “hard” sciences. Most readers do not need to be told about the current role of S.T.E.M. (science, technology(ies), engineering, and math) in the academy and in the economy. Tietge is drawing out a civic rhetoric, if you will, much like Omar Swartz does with his “Socially Responsible” research agenda. In short, rhetoric has not received its due—both academically speaking and in popular culture—in large part because of the science wars, wherein the “hard” sciences have taken a predominant role over the humanities. With neuroscientific research from the last twenty years or so, rhetoric is poised to benefit because hard sciences are confirming long-held tenets from rhetorical studies such as those espoused by Daniel Gross.

Gross’s main argument is with cognitive neuroscientists of emotion who put too much emphasis on the physiological component of emotions. Essentially, the author asserts that community or group emotions, if you will, are at least as much formed by

¹ See Deirdre McCloskey in *Rhetorical Hermeneutics...*(included in Works Cited) for an excellent exposition of the “Little Rhetoric” versus “Big Rhetoric” debate.

non-physical factors as they are by purely physical factors. But this is just one example of certain groups oversimplifying cultural or group dynamics, in this case the cognitive neuroscientists. The point here is that our culture has swooned to the tune of the hard sciences proportionately more than the humanities. Now neuroscience is confirming that cultural value sets, emotions, and other components of group dynamics are intimately interconnected at the physiological level. Put simply, neuroscience is providing rhetoric with the requisite research confirming a general belief that fields like linguistics, emotional studies, rhetoric, and other humanities are, in fact, just as important or valid as the hard sciences. I must stress, however, that the exact ways that these connections are made and how they are presented is still controversial and uncertain. But neuroscience is definitely providing the research which can, due to the power of hard sciences, boost rhetoric into a more visible and viable role, both for the academy and popular culture.

Why are there more and more explicit pushes for socially responsible research? A primary reason is that the human species has been trying to understand itself from the very start. But this is an anthropological statement. Political and ethical agendas within the academy are the real focal points here. More precisely, the rhetoric of the saying plays an equally vital role to the rhetoric of the said in exploring an originary rhetoricity and it is exactly this originary rhetoricity which serves to open ethical relations and help the institution of rhetoric gain political or ethical validity within academe. Neuroscience is providing rhetorical studies with the ammunition it has been wanting in the form of neurological research which supports a paradigm that places rhetoric on roughly equal footing with epistemology, philosophy, positivism, and other fields which have dominated or come to dominate the academy. Specifically here, neurological research

into empathy, language, and communication provides the empirical support that rhetoric and communications studies need to gain validity across the academy.

My thesis here is this: Recent neuroscientific research on empathy, language, and communication (among other things) supports a paradigm that places rhetoric on roughly equal footing with ontology, philosophy, epistemology, the sciences, or any other field because it indicates, if not *proves*, that the impulse toward communication or rhetorical interaction to be *physiologically* inborn, as well as being socially or culturally shaped; moreover, rhetorics of the saying require certain priorities over rhetorics of the said in the sense that neuroscientific research needs explored, synthesized, and more closely aligned with rhetorical theory and praxis. This requires that the ethical relation, as Davis uses the phrase in *Inessential Solidarity*, be tended to and in this case, it turns out that the ethical relation is very analogous to a “rhetoric of the saying.” In turn, it is time that rhetorical studies “gets its due,” so to speak, within the academy and Davis’s project, my own, and others, combined with recent neurological research may be mined or exploited to capitalize on these exigencies.

The neurosciences are saying the following:

1. The subconscious accounts for the vast majority of thinking and, by implication, all human interactions; the unconscious is mostly inaccessible, only affording glimpses; the subconscious correlates with the Other in a sense that alterity is inborn and universal but it is no more or less vital than similarity (this last point is open for debate and remains to be validated across disciplines or even, perhaps, within rhetorical studies);

2. Language is:

a. BOTH affective and rational, in approximately equal parts and the one being equally important to the other, as well as to the whole.

b. A cognitive, neurological “function” that uses metaphor as a tool to create understanding and bridge gaps; also, metaphor is, in fact, a proven aspect of higher order cognitive functioning within the human brain, meaning it is used/applied across the *entire* species (notwithstanding exceptions of injury or malformations)

c. Hence, my subconscious IS the Other, an other, a drastic alterity, proven—or, at the least, convincingly suggested & researched—by the neurosciences!

3. Empathy is—as far as neuroscience can tell—engendered in the human brain by “mirror” neurons which enable people to engage in “intersubjective” relations.

4. While metaphor is a definitely invaluable form of higher order cognition, paradox² seems to be more difficult for the human brain; but paradox is absolutely essential as a cognitive tool for working through complex networks and paradox is the organic, natural successor to metaphor.

² Paradox is under-treated & undervalued for some unapparent reason. In this author’s opinion metaphor is the natural antecedent of paradox in literary & rhetorical studies. Mark Paul Moore, in the summer 1988 issue of RSQ, wrote a piece focusing on the use of paradox (the only piece with “paradox” in the title going back 30 years).

In short, rhetoric is first (or equal to first) philosophy because of purely physiological factors as well as cultural or psychological ones. It is in our very nature to be communicative, to respond to one another, to write and reflect, and to engage other people's minds but the vital point here is that now neuroscience is showing that it is in our physical nature at least as much as it manifests in social ways.

Diane Davis, in *Inessential Solidarity: Rhetoric and foreigner Relations*, tells us that there exists an originary rhetoricity that comes before and trails after everything we say or do. This is the central aspect to her 1st philosophy rhetoric of the saying (vs. the said) which dictates, like the Levinasian Other, that we always—and in all ways—must attend to the address of the Other, the face of the other, thusly holding us “host-age,” in Davis's usage of the term. And it appears that neuroscience is an other that is—quite concretely, not incidentally—opening a door for rhetoric to rise up and be heard finally due to the currency of “hard” sciences' persuasive force in the academy and at large.

I should warn readers that some of the concepts put forth here will, in all likelihood, seem quite strange, overly abstracted or philosophical. The major point to remember is that rhetoric, language, and literacies emerge through purely physical factors *at least as much* as they do by purely sociological ones. This tension between the humanities and hard sciences—between pure empiricism versus pure speculation—is seeking resolution and neuroscience is providing road signs toward such a resolution. And if having nanowires in your brain connecting you with other humans and the internet

via a “World Wide Mind”³ concerns you in the least, then I strongly suggest we listen to neurosciences.

³ See Michael Chorost’s *World Wide Mind: The Coming Integration of Humanity, Machines, and the Internet* for a compelling journey through (quite real) cyborg discussions.

Section I. Introduction/Literature Review: Neurorhetorics...what?

This paper looks at so-called neurorhetorics, labeled as such to reflect a burgeoning interest in neuroscience⁴ from rhetoric of science scholars as well increases in popular interest. The overriding questions propelling this piece are, “What, precisely, might a theory of neurorhetoric do? What can a theory of neurorhetoric do or what should any such theory do?” In considering these questions and synthesizing reviews of the pertinent literature, I take an article from Jordynn Jack and L. Gregory Appelbaum that appeared in the November 2010 issue of *Rhetoric Society Quarterly* as a springboard for this work. And recall that the availability of sources available on this specific topic is severely limited. More importantly, the question of just how biased I was in choosing these sources is answered by saying that I studied just as much neuroscientific literature as I did rhetorical material. If the proportion of purely scientific versus rhetorical literature represented here seems out of balance, it is likely due to limited availability at least as much as being due to my own biases.

Literature reviews are bound to be inherently biased, simply because we are unavoidably human. I must stress that my selection has been severely limited by one overriding factor: very little research and literature exists for neurorhetorics. It is such a

⁴ See Damasio’s *Descartes’ Error: Emotion, Reason, and the Human Brain* for an expanded discussion of the various definitions & subfields attached to the term “neuroscience.”

new and unexplored territory that the source selection here has an above-average chance of being less biased than literature reviews on well-covered topics. I only offer these explanations in the way of ethical disclosures about my research.

Jack is a rhetoric of science scholar and Appelbaum is a cognitive science scholar. They co-wrote a piece outlining some research directions for neuro rhetorics. In discussing the notion of empathy, which I am highlighting in this piece, the authors observe that some gaps exist between neuroscientists' definitions of empathy and those of rhetoricians. For instance, of the neuro-based studies looked at, one defined empathy as "... 'the ability to imagine oneself in another's place and understand the other's feelings, desires, ideas, and actions...' while another described it as "... 'the capacity to share and appreciate others' emotional and affective states in relation to oneself...'" (qtd. in Appelbaum & Jack 419). The authors point out that the first one implies an outward movement whereas the second definition indicates an inward movement. Still—and more importantly here—the scientific descriptors for empathy stop where rhetorical accounts continue, the latter emphasizing the *performance* of the other's emotions somehow, much like a Burkean actor might perform her neighbor's "Day in the Life."

"On the face of it, these definitions might square with Quintilian's notion that the most effective rhetors possess a capacity to feel the emotions they seek to evoke (Quintilian 6.2.26). For Quintilian, though, empathy is a distinctly performative skill..." (Appelbaum & Jack 419). The authors go on to suggest the possibility of aligning fMRI studies with Kenneth Burke's notions of identification, which I will unpack according to Davis's project later. For now, notice the differences between neuroscientific descriptions of empathy compared to rhetorical descriptors. As rhetoricians, we may feel

frustrated to see explorations into empathic networks, as I call them here, which fall somewhat short of “...an ecological metaphor in conceptualizing, designing, and enacting research in...” rhetoric and composition studies (Fleckenstein et al 388). In short, most current, neuroscientific definitions of empathy focus disproportionately on the purely physical factors, omitting cultural or social ones.

Generally speaking, my main goal here is to productively *supplement* existing conversations or studies around neurorhetorics. More precisely, I will show how Diane Davis’s *Inessential Solidarity: Rhetoric and Foreigner Relations* serves as a useful connection with recent developments in the neurosciences, thereby supporting and extending the main thrust of Jack and Appelbaum’s “Neurorhetorics” piece, as well as synthesizing strictly physiological components with cultural and rhetorical components to support Davis’s thesis which puts rhetoric as first philosophy so that we may draw out and focus on the “ethical relation,” as Davis calls it.

I will first review the pertinent literature, and then explicate connections between neuroscience and Davis’s book and finally, I offer some forward-looking speculations. A few of the more pressing stakes here are: the definition, role, and direction of rhetoric within the academy, both theoretically and in praxis...in our classrooms; also, the “ethical relation” in the sense that Davis uses it. For our purposes here, the most pressing stake at the moment is to “...approach speaking and writing, any form of the address, not simply or firstly as the *means* of communication (as servants of the said), but *as* communication itself, as modes of the saying, expositions of an ethical relation that precedes identity, intellection, and intentionality”(*Inessential* 113). Currently, institutional “wars” exist between rhetoric and communication departments over “Big

Rhetoric” and “Little Rhetoric,” with rhetoric departments losing ground to communication departments on certain fronts. The upshot is that some inventory and in-house cleaning may do rhetoric departments a lot of good right now. This piece aims to help achieve this for the institution called rhetoric. Another vital upshot is that the contents or perceived meanings of the debates may not be nearly as important as the simple fact that we are engaged in the first place. This is the all-important distinction between a rhetoric of *the saying* and a rhetoric of *the said*, to use Davis’s parlance. Put simply, no matter what is being said or to whom, Davis is calling us to pay more attention to what lies *beneath* the words or meanings: the fact that we are compelled to engage with each other in the first place.

In reviewing the literature, I begin with the 2010 special issue of RSQ because, as far as I have seen/read, this work deals most directly with neuroscientific implications for rhetorical studies. In the opening editor’s notes, Debra Hawhee cites “...the need to approach pressing topics from prismatic perspectives, and to do so in a sustained manner...” as a primary reason for focusing the entire issue around neuroscience (ii). Hawhee’s latter point hints at a particular exigence for rhetorical studies, one which revolves around inconsistent, incomplete, or otherwise lacking coverage of given topics, so-called neurorhetorics being no exception. Readers may take this RSQ issue as evidence supporting a notion that there is, in fact, a dearth of strictly rhetoric-based works treating possible neuroscientific connections with rhetoric in spite of an evidently parallel phenomenon of growing interest in this particular area. I can assert with a fair amount of confidence that volume forty, number five of RSQ represents one of the only major works to treat neurorhetorics directly that is published in a rhetorical studies journal.

There are, of course, other works that touch on this particular area but most of them are just that, barely touching it, or they are primarily focused on something besides connections between neuroscience and rhetoric. The fifth special issue of RSQ for 2010 has six authors treating this specifically neuroscientific aspect on rhetoric.

J. Jack opens the issue with her piece, “What are Neurorhetorics?” In this article, Jack begins with a simple but effective imaginary anecdote. She draws out a hypothetical figure, the neurorhetorician, speaking expertly on television about Martin Luther King, Jr.’s orations then diving into a plug of her own line of media designed to help anyone become an adept orator with minimal effort (Jack 405). With this brief sketch, Jack brings up important ethical and sociopolitical questions regarding a situation which is not nearly as far-fetched as it seems on the surface.

One of Jack’s main points in this article is to illustrate examples of how neuroscience is intersecting with timeless, perennial questions that have been haunting Western academia for hundreds and thousands of years. For instance, “...neuromarketing seeks to exploit neuroscience insights to trigger the brain’s ‘buy button’” (Jack 405). And this is just one example of many, as the author stresses. In other words, recent neuroscience findings are shaping the nature and direction of elementary questions which have persisted within scholarly pursuits and with good reason. By recent, I and most authors writing on this subject approximately mean the last twenty years or so. Jack goes on to give multiple examples, asserting that most, if not all, of the various disciplinary interests in neuroscience carry “...attractive commercial applications,” and I think that most people will concede the validity of such an assertion in our late-capitalist culture (406).

While there are many concerns that arise quickly—and for many different disciplines—my reading of Jack’s article says that the most critical message to take away from it is a cautionary one. The author is concise in her treatment of the subject as is evidenced by its short length. Jack emphasizes a stance which is wise in its ethics and holistic in its depth of vision. She says, “Drawing on the increasingly interdisciplinary nature of rhetorical study, neuroethics would question how discourses about the brain construct neurological difference, how to operationalize rhetorical inquiry into neuroscience in meaningful ways, and what those constructions imply for contemporary public discourse” (Jack 406). Put quite simply, many exciting, frightening, or otherwise energizing questions are quickly gleaned from discussions surrounding recent breakthrough discoveries in neuroscience but the most important task is to explore these questions with high ethical standards, which entails interdisciplinary collaboration as well. Most, if not all, of the borders between disciplines are contrived, artificial, and this is borne out in “What are Neuroethics?” as well as other works by the simple fact that many fields and their concurrent discussions are intertwining with each other regardless of barriers. These general phenomena only serve to support Jack’s specific urges to proceed with caution and her reference to public discourse, in turn, points back recursively to an impetus for interdisciplinary modes and ethics.

Jack and Appelbaum treat the subject of neuroethics with a similar cautionary tone in “‘This is Your Brain on Rhetoric’: Research Directions for Neuroethics,” delving into more detailed exploration. In the same general vein as Jack’s introductory piece, the two authors stress a two-pronged approach for any rhetorical studies of neuroscience. Their urging is to explore the rhetoric of neuroscience approximately

equally as exploring the neuroscience of rhetoric. Their reasoning for this approach: “These two approaches can be combined to examine neuroscience discussions about methodology, research, and emotion, and studies of autism and empathy, with a rhetorical as well as scientific lens. Such an approach yields productive insights into rhetoric while minimizing potential pitfalls of interdisciplinary work” (Appelbaum & Jack 411).

The authors make it abundantly clear that such a two-pronged approach is vital by repeating, emphasizing, and modeling the approach. One rhetorical lens and one neuroscientific lens work, in the authors model, together recursively, helping to maximize the chances for ethical and holistic, well-rounded projects. I read into Jack and Appelbaum’s piece, even if they do not state it explicitly, that scholars often have blind spots throughout the course of any given research project and not necessarily to their discredit. While this is not an unknown or uncommon phenomenon, it bears noting here because “‘This is Your Brain on Rhetoric’...” implicitly supports the notion that all opportunities to minimize biases and maximize fairness in any research projects, and especially in rhetorical interactions, must be capitalized. The persistence of human biases in research projects is highlighted by scholars like Keith Rhodes when he argued “...provisionally for a new term to describe composition *ethnography*, offering the term *psychography* to describe the nominally ethnographic practices of many composition researchers” (24; emphasizes his). Rhodes was not taking anything away from ethnographers and their work, only urging more accurate and honest descriptions of their practices. Appelbaum and Jack are conveying this same call for careful reflexivity and methods.

Jack and Appelbaum focus in on a relatively brief set of particular methodologies, debates, and topoi used within the neurosciences. One of their move is to “...highlight key topoi scientists use to negotiate methodological argument, such as accuracy, efficiency, and bias” as they are used with brain scan imaging (Appelbaum & Jack 413). The authors provide a contextual survey introducing debates around brain scans, particularly fMRI technology. They explain how fMRI technology, while providing some meaningful insights into brain anatomy, patterns, and cognition, also inherently provides some difficulties and uncertainties. For instance, fMRI works by detecting changes in blood oxygen levels within the brain and these changes signal neural activity (Appelbaum & Jack 414). Problems arise when broad deductions or inductions among individual brains are attempted because “...given the inherent variability between individuals in brain anatomy, these activations cannot easily be generalized across individuals” (Appelbaum & Jack 414). The activations referred to are blood oxygen level changes correlating with changes in neural and/or synaptic activity. This is the crux of debates about fMRI technology uses, image interpretations, and methods used to work with fMRI data. Given the indirectness of some of the transactions occurring from brain activity to fMRI scan read-outs, what methods for comparison or interpretation are best? How loosely or how strictly should brain scan images be read? And to what ends?

Jack and Appelbaum point up three particular areas of interest in fMRI work concerning research methods and stability. Accuracy, efficiency, and bias: “The accuracy *topos* focuses on the degree to which methods, procedures, and statistical calculations match what is being measured, while the precision *topos* focuses attention on the degree of reliability of the experimental method. Bias refers to the potential for the

results to be influenced by factors unrelated to the variable being tested” (Appelbaum & Jack 413; emphasis theirs). I am inferring here a correlation between quantitative precision as a topos and “efficiency” as a synonymous label for said topos. The authors explain how these three topoi are used by neuroscientists to argue for their variously preferred methods and interpretations. This is where rhetorical inquiries enter since “The methods used to accurately extract data from squishy brains are rhetorically negotiated through ongoing debates” (Appelbaum & Jack 414). The duo then go on to explicate in more detail some illuminating cases which embody challenges connecting these particular points about accuracy, efficiency, and bias with related rhetorical entrance points.

The authors are showcasing the fact that different scientists prefer different styles, modes, and methods of interpretation based on their own biases or research agendas. They do this in an effort to convey a sense of urgency to researchers for ethical, read unbiased work. Appelbaum and Jack are also stressing a particular need for rhetoricians to first and foremost make concerted and consistent efforts to thoroughly understand the neuroscientists’ viewpoints, including all of their field-specific biases, conventions, and tendencies. The authors are also foregrounding a similarly primary need for rhetoricians to comprehend as thoroughly as possible the science being done. This is no small point since the precise nature or workings of some of the science often eludes even the brightest minds. Also directly related to this point is the tendency of rhetoricians to use a purely rhetorical lens more than a purely scientific lens during rhetorical explorations into science. While this is understandable, Appelbaum and Jack are very clearly prioritizing a distinct need for *both* lenses.

In the next section of the article, the authors bring out another useful set of topoi, connecting these to so-called neuroeconomics. The focal points here are emotion and reason as they work together to actuate persuasion. The authors are also magnifying ways that these phenomena may or may not interrelate with the traditional rhetorical concepts of pathos, logos, and identification (Appelbaum & Jack 416). To explicate these points, the authors discuss a “compensatory” model used by some neuroscientists and economists, wherein people making decisions deploy what may alternately be described as a risk/reward scheme, pros versus cons scheme, or similar schemata. It is not difficult to see why economists and marketing professionals would want to study the neuroscience of buying, planning, and decision making. It almost goes without saying, but if economists or marketing professionals can acquire insights into brain functions or patterns of consumers, the capitalistic potentials are virtually unlimited.

Appelbaum and Jack again stress the importance of caution in this section, pointing out the elusive or ever-changing nature of emotion and reason (417). They write about particular neuroscience discoveries in brief detail which have recently cast more light on how reason and emotion operate, neurologically speaking. The primary question or concern in this section as the authors state it is, “...does this understanding of reason and emotion line up with the assumptions rhetorical scholars might make about those concepts, which since Aristotle’s Rhetoric, have been associated with logos and pathos”(Appelbaum & Jack 417)? This is a vital point and one which I find is magnified more clearly using the concept(s) of translation/transcription. Most scholars know and concede that something is always lost in the process of translation. This is a commonly acknowledged phenomenon and the general validity of such claims is rarely contested.

Appelbaum and Jack are emphasizing and contrasting the rhetorical lens versus the scientific lens presumably for multiple reasons; however, one of the more pressing reasons is a simple recognition of biases inherent in field-specific viewpoints and practices, as well as conventions, consensus paradigms, and the like that are bred or conditioned by particular institutions such as English departments first, then rhetoric and writing departments. In other words, the problems innate to translation or transcription of any sort provide a useful analogy for understanding the problems that Appelbaum and Jack are bringing out. The utmost care must be taken to minimize blind spots, pitfalls, biases, etcetera when “rhetorically” studying neuroscience because there will always be at least some differences between a rhetorician’s interpretation of a given topos and a scientist’s interpretation of the same topos. Of course there will also be similarities but I read this section of Jack and Appelbaum’s article as a manifesto for extreme care when blending rhetoric with neuroscience.

While the piece by these two authors is mostly qualitative, textual, or scholarly methodologically speaking, three factors combine to support a view that very little, if anything, should be detracted from this methodology. The first factor is the primary goal of the piece. It is clearly intended to mainly offer research suggestions, as the title reveals, rather than settling on any definitive conclusions pertaining directly to possible or probable connections between rhetoric and neuroscience. The second factor is that the execution of the piece itself models high ethical standards because it is coauthored by a neuroscientist, and this also expertly models the interdisciplinary approach proposed by the authors. The third factor is that the authors employ a small amount of quantitative work in the section on neuroeconomics, emotion, and reason. They “...searched PubMed

for articles that contained the terms reason, emotion, and fMRI,” and in so doing explicate other quantitative measures (Appelbaum & Jack 418).

One last aspect of this article worth mentioning is the authors’ discussion of rhetorical inquiries into popular media treatments of neuroscience. In particular, the authors discuss work done by Erik Racine, Bar-Ilan Ofek, and Judy Illes, wherein three main kinds of claims emerge in popular media reports on neuroscience. “Neuro-realism, neuro-essentialism, and neuro-policy” are signifiers created by Racine, Ofek, and Illes meant to classify and describe three of the more apparent and important types of popular media conveyances pertaining to neuroscience (Appelbaum & Jack 425). According to these writers, neuro-realism emerges when “...’coverage of fMRI investigations can make a phenomenon uncritically real, objective or effective in the eyes of the public,’ or when reports invalidate or validate our ordinary understanding of the world” (qtd. in Appelbaum & Jack 426). Neuro-essentialism signifies “...how fMRI research can be depicted as equating subjectivity and personal identity to the brain” (qtd. in Appelbaum & Jack 426). Finally, neuro-policy points to “...attempts to use fMRI results to promote political and personal agendas” (qtd. in Appelbaum & Jack 426). Jack and Appelbaum go on to explain how these three phenomena may usefully be applied to neuroscience articles and reports as well as a way of detecting biases or the relative criticality of given projects. The authors also cite the persuasive power of visual rhetoric, particularly fMRI images and unethical use of such imagery by popular media.

The other three articles in volume 40, number 5 of RSQ by John P. Jackson Jr., Katie Rose Guest Pryal, and Jenell Johnson focus on relatively specific topoi. Given the fairly narrow scopes of these pieces, I give a brief space to them here, highlighting some

of the more useful or important aspects. While this is partially a judgment call on my part, my choices are also based in comparable views from other scholars. Jackson Jr. writes about the cephalic index and the work of Franz Boas as a way of urging “...rhetorical scholars to attend to the notions of burden of proof and presumption in scientific controversies over neurological differences” (438). This is an especially crucial point from Jackson Jr. since locuses of falsifiability often get obscured or lost amid heated debates. Another vital aspect from Jackson Jr.’s piece pertains to competing discourses and popularly accorded statuses given to different discourse communities. Jackson Jr. illuminates the importance of recognizing the power and sway of scientific communities, at the same time taking appropriate measures to maximize the chances of other communities being heard, particularly rhetorical studies. Put simply, Jackson Jr. is urging rhetoricians to capitalize every possible “weapon,” and wisely so, in the face of scientific knowledge, discourses, and persuasions, which have been shown to often be inequitably powerful forces.

Pryal writes about how persons diagnosed with psychiatric mood disorders have been using what she dubs the “mood memoir” to combat rhetorical or communicative exclusion in communities, exclusions based in unfair stances conditioned by persistent stigma attached to psychiatric disabilities (479). Pryal highlights the traditional rhetorical concept of ethos as a vehicle for building discursive power among those diagnosed with mood disorders. The “mood memoir” Pryal classifies, along with the author’s particular usages, finds roots in genre theory and narrative studies (479). The particular approach deployed by Pryal is largely literary, with significant rhetorical tactics as well. One of the more valuable functions of Pryal’s piece is to model another method for rhetorical

entrances into neuroscience, this one feeling more ethnographic in nature than some others. Methodologies that are more literary or narrative-based in nature may serve to complement more rigorous, quantitative approaches⁵ for rhetorical studies of neuroscience, helping to round out projects, ensuring maximum balance or ethical standards for research methods.

Johnson writes about “rhetorical disability,” a phrase describing how mental illness stigmas work to damage one’s ethos and, consequently, one’s career (459). She uses a rhetorical concept to build her argument, “...kakoethos, or bad character” (Johnson 459). Just as Appelbaum and Jack suggest transcribing or superimposing certain rhetorical devices or *topoi* onto neuroscience works, I would suggest that Johnson’s use of *kakoethos* may be usefully employed to study how neuroscientists become marginalized or elevated within their field. Neuroscience is far from exempt from disciplinary politics and the crucial question is how those play out according to conventions, tendencies, or consensus standards specific to neuroscience communities. Also, Johnson’s particular usage of “rhetorical disability” may be constructively used in a variety of ways or venues. I would only add here that a primary concern for rhetoricians should be to use any such methods from a neuroscience viewpoint, inasmuch as is possible. This exigence also echoes Appelbaum’s and Jack’s urgings to understand neuroscience/neuroscientists as accurately and closely as possible according to that community’s particular paradigms.

⁵ For a sublime example of the type of quantitative work referred to here, see Jeremy Tirrell’s dissertation, *Mapping a Geographical History of Digital Technology in Rhetoric and Composition*. Tirrell’s piece works so well *precisely because* he exploits quantitative data, communicating in the language of dominant STEM type disciplines.

For my next review, Marilyn M. Cooper's "Rhetorical Agency as Emergent and Enacted" appears in *College Composition and Communication* volume 62, number 3. Although Cooper discusses neurophenomenology, her piece, in her own words, "...has a quite different focus than Jack's; I wouldn't describe it either as the rhetoric of neuroscience (I'm not interested in looking at how they make their arguments), nor is it quite the neuroscience of rhetoric as she and her co-author describe it, though I am interested in how studies of the neurological system can contribute to our understanding of the role of emotion and the nonconscious in making arguments"(work). Neurophenomenology is, according to Francisco J. Varela, a cognitive neuroscientist and one of the pioneers of this burgeoning field, the name for "...a quest to marry modern cognitive science and a *disciplined approach* to human experience..."(330). It is essentially a way to study consciousness and nonconsciousness by pragmatically applying methods from both neuroscience and traditional phenomenology, read the Husserl branded phenomenology.

I am giving a brief space here to Cooper's piece for two reasons. The first is that her treatment or use of neuroscience is secondary, or even tertiary, to her primary focus, which is writing, pedagogy, and communications—read: *praxis*. Cooper says in the last paragraph of her piece, "What we need is not a pedagogy of empowerment, but a pedagogy of *responsibility*," and she is speaking here specifically about composition classrooms (443; emphasis mine). The locus of this statement in her conclusion also implies a thesis-level status, compared to more secondary descriptions. The second reason I am giving space to Cooper is that her explorations into consciousness and her discussions of identification, figuration, and agency tie directly into my goal here.

There are three important values that I see in Cooper's piece which pertain to rhetoric of neuroscience (or neuroscience of rhetoric: readers may assume that herein, when one is mentioned, the other is entailed). Because she is extending complexity theory to tackle vastly complicated themes, her piece is valuable for modeling possible methodological entrance points into highly complex arenas dealing with ecologies of scale. In "Rhetorical Agency as Emergent and Enacted," Cooper models effective methods for studying incredibly complex systems. Her form deploys metaphor(s) like those presented by Fleckenstein et al, wherein ecologies of scale⁶ are discussed, emphasizing the interrelated nature of people and things along with recursive movements between scales (388). Her use of metaphor also directly supports neurological findings which I use throughout, at the same time supporting "networked" explorations and discussions into rhetoric of neuroscience.

Another potential value of Cooper's piece for rhetorical studies of neuroscience is her interdisciplinary approach, albeit a largely textual or scholarly one. The author connects work from a wide variety of fields, including cognitive neurosciences, phenomenology, complexity theory, and more. The importance of interdisciplinary work cannot be overemphasized because it speaks to the importance of tending to the address of the Other.

Finally, and perhaps most importantly, Cooper brings up one of the key messages from recent neuroscience: that emotion, reason, empathy, and communication are actually corporeal, embodied aspects of humans. These concepts are not just abstract;

⁶ Collin Brooke also provides a rich discussion framed around ecologies of scale in *Lingua Fracta: Toward a Rhetoric of New Media*, not unlike Fleckenstein et al's "The Importance of Harmony: An Ecological Metaphor for Writing Research."

they are also quite physiological and this is what neuroscience has been showing the world. In other words, these phenomena which have been so often treated abstractly are actually hardwired into our brain systems and into our bodies. This is a major point gleaned from neurosciences in recent years and Cooper's piece touches on it in important ways. Also, rhetoric scholars and neuroscience scholars have significant myths and resistances to overcome regarding these particular threads of concern/fact before real work can be done among the fields.

Where philosophy, epistemology, and ontology interrelate to form foundations for rhetoric, I start with a neuroscience literature review using George Lakoff and Mark Johnson's *Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought* published in 1999. This work nicely summarizes some of the more apparent and important implications for philosophy and related fields, particularly here, rhetoric. The three above-mentioned fields have always played a vital role in rhetorical scholarship and praxis and, as it turns out, neuroscientific discoveries are presenting crucial directional shifts for foundational theories and praxis, shifts that simply cannot be ignored.

For instance, Lakoff and Johnson outline major cognitive science impacts on Western philosophy and, hopefully, culture. The authors are cognitive scientists and Lakoff is also a cognitive linguist. Not incidentally, linguistics is recognized as a science. Here are some results for 2500 years of Western philosophy:

“Reason is not disembodied, as the tradition has largely held, but arises from the nature of our brains, bodies, and bodily experience...the very structure of reason itself comes from the details of our embodiment...Reason is evolutionary, in that abstract reason builds on and makes use of forms of

perceptual and motor inference present in “lower” animals. The result is a...rational Darwinism: Reason...makes use of, rather than transcends, our animal nature...Reason is not ‘universal’ in the transcendent sense...it is not part of the structure of the universe. It is universal...in that it is a capacity shared universally by all human beings...Reason is not completely conscious, but mostly unconscious...Reason is not purely literal, but largely metaphorical and imaginative...Reason is not dispassionate, but emotionally engaged”(Lakoff & Johnson 4).

This is a lot to absorb by any standards. But for purposes of this text, the focal points are implications for rhetorical studies of neuroscience or neuroscience of rhetoric. In plain terms, here is an ontology, a paradigm that brings overly abstracted cognition back into the body. More relevantly here, distinct “discourse” communities also carry distinctive worldviews *physically* speaking. This is crucial because, as David Tietge asserts, “...science and consumerism have mutated into common goals in contemporary American society” to create a “culture of science and capitalism” wherein the “hard” sciences carry disproportionate weight (20; 21). Put simply, notions that rhetoricians have valued for some time—but that have been difficult to assert with other fields, namely the sciences—are finally gaining ground thanks to neuroscience.

An exemplary case of a major paradigm shift resulting directly from the neuroscience discoveries outlined above can be seen in Noam Chomsky’s linguistics, if you will. “Chomsky has blended parts of Cartesian philosophy with parts of formalist philosophy to form a philosophical worldview that has persisted throughout his career...In understanding Chomsky’s linguistics, it is crucial to recognize that

Chomsky's philosophical assumptions are paramount"(Lakoff & Johnson 470). Here one can readily see rhetorical implications as well as rhetorical movements. In a nutshell, Chomskian linguistics, which has been a powerful and persistent influence within the academy, embodies a paradigm that is now effectively undermined by recent neuroscience discoveries. The paradigm established and perpetuated by Chomsky is based in the Western analytical tradition, which, generally speaking, conspicuously disregards discussions about emotions.

The tome by Lakoff and Johnson cannot possibly be fairly covered here. Suffice it to say that the above statements signify some of the more vital implications for rhetorical (and composition) studies. These illuminations also directly affect potential approaches for rhetoricians as they formulate their projects.

Antonio Damasio, in *Descartes' Error: Emotion, Reason, and the Human Brain*, provides valuable insights into neuroscience, but also into how neuroscientists work and think (he is a neuroscientist). The author points up a distinct "...neglect of emotion as a research topic," and he does so with general and specific references(x). The title of a related work also hints at this strange phenomenon: Daniel M. Gross's *The Secret History of Emotion: From Aristotle's Rhetoric to Modern Brain Science*. The word "secret" in Gross's title implies a whole historical trajectory of Western, academic practices ignoring, minimizing, or otherwise marginalizing the role of emotion, placing Reason on a pedestal. Damasio's point is important because one of his book's primary goals is to explicate how emotion works with (or without) reason. With a few words, Damasio summarizes recent and specific discoveries about emotion: "...it allows the

possibility of making living beings *act* smartly without having to *think* smartly...Reasoning does what emotions do but achieves it knowingly”(xi).

Essentially, Damasio explains how emotion plays an equally important role to reason. The author describes case studies and research projects that convincingly show how too much or too little emotion is damaging. Damasio explains “...that the reasoning system evolved as an extension of the automatic emotional system, with emotion playing diverse roles in the reasoning process...Emotion also assists with the process of holding in mind the multiple facts that must be considered in order to reach a decision”(xii). These assertions indicate that too much abstracted theory—versus praxis—simply will not do anymore. Grounded research practices must also play a partner to ephemeral theoretical constructs. Tietge’s “culture of science and capitalism” emerges again here as “hard” science catches up to and validates contemporary rhetorical theories.

Whole articles may be written specifically about the affective component as it relates with rhetoric. I am only mentioning it here as a nod of respect and awareness to my audience but I will not explore this particular aspect fully.

Damasio also expresses a strong wish to pursue work with the humanities and he cites one particular point as his impetus to do so. “...the mechanisms of basic homeostasis constitute a blueprint for the cultural development of the human values which permit us to judge actions as good or evil, and classify objects as beautiful or ugly” (xiv). Homeostasis is defined as follows: “The body’s motor activity and behavior are only possible when its internal milieu is controlled to keep the component cells, tissues and organs (including the brain and skeletal muscles) maintained in an optimal environment for their function. This enables the organism to adjust its performance to the

varying internal and external demands placed on the organism” (Janig 1). Here is an instance of an “actor” living within an environment...or network. This is a communication between the organism and its surroundings to maintain, warn, or shut down the organism according to dynamic, ongoing events. Notice that the brain apparently is comprised of muscle(s), which entails that they can atrophy just as any other muscle might. Also inferred from this muscular nature is the real possibility of over-work, which may then entail any number of results, many of which are presumed to be negative for the organism.

Antonio Damasio has spurred a fair amount of controversy as he has been a prolific author in neurosciences. While I could engage any number of the debates, I only want to point out that: A. He is perfectly willing and even eager to work with humanities; and B. That his succinct explanations of how emotions work in humans—*from a neurologist’s stance*—are useful to rhetorical inquiries in any number of ways. But for my purposes here, Damasio’s explications are especially useful because they directly support Davis’s project which says that an originary rhetoricity involves an *affective* component just as much as a rational one. This is vital because, as the quote from the author above indicates, emotion and reason work together so that we may “take care of business,” as it were, without having to constantly, consciously think about all of the minutiae at every step. The basic and advanced roles of emotions in human activity also strongly suggest that certain neurological components, like so-called mirror neurons, “...allowed humans to reach for the stars, instead of mere peanuts” (Oberman et al 441). So without the crucial help of the affect along the way, I may not have arrived here to write these words.

Next, Daniel M. Gross deploys his "...polemic against cognitive scientists of emotion..." in *The Secret History of Emotion: From Aristotle's <<Rhetoric>> to Modern Brain Science*. I can confidently summarize Gross's work in two sentences. Emotions are social phenomena in addition to neurologically based ones. "...we would do better to track the history of terms such as *pride*, *humility*, *pity*, and *compassion* and see how they have been mobilized for strategic purposes..."(178-9; emphasis his). Gross rhetorically and socially analyzes Seneca, Hobbes, and others to trace political and social trajectories of emotions in history, showing how "Reaching behind the scientific understanding of emotion that runs from Descartes to Damasio and again focusing upon the rhetoric and politics of emotion gives us a sophisticated framework to talk about emotion beyond what can be revealed in a face or in a theory of evolutionary biology" (50). Gross effectively tempers the swirling effects of disproportionately physical theories about the affect in his book. This move also coincides nicely with Diane Davis's project in paying attention to an ethical relation and, more importantly here, in "reaching behind" the contents of the said to get at the meanings behind the address, the saying. When Gross explicitly refers to the "politics of emotion" he is pointing us toward ethical agendas which push and pull various disciplinary concerns as well as an array of personal schemas, all of which shape our institutions.

Section II. Rhetoric “Needs” Something...

Before explaining Davis’s project, I must pause briefly to show a pertinent need on the part of rhetorical studies to adjust its current standing and direction.

Rhetorical theory AND praxis—both together—must be cutting edge in order to remain vibrant, both as a self-enclosed entity and within the academy at large. I realize this is an obvious statement but certain “holes” or pitfalls still haunt rhetorical studies. To be certain, some rhetoricians and their work are indeed cutting edge but on average, or as a singular institutional power, something is lacking.

To explain, first let me say that strictly *within* English departments or the humanities rhetorical studies are generally seen to be perfectly valid; the trick is to convince other fields of our own validity, which requires research that is legitimate or reliable *according to their terms*. In 1990, Maurice Charland, writing from a communications scholar’s viewpoint, said “Both the emancipatory interest of rhetorical theory and the theoretical interest of rhetorical scholars would be well served by an opening to the new critical discourses within communication studies” (471). We may appreciate the gesture from Charland in the sense that interdisciplinary work is necessary for institutional validity and health...from *anyone’s* position. Enlightened self-interest reaches outward also. In the opening paragraph of his piece, Charland writes, “Rhetorical theory and its practice provide Eagleton with the means to reassert a link between discourse and *praxis*, and thus evade the compartmentalization of the “literary” within the

realm of psychological effects and personalized or romantic conceptions of aesthetics”(464; emphasis his). Note the crucial connection made between praxis and theory even if it is implicit. Institutional tensions aside, obvious nods are taken and given from both sides of this fence and with good reason.

In 1997, speaking about the narratives that thread through American English departments and other disciplines, Carolyn R. Miller wrote, “To the extent that they [rhetoricians] are opportunists, however, they are failures at the game of disciplinary politics, judging by the still precarious status of rhetoricians within the academy” (160). This statement comes from a rhetorician, so we may rule out external biases based in competing viewpoints. Enough said.

Daniel M. Gross’s *The Secret History of Emotion*...more perfectly illustrates these “blind spots.” While Gross’s central thesis is correct—that emotions are socially constructed phenomena in addition to purely neurological ones—he does not go nearly far enough. Gross is convincing to humanists but his grand conclusion is to look backward some more...just in different ways. And what does this do for rhetoric as an institution or for rhetorical inquiries into neurosciences? Quite little I think, although in all fairness I must concede that these types of institutional battles are worth fighting. My response to Gross is to align with Omar Swartz when he argues for “A teleology, as opposed to an archeology...,” an approach that operates temporally in both directions (22). Ergo, a paradigm that looks forward at least as much as it looks toward histories. Too much specialization and overly biased fracturing has created in the academy a plenitude of myopic scholarly research agendas. We need more unifying work if we are to move forward. Scholars like Swartz, Tietge, even Damasio and other neuroscientists

are supporting and manifesting such a stance. One of Diane Davis's primary goals is to unify and, while this may sound pedantic or obvious, our institutional realities speak otherwise.

Certain gaps still exist between theory and praxis within rhetorical studies, specifically here the myth of the subject still permeates classroom practices in spite of the myth having been busted in theory for some time now. Among scholars in critical theory that have convincingly shattered the myth of strictly autonomous agency, notable work includes that of Lacan and Althusser, among others. Most of my readers will be familiar with gaps between theory and classroom praxis; hence, too much detail here is not required. It is sufficient to make note of the general, aforementioned gap as applied to the specific topic of individual agency and as it may or may not be affected by neuroscience. What is important here is that this piece aims to help close this gap even further by synthesizing current neurological research with rhetorical theory.

The precise details about how rhetoricians may achieve such a synthesis remain to be seen since much of the recent neuroscience research is still inconclusive. At the same time, one thing seems fairly clear: that gaps do, in fact, persist between theory and praxis inside of rhetoric and writing classrooms in spite of our best intentions or ideologies, especially here regarding notions of individual agency or the subject.

Section III. Davis and Levinas May Marry Neuroscience

This is where Davis's project comes in because she is proposing a certain priority over a "rhetoric of the saying" versus a "rhetoric of the said" in order that the *ethical relation* be opened and explored properly(84). In this section, my aim is not to persuade readers that the myth of the subject has been effectively busted or not since this has been accomplished for some time in critical theory. Instead, my aim in this section is to explicate Davis's project, providing a summary of *Inessential Solidarity* in the hopes of revealing entrance points which may allow her goals to align with recent neurological research studies. In particular, Mirror Neuron Systems, as they have been described by recent neuroscience literature, seem to correlate with conceptions of the Other, the tropological field as Davis describes/discusses it, consciousness studies, and more. Recent theories in rhetoric and writing studies propose networked/networking metaphors for researching writing, rhetoric, and other areas (also related are "ecologies of scale" theories). MNS research directly and strongly supports such theories based in the fact that empathy has been conclusively shown to be neurologically inherent in humans, engaging each and every one of us in a vast network of intersubjectivity. Emergent identities and other emergent phenomena are also supported by MNS research, showing that rhetoric and communication is one of the fundamental forces that shapes us as humans through networks of people, media, and other forces. Davis's central thesis is that rhetoric is first philosophy precisely because we are called and obligated to

communicate with each other. Her preoriginary rhetoricity is supported and illustrated by MNS research in the sense that the language capacity, among other things, is most definitely a physiological component of humans as well as the social or cultural component. Furthermore, the empathy research coming out of neuroscience supports Davis's project strongly because one of the author's major thrusts relies upon relations between self and the other.

In the plainest possible terms, Davis is pushing for rhetorical studies to attend to *the address* of any given rhetorical interaction, in addition to the contents, meanings, or other possible interpretations of this interaction. Put another way, Davis wants us to study the fact/phenomenon that we are compelled to address each other at all. She is very clear about keeping the "rhetoric of the said" intact, giving it its due; however, she is also very clear in stressing the importance of tending to the address itself and what is "underneath" it.

Davis begins by discussing identification, drawing primarily on Kenneth Burke and Freud. She points up Freud's influence on Burke and draws out his conspicuous omission of Freud's "...less 'official' reflections on an immediate, *affective* identification with the other...who is not (yet) a discrete object or image or form" in his own theories on identification (*Inessential* 19; emphasis hers). Davis continues by extracting "...two nonharmonious Burkean drifts..." the first of which is that individual identity "...is the product of an identification with figures or symbols that reside outside my self, that the relation to symbolic structures precedes the relation to the self..." and, based on this assumption, "I am always already other than myself, nonpresent to myself, inessential" (*Inessential* 21). This aspect is essentially socially grounded. The second "drift," which

works to contradict the first, is that there is, in fact, a very real “individual.” “Indeed, for Burke, everything begins with an ‘individual’ who is individuated by nature itself...” (*Inessential* 21). This aspect is essentially materially or biologically grounded.

While *part* of the first Burkean “drift” aligns with Davis’s project—a notion of the inessential individual that is somehow eternally separate from (at least part of) the self—the second “drift” does not align with her aims. Davis’s overriding goal, in general terms, is to open up or reveal an ethical relation that serves to unify, or, in Carolyn Miller’s words, to “...construct one out of many, over and over again”(qtd. in *Inessential* 167n2). In this context, one may readily see how the second “drift” is misaligned with her work because it is essentially biologically grounded, denying the social aspects of individual identity formation. Put another way, Burke is actually guilty of what D. Gross rails against: overly neurological or biological frameworks relegating social frameworks to disproportionately subordinate levels. “But whenever Burke feels forced to make a decision, to layout the ultimate order of things, he comes down on the side of originary divisiveness...”(*Inessential* 22). More importantly here, Davis is revealing this contradiction in Burke primarily for two reasons: to establish an inessential, irreducible, and undeniably *indivisible* aspect in the individual and to work up to a discussion of Freud’s “unofficial” theories on suggestibility and hypnotherapy.

Before getting to Freud, I take a passage from Gregory Ulmer’s *Electronic Monuments* to attempt clarification on these points. “...a human being circulates around a ‘hole’; in Lacan’s phrase, ‘truth makes a hole in science.’ Goedel’s last theorem showed that ‘there is a hole in the field of science that prevents its rational unification.

On the other hand, in the field of conjectural sciences, the function of the hole is taken up by the unconscious; the two incompletenesses become figures of one another” (Ulmer 16). In other words, the subconscious acts like a black abyss, blocking me from complete understanding, but it *also* and *simultaneously* acts to connect me with you, or me with myself. The emphasized phrase above is the crucial point here because this distinction is subtle but all-important. My subconscious is indivisible—and thus inessential—in the sense that I can never fully or directly glean all of its contents but it is also *precisely* the thing that connects me with you or anyone. To put it in the simplest terms possible, speaking solely in terms of the individual, my subconscious is always in dialogue with me but this dialogue is quite opaque, like a dirty window through which I can barely discern a shadowy figure; however, the muddled nature of this ongoing, emergent exchange takes absolutely nothing away from its importance.

Davis discusses primary identification, extracting from Freud’s *Group Psychology* a “...very first ‘emotional tie’...” that is “...formative of the ego—so we’re really talking about the ‘passionate attachment,’ as Judith Butler puts it...of something or someone who doesn’t yet exist, a relation (without relation) to the other that is older than and productive of the relation to the self” (*Inessential* 26). We are officially well within the realm of emotions now. Here is one of Davis’s most crucial moves as she establishes an inessential individual born out of a preoriginary force that is, as yet, unfathomable, inconceivable to human consciousness. This “force” will, in fact, remain unthinkable in any fully direct or immediately profound way...but more on this later. The important thing here is that Davis, drawing on Freud and Burke, has established the inessential individual that *simultaneously* shares a commonality and a difference with others and

with the symbol-world which dwells outside of the self, the whole time keeping an internal dialogue with self. This point is absolutely key because simple dichotomies utterly fail. *Both* the social and the neurobiological are vital factors for identification—and *and* as approximately equal partners.

Now Davis gets into the “hypnosuggestive technique.” She explains how Freud, at the end of the 19th century, practiced this method, “...literally persuading the patient to become persuadable, affectable, suggestible vis-à-vis the hypnotist” (*Inessential* 29). Not incidentally, these are the same terms she uses to describe the preoriginary rhetoricity which precedes and supersedes everything, including all conscious interactions. But what I want to extract here is the distinction between consciousness and sub-/unconsciousness. My thesis rests on this distinction because neuroscience has recently shown that the vast majority of our waking moments, indeed all of cognition, are based in the subconscious.

In *Philosophy in the Flesh*, Lakoff and Johnson summarize this latter point. “...most of our thought is unconscious, not in the Freudian sense of being repressed, but in the sense that it operates beneath the level of cognitive awareness, inaccessible to consciousness and operating too quickly to be focused on”(10). The operative word for our purposes here is “inaccessible.” The important note here is that most of my own cognition—and so, by implication, most of my waking interactions—is driven by my subconsciousness, which is never directly/fully accessible. A simple and useful metaphor is an island. We directly *see* 10% or less of a mountain, which keeps the remaining 90% underwater and unseen. Because 90% is not seen, it goes largely unexplored, discussed,

or understood. But this does not take anything away from the reality and vitality of that 90% and how it affects other parts of its ecosystem.

Now let us equate Davis's rhetoricity and her discussions of the tropological field with Lakoff and Johnson's explications of the subconscious. Ten percent is the "tropological field"—or what may reasonably be equated with consciousness—and ninety percent is the subconscious or the "cognitive unconscious," to use Lakoff and Johnson's phrase. So in plain terms, in any given moment, in any given situation, I only have ten percent *direct* access to "my own" thinking and to "my" interactions. The reasons for quoting "my" here will become clearer below but for now let us work with this equation connecting Davis's rhetoricity and neuroscientific descriptions of consciousness and unconsciousness.

In the simplest possible terms, my own subconsciousness IS, in fact and in neurological terms, the Other, a gleaming exteriority, always driving and pulling to shape my psyche and my resulting identity. So using the tropological field, in the specific sense that Davis uses it, we may reasonably claim that rhetoric may be properly seen as a first philosophy even if we don't designate it as *the* first philosophy. The connections here are due to neuroscience research supporting claims that the language capacity and the compulsion toward communications are now physiologically, neurologically, or scientifically "proven" to be manifestations in our bodies and in our cultural identities. In other words, my *unavoidable* link with other people—with the Other—is correctly equated with my own subconscious and its link with my consciousness. An analogy emerges here of a comparison of relationships.

Let me be very clear here: neither I nor Davis is saying that this preoriginary rhetoricity is solely or only located in the subconscious. It just so happens that it has *its roots* in the subconscious while at the same time surfacing as the everyday interactions which we experience. But like I stressed above, this rhetoricity *also* and *simultaneously* has its roots in the social, perfectly concrete world. In the simplest terms, the rhetoricity that Davis is working to reveal stems from and works through the subconscious even though she does not frame it this way or discuss this particular connection explicitly. This is my connection.

A more in-depth explication of Other/other is necessary at this point to help these connections along. The bulk of *Inessential Solidarity* revolves around rhetorical theory, some sophisticated philosophies, and Emmanuel Levinas, specifically around discussions of Levinas's Other (and its partner the other). Basically Levinas is saying that there is *always* something outside "myself" that I can never fully comprehend or articulate adequately. Again, this is not just another discussion about "the play of the signifier" either. Some of Levinas's descriptors for the Other include the "gleam of exteriority" or Infinity. "...Levinas...also depicts the interruption in identification as an encounter with the other *as* other, with a surplus of alterity that I can neither appropriate nor abdicate, and that therefore calls my self-sufficiency and spontaneity into question. Levinas describes this encounter as the opening of ethics..." (*Inessential* 37).

So in a basic sense, even if we cannot fully understand or articulate Other, we may nonetheless get a glimpse of it with this summative description. Of course it gets more complex than this but these are the basics. In the simplest terms, there will always be something/someone that I will never fully understand and this realization or encounter

with the other is precisely what disrupts identification and thus opens the way for ethics but a “nonheroic” ethics vis a vis Levinas (more on this later). Also note Davis’s use of “abdicate” above. This is crucial because she (and Levinas) is asserting that we can never simply resign or get away from the encounter with the other. We may deny, suppress, repress, or the like, but this is simply a response to the other, a particular mode of ethics responding to the address of the other.

Davis moves on in *Inessential Solidarity* to work through figuration. This is where she delves deeply into Levinas and the Other/other. Essentially, Davis draws on Levinas, Heidegger, and others to assert that my (anyone’s) conception of self is flawed from the outset, limited to/by my mind’s parameters, language, and always overwhelmed by the “gleaming exteriority” that never lets me forget it is out there...its address. There is always something omitted by even the most evolved/advanced conceptions of “me” possible. This is the “radical alterity” the author refers to repeatedly, the same one that ruptures my identification and opens up ethical relations. Essentially speaking, my own idea(s) about me are severely flawed or limited from the start so that in sociocultural terms, I can never truly pin down any distinct notion of self because I was born from a particular, social world and am dynamically formed in this particular cultural context. Davis is taking us beyond “...the comforting fiction of a knowing and speaking subject...” established by and perpetuated by the academy at large, including Nietzsche and Heidegger, among others (*Inessential* 38). She is building a definition of figuration which permanently, irreparably disrupts any/all figurations of the subject.

“In Levinas, ‘the face of the Other’ signifies a trace of that which is irreducible to the tropological field, to all form and concept, to the entire territory of the said; it exposes

the trace of a relation that is even older than your reduction to the status of a figure and which overwhelms your powers of comprehension, producing in you ‘the idea of the Infinite⁷’” (*Inessential* 53). Here again, I want to equate the conscious—both in neuroscientific terms and in rhetorical terms—with the “tropological field” as Davis uses it. And I want to equate the overwhelming “Infinite” with the subconscious but in a very restrictive sense. Let me re-stress that the “face of the Other, the idea of the Infinite” is *also* and *simultaneously* infinitely more than the subconscious.

I have worked through identification, figuration, paraphrased the idea of the Other/other, and drawn out correlations between consciousness/subconsciousness and the tropological field/Other, respectively. The consciousness roughly translates to Davis’s usage of the tropological field and the subconsciousness translates into the other/Other, the timeless address. Referring back to D. Gross’s project let me reiterate that although my particular correlations may be valid, they are only one part of an incomprehensible whole. Gross essentially argues that emotions are social phenomena, neurological phenomena, and more, with his nods to the latter two aspects being implicit and subordinated to his first emphasis on emotions as social phenomena. “The More” referenced above alludes to the Other as Davis and Levinas use it, the “gleaming exteriority,” for lack of a better phrase, that is always already addressing me and creating inexplicable, inaccessible fissures in my thinking and in my ideas about self (and thusly about others as well). Gross does not explicitly address “the More” which goes beyond social and neuroscientific treatments of emotion but what is important here is the

⁷ For an interesting and compelling book on the Infinite, God, god, or any such notions, see *The Spiritual Doorway in the Brain: A Neurologist’s Search for the God Experience*. Author Kevin Nelson, M.D. speaks from a distinctly neurological perspective so this example is useful for rhetorical studies.

inconceivably complex phenomena at play and—more importantly and specifically—the *addresses* at play which are always already interrupting me, endlessly provoking a response, but also opening up the ethical relation. These endless addresses also interrupt my identification and figuration, temporarily dismantling the myth of the subject as a distinct or essential entity.

In Chapter four of *Inessential Solidarity*, Davis covers the notion of agency as it plays out for her project as well as its “trajectories” through rhetorical studies. She begins the chapter by talking about the ethical relation, which for Davis is the major stake in all of this. Davis explains how the Levinasian “...’subject’ (in his radically revised sense) is ethically *structured* so that it has already taken up responsibility for the other before it has the chance to choose” (*Inessential* 87). Here is the key move for Davis and Levinas’ rogue idea about the subject because if we recall, “I” am nonspontaneous and always at the mercy of the Other’s address. This notion stands in stark contrast to currently practiced/propagated notions about the subject.

Davis remarks, “...this phantasm is alive and well in rhetorical studies, often circulating under the name ‘rhetorical agency,’ and very frequently pegged as the fragile link between rhetorical practice and civic responsibility”(*Inessential* 87). Rhetorical theories have been working in/around a language of “constructions/deconstructions, frameworks, postmodernist, pragmatist,” and the like (the list goes on interminably) that the “language speaks” first, in Heidegger’s phrasing. In other words, the words, labels, categories, the SAID, has taken a dominant role.

Davis goes on, “...Levinas’s extraordinarily concrete explications of an always prior responsibility...” challenge currently predominant discussions and praxis revolving

around the subject and her “rhetorical agency” (*Inessential* 88). The concrete aspect noted in the quote above is also important as disproportionate power accorded theory is the target being got behind, if you will, so that we may reach the saying/the address instead of getting stuck in the said. Marilyn M. Cooper defines agency as “...the process through which organisms create meanings through acting into the world and changing their structure in response to the perceived consequences of their actions” (420). This assertion from Cooper, comparative to Levinas’s ethically structured “subject” who is always already obligated to respond, explicitly supports Davis and Levinas’s project to meditate on the saying, the address, rather than with all of the said swirling around. Cooper is also drawing upon Latour, neurophenomenology, and consciousness/unconsciousness as she explores ways of “rescuing” agency. The fact that she is mining neuro-related topoi is, like Levinas’s descriptions of the “subject,” an utterly immediate and concrete testament to the call of the saying, to the reality of Davis’s originary rhetoricity which comes before and after everything.

So for Davis, agency is a question of what is causing what, which “agent” or phenomenon is the maker and which is the made. And Davis clearly asserts that the saying or address of the other is equal partner to my own Other/subconsciousness/consciousness in creating the condition for my emergent identity. The author proposes that Levinas’s descriptions of an “...always prior responsibility offer a *nonheroic* notion of rhetorical agency that challenges even the ethical consciousness assumed by the authentically individuated Dasein that Heidegger describes in *Being and Time*” (*Inessential* 88; emphasis mine). This nonheroic aspect which Davis mentions and Levinas explores is what needs to be built up among rhetorical

studies to shatter a heroic image of the agent. This same aspect also serves to “make one out of many,” bringing rhetoric into a more well-rounded light wherein rhetors are no longer seen as inordinately influential monads, but as interactive participants in a constantly evolving situation.

Davis continues, “My very subjectivity is an *effect* of ‘my’ subjection to and assignation by the Other...” (*Inessential* 108; emphasis mine). Here we may see the interplay between cause and effect, condition and emergent identity. Whereas in many current writing classrooms the rhetor is still treated as an agent—and this claim is explicitly supported by Davis—she and Levinas work to show us a rhetor that is only partially autonomous, caught in this experience which demands us to participate, thereby interactively working with the rhetor to create emergent identity. In this light, individual agency takes on a much more well-rounded and connected sense.

There are obviously many implications, questions, and complexities to be addressed in all of these discussions but if readers can more or less understand my explanations of Davis’s (and Levinas’s) figuration wherein the subject’s very identity is called into question then we have a necessary and sufficient foundation on which I can build my thesis. The single most important connection by far that I am making is the one between Davis’s topological field/the Other and consciousness/unconsciousness, respectively. This is because the vastly complex notions about rhetoric, rhetoricity, consciousness, and subconsciousness are now being more readily adopted by the academy at large, namely the sciences. In plain terms, theories regarding the above-mentioned topoi that have been valid for many humanities professionals for years, even centuries are finally being treated as valid by the sciences.

As far as any discussions of the Other, the other, the Infinite, or any such ideas, Davis's primary focus is on others *outside* self. She does refer to the other within me that is always inaccessible and irreducible, but this point is secondary to her primary goal of drawing out the disruption in my own figuration that is caused by others outside. I am simply dwelling with and extending her references to the other within the self to show how, even if I am the only person—even if I never communicate with another living person—I am still addressed by an Other. Thusly, do I productively support and extend her central thesis that a preoriginary rhetoricity is always already addressing me, even when I am the only person in the world. This rhetoricity defies clear explanation but the important aspects to note here are that it is always already present, it always is addressing and disrupting, opening up the ethical relation, and it precedes and supersedes me, you, us, and everything in between.

When Davis discusses the language relation, she is connecting with and supporting current neuroscientific understandings of language, whether intentionally or not. “In an essay called ‘Language,’ Heidegger emphasizes that language is not simply ‘a human faculty,’ as humanism wants/hopes, but that language *itself* speaks—if ‘language *speaks*,’ he observes, ‘this means at the same time and before all else: *language speaks*’”(Inessential 44; emphases hers). This claim points to an Other in the self, specifically the cognitive unconscious, the one that I am exposing here, in addition to supporting any/all notions of the other/Other drawn out by Davis and Levinas.

Also, “The philosophical assumptions behind Chomsky's linguistic theory are almost entirely inconsistent with empirical research on mind and language coming out of second-generation cognitive science. That research indicates that the syntax of a

language is structured...not independently of communication, but in accordance with communicative strategies, not independently of culture, but often in accord with the deepest aspects of culture, not independently of the body, but arising from aspects of the sensorimotor system...”(Johnson & Lakoff 479). Of the three “nots” above, the first lends currency from “hard” science to Davis’s rhetoricity as well as many rhetorical theories, thus opening potentially infinite doors for rhetorical inquiries into neuroscience and vice versa; the second “not,” perhaps surprisingly, directly and clearly lends currency to existing cultural theories; the third “not” lends currency to Davis’s affective aspects of her rhetoricity.

Throughout all this and not incidentally, one can easily see the constant addresses and responses. *All* of these model and illustrate Davis’s explications of/emphases on the saying, versus the said. In addition, the adjustments in philosophical approaches/foundations being made across disciplines support her emphasis and the quite concrete existence of the ethical relation.

“...Hickok also argues for a two-stream circuit for phonological processing, one dedicated to speech recognition and the other to speech production”(Caramazza 766). Hickok is a neuroscientist and this quote is from an anthology published in 2009. While “...it is clear that we are still very far from an articulated theory of the biology of language,” this theory from Hickok provides strong evidence supporting the hermeneutic dimension of rhetoric as well as the performative/productive dimension(Caramazza 766). Chapter 3 of *Inessential Solidarity* covers the hermeneutic dimension of rhetoric, obviously supporting hermeneutical treatments and approaches along with performative/productive dimensions. Even from the stance of traditional rhetoricians—

Little Rhetoric—that fight to keep the hermeneutic dimension out of the picture, gaping holes are easily cut out of their arguments. “In classical rhetoric, the doctrine of imitatio marked the most obvious intersection between the reading of texts and the production of persuasive discourse...within the larger program of rhetorical education, imitatio allowed interpretation to play a vital role in the formation of rhetorical judgment”(Leff 97). As discoveries like Hickok’s continue to engage rhetorical studies with neuroscience, Little Rhetoric should eventually give up the fight and Sophistic rhetoric, Big Rhetoric, or any rhetoric can live freely in the light.

The ultimate goal for Davis and for my work here is to establish and draw attention to a rhetoric of the saying. That said, one particularly crucial task is to effectively shatter the “myth of the subject” to the point where practices in writing classrooms fully align with critical theory, which already supports the destruction of the myth of the subject. For Davis and Levinas, the “...’subject’ is ethically structured so that it has already taken up responsibility for the other before it has the chance to choose...neither I nor the other is an enclosed entity but...both are already exposed, posed in exteriority, radically non-selfsufficient...”(*Inessential* 86). In terms of figuration discussed above and as plainly as I can possibly put it, there is both a subject and no subject, simultaneously. But the subject that does “exist” and is always partial, always part of an infinitely larger whole and in this way, effectively disfigured, eluding any easily determined/described locus. The most concrete or accessible subject is the physical, biological one but even here, any idea or description of such a subject can only

be partial due to the ongoing, emergent nature of this subject, as well as the constant and compulsory effects from the Other.

Although some disagreements still persist among neuroscientists regarding hominoid versus human brains, some evident similarities have been agreed upon. “Although basic principles of cortical development are probably similar in all species, the modifications of developmental events during evolution produce not only quantitative changes..., but also many qualitative changes...”(Chalupa & Rakic 3). This relatively simple statement alone reveals the simultaneous uncertainties and definitive patterns of similarity to be found among humans and other species. Essentially speaking, however, any differences or similarities between humans and primates or other mammal species can be assuredly summarized with Todd M. Preuss’s words in a recent chapter on “The Cognitive Neuroscience of Human Uniqueness.” The author states that “First, evolutionary biologists now understand that living species cannot be arrayed along a single, unbroken sequence of phylogenic development: species can differ qualitatively...methods are being used to directly compare humans to other species (including chimpanzees, the species most closely related to humans)...providing...a...detailed account of how the human brain both resembles and differs from that of other species” (Preuss 49).

As we can see in the paragraph above, much is still uncertain. However, Chalupa and Rakic, writing the introduction for the section on development and evolution in *The Cognitive Neurosciences* fourth edition, essentially point up conclusive and striking differences between humans and *rodents*, the species which, according to the authors, has provided the vast majority of advances in “...our understanding of the cellular and

molecular mechanisms of cortical development...”(Chalupa & Rakic 3). My point here is that the authors, throughout *The Cognitive Neurosciences*, are very careful to rarely, if ever, cite any definitive differences between humans and hominoids. Such a distinct omission may reasonably be read as a statement that there are, at the very least, some definite and important similarities. Indeed, Chalupa and Rakic assert that “...these studies may help in understanding the...high level of cognitive ability that is achieved during primate evolution culminating in humans” (4). Note the operative use here of the words “during” and “culminating.” For this reader, it is fairly evident that in terms of evolution, we come from hominoids and capacities like language or empathy are also probably shared, even if the exact quantitative or qualitative nature of such similarities is not yet understood.

The term “hominoid” is used to describe—somewhat roughly here—apes, chimps, humans, and closely related species. “Since certain human brain functions appear to be highly lateralized compared to nonhuman primates, it’s natural to suppose that the well-documented anatomical asymmetries of the human brain...must also be human-specific” (Preuss 53). Note the fairly obvious use of tentative language here which belies the fact that beyond general agreement that humans have “...very large brains...there have been few points of general agreement...Apes, however, possess at least some of the asymmetries seen in humans...” (Preuss 53).

Put simply, long held academic theories that “articulate a strictly human(ist) description of the language relation, presuming that the gulf that separates ‘the human’ from ‘the animal’ is uncrossable...” must be effectively worked with—both in theory and in classroom praxis—to reveal the artificiality holding them up (*Creaturely* 88).

Promising neuroscientific discoveries like the link made above between apes and humans are emerging that should do well to expose the myth of the subject by way of closing the gap between “human” and “animal.” This task is required before a fully cogent rhetoric of the saying can emerge among academics. “...in the beginning was rhetoric, neither as genetic attribute nor as art or science but as an underivable provocation, an imperative to respond. Animals, human and nonhuman, are corporeal creatures, exposed—open to the other’s affection/alteration—and so obey this ‘rhetorical imperative,’ as I have called it elsewhere”(Creaturely 90). Here Davis is exposing the unreachable aspect of rhetoricity that eludes us. I must stress that in this particular passage, Davis is speaking to one specific aspect of rhetoric. She is not saying here that rhetoric is *only* an “underivable provocation,” not by a long shot. The author is simply working to keep our attention on the undeniable, ever-present *address*, the rhetoric of the saying, thusly her “presence” emerges in this piece in the sense that Alan Gross propagates in *The Rhetoric of Science*. Rhetorical presence and the said work together to perpetuate the myth of the subject “...who understands the world and communicates that understanding with eloquence and grace...” (Creaturely 88).

Precisely because our world is ongoing and dynamic and precisely because my identity is emergent and at least partially tentative with said world...precisely because of these phenomena we must work with rhetorics of the saying/address in addition to rhetorics of the said if we are to productively synthesize neuroscience findings with rhetorical studies. I must also stress here that critical theory has long held the subject to be a myth. It is only certain classroom practices which seem to need to catch up with criticism/theory. But MNS research, empathy research, language, social, and other

research coming from the neurosciences can be usefully deployed to exploit syntheses between rhetoric and neuroscience in order that rhetorical studies gain significant recognition or validity from the hard sciences. If the neuroscience work is handled with care, there is no reason why rhetoric cannot grow into a role of wider academic recognition and respect, thereby transcending much of the controversies surrounding Little versus Big Rhetoric or any other political/ethical wars with any academic departments.

A. Gross, working at the end of the 1980s, elaborates the “...New Rhetorical concept of ‘presence.’ Through presence, writers place ‘certain elements’ in their discourses, those on which they ‘[wish] to center attention,’ in ‘the foreground of the [reader’s] consciousness...” So according to A. Gross, first and before all else presence is “...’a psychological phenomenon’...” (42). These articulations of presence clearly speak to Davis’s thesis that an originary rhetoricity manifests an affective component *also* and *simultaneously* with a strictly intellectual one. This, in the sense that I am responsive, *interactive*, language-driven. And it is this interactive element which we are exploring in order to see how current neurological claims may be constructively merged with critical rhetorical theory/praxis.

In a very real sense, the distinction—or at least any complete and final distinction—between humans and the rest of the animal kingdom is utterly and wholly artificial, as well as the designation upon communicative capacities that places humans in some sort of superior or radically different role compared to other animals. This is my claim as well as that of other scholars and critical theorists. And yet, the mythical or artificial separation of humans from the rest of nature still persists as evidenced in the

following statements. “The faculty of language is a cognitive ability that only humans possess” (Craighero & Fadiga 101). This assertion is simply false but it is up to rhetorical studies and the academy *as a whole* to reach a consensus on this. This statement was written by a team from the Department of Neuroscience at the University of Ferrara and it shows what Daniel Gross so aptly reveals: that neuroscientists think, speak, and write from a neuroscientist’s stance. Most people would agree that other species communicate but apparently many disagree about how to define or work with such communications.

The authors at the University of Ferrara make the claim—*in the very same breath*—that the origin of human language most likely “...derives from...gestures,” the only other contender for origin being the “animal’s call” (Craighero & Fadiga 101). In other words, the researchers are placing a disproportionate amount of importance on the role of humans, as opposed to other animals. But they are also contradicting themselves since “animal calls” and physical gesturing preceded any forms of orality and are common—then and now—to both humans and other animal species. The primary point here is that rhetoric is, in fact, just as physical as it is cultural, social, or any other strictly non-physical trait.

Apparently, according to these authors, only human gestures qualify as communication. The highly elaborate and complex communication systems of dolphins or whales, if we believe the authors’ blatant claim, do not make the cut. An obvious and unsettling separation between “human” and “animal” is found here and while the reasons or intentions behind such distinctions is understandable, we have learned enough to now synthesize this separation back into something more cohesive, both in theory and in

praxis. Put another way, even if the myth of the subject is effectively busted for rhetorical theory or critical theory in general, it is still to be witnessed in our writing classrooms, alive and well, as evidenced by Diane Davis's testimonies. The myth also persists in neuroscientist paradigms and literature, some more than others. Thusly, some sorts of alignments or cohesion are still needed between rhetorical/critical theory on the one hand and classroom practices and neuroscientific paradigms on the other. More precisely, the social and physical impulses behind, between, and trailing ever after "animal" communication may be more properly explored now thanks to recent neuroscience research which opens the doors toward more well-rounded or sophisticated manifestations/notions about agency or the subject.

Interestingly, the authors rely on Mirror Neuron Systems to elaborate their initial claims about origins of communication. This reliance builds their rhetorical presence and help to perpetuate the myth of the subject in neuroscientific writing. But it also supports my thesis in that gestures are rhetorical moves; rhetoric is first philosophy precisely because we bother to gesture at all and not solely because of any messages involved. The rhetoric of the saying has been in our *flesh and blood* since our very birth; long before orality was born the address was calling, obligating, and drawing forth a response. Today the rhetoric of the saying is ready to be explored and explicated in some reasonably balanced light. The rhetoric of the said is almost dead from too many beatings...from too much focus and disproportionate emphasis. Our rhetorical movements and identities are formed and forming through both neurophysiologic and sociocultural forces. We need to explore how and why this matters to rhetorical studies now.

On this note, let us explore neurological studies of empathy as they may or may not relate to rhetorical studies. As it turns out, the turn toward the face of the Other is very simply in our blood, so to speak. More specifically, Davis's central thesis that a preoriginary rhetoricity precedes and supersedes epistemology, philosophy, or other fields finds mooring in neuroscience work on empathy. In addition—and perhaps most importantly—Davis's work is upheld in another sense by neurology studies, which is that notions of an originary rhetoricity seem to be scientifically validated in many of these projects. Lakoff and Johnson's tome is a distinct example but so too is much of the work on Mirror Neuron Systems and empathy, among others.

Section IV. Empathic Networking

Empathy forms the backbone and heart of what this piece works toward.

Empathy, as noted above in the introduction, is being studied by neuroscientists and some rather revelational research findings are bubbling to the surface. Although many denotations of empathy vary, most of them circle around a capacity or desire to understand another.

In an article titled “Motor Cognition and Its Role in the Phylogeny and Ontogeny of Action Understanding,” Vittorio Gallese et al assert that “Social life rests in large part on the capacity to understand the intentions behind the behavior of *others* (Gallese et al 103; emphasis mine). The question here is this: why are we compelled to communicate with each other at all? More specifically, how do such claims and research affect rhetorical studies, if at all? At the very least, a large part of the answer is that rhetoric/communication/language is in our brain, our neurology, and in our bodies. It doesn’t get much simpler than this. For our purposes here, this means that all of the debates surrounding rhetoric and communication are faced with an undeniable challenge, one which appears to be saying that rhetoric and communication is a natural part of our physiology. The controversies start arising when binaries are thrown around, as in D. Gross’s book. My central claim is that rhetoric is first philosophy—or at least on roughly equal footing with other disciplines like ontology that have held sway—*because* it is embedded in our brains/bodies and because it is an appropriate term for the

misunderstood or little understood impulses driving me to communicate with others in the first place...Davis's "originary rhetoricity." More concisely, rhetoric is *both* physiological and cultural. Neither realm takes precedence; instead, these binaries are roughly equal partners in an ongoing, emergent experience. Thus we may see how the arguments around social vs. scientific, cultural vs. physical may be rendered null and void. Put simply, the contained meanings or messages of the said distract us from the primary, fundamental fact that language and rhetoric is a physical force first; not in place of or any less importantly than sociocultural forces but simultaneous to/with the purely physical. The question for rhetorical studies now is, "Exactly what shall we do with this?"

A simplified answer to this question is to take up Davis's call to further break down the myth of the subject and the "human" versus "animal" distinction, thus resolving the "problem of agency"...and then to explore the rhetoric of the saying in order to bring it into the light as equal partner to the rhetoric of the said. Exploring empathic networks, as I term them here, will help to achieve these tasks. My identity is most properly seen as participant in a network which is analogous to the "webs" that I have alluded to previously. More particularly, my alleged agency is formed by *interacting* with others, as well as being determined by my own subconscious, which, recall, is properly viewed as an Other. In this light, a team metaphor may be appropriately seen to be shaping my rhetorical agency, contrasted with a conception of agency which places most, if not all, power—both rhetorical power and that which constitutes my identity—with myself alone. Other helpful work that deals from these contexts is literature on emergent

phenomena, emerging networks, and anything focusing on the emergent realities of our identities.

Indeed, a neuroscientific article on empathy displays a subheading titled, “A shared network hypothesis of empathy,” implying emergent states (Leiberg & Singer 975). Keep in mind that my end goal in this piece is to mine any potential connections between current neuroscience and rhetorical studies. In this context, another, more specific end goal is to draw out rhetorics of the saying/the address and the ethical relation. With this in mind we may begin to look at some recent neuroscience research into empathy as it helps to show how rhetoric is, in fact, embedded in us physically, in addition to any entrenched sociocultural aspects.

“Motor cognition finds its neural substrate in brain areas involved in matching action perception and action execution (the mirror neuron system [MNS])” (Gallese et al 103). The Mirror Neuron System works to catalyze or convey the ethical relation and to embody it. According to Davis, Levinas’s “singular insight” is that “...it is precisely to the extent that you are a bodily creature that you are...an ethical subject...” (*Inessential* 150). Perhaps one of the primary difficulties lies in the seemingly paradoxical nature of this networked, emergent identity, wherein I am both and simultaneously making my own decisions as well as being influenced by others. For now it is enough to admit that the address of the Other *absolutely* obligates me to respond and that, in this sense, I am beholden to an originary rhetoricity, a force which is bigger, older, and—more importantly here—more physically based than might have been supposed to this point.

Leiberg and Singer go on to define empathy, stressing four aspects given by other neuroscientists: "... (1) the presence of an affective state in ourselves, (2) isomorphism between our own and another person's affective state, (3) elicitation of our affective state upon observation...of another person's affective state, and (4) knowledge that the other person's affective state is the source of our own affective state"(974). While I take issue with the last point, I will ignore it for reasons of propriety and only stress the interactive, networked connections being made in this definition, connections which stem from and emerge into identity and figuration among other things.

One important note here is that these authors make it a point to clarify distinctions between empathy and other terms or conditions which often get confused with each other. For instance, "The term *mentalizing* refers to the drawing of inferences about other people's mental states, including their affective states, but it does not entail emotional involvement" (Leiberg & Singer 974; emphasis theirs). In this clarification, we can see an important role for the affect as it pertains here. As Damasio states, "...it allows the possibility of making living beings *act* smartly without having to *think* smartly..." (xi). The mentalizing distinction is important because emotions do play an equally important role to the intellect. And if rhetoricians or neuroscientists are misinterpreting each other's works because they are only mentalizing and not empathizing...well, one may imagine the potential damage.

Leiberg and Singer list three other distinctions between empathy and similar phenomena and then summarize qualifications of their definition of empathy by stating that "...only the co-occurrence of the above-mentioned factors makes an affective experience an instance of empathy" (974). The team goes on to explain that "...recent

fMRI studies on humans in the domain of emotions and empathy suggest that neural networks with mirror-like properties are not restricted to the motor domain or confined to the prefrontal cortex but extend to other brain areas such as somatosensory and insular cortices. Thus evidence is accumulating for the existence of shared neural networks for facial expressions, sensations, and emotions...” (Leiberg & Singer 975).

The authors continue in this vein to propose similarly framed arguments, specifically citing mirror neuron research. The upshot here is that this particular article—and it is far from alone—essentially supports D. Gross’s claim that emotions are socially constructed and situated, *in addition to* being strictly neurological or physical, as some neuroscientists would have us believe. The crucial aspect to keep in mind here is one’s emergent identity, which is formed *through* an originary rhetoricity. As I noted above, one’s subconsciousness plays a role in addition to one’s interactions with others. I want to propose here that my subconsciousness is, in fact, an Other. This is not a new idea but in this context, above and beyond the particulars of any arguments, we may see how I am always faced with an Other, regardless of anyone outside myself. All of this shows how rhetoric is, in fact, a very real force based in our bodies as well as our cultures and social networks. If empathy is how we learn and grow as humans, then rhetoric is one of the primary and requisite tools with which we accomplish said growth. Now we have some very strong evidence for linking a physical rhetoric, if you will, with sociocultural rhetorics.

This is the crucial link for this piece because we may begin to see how Davis’s originary rhetoricity is quite real and valid, not just in a rhetorical sense but also in a neurological sense. Precisely because my subconsciousness is both inaccessible and

driving the vast majority of my thinking—and actions—we may grant credence to this originary rhetoricity and to the Other as it never stops interacting with me. Put simply, an indissoluble entity is always with me (subconsciousness/Other/alterity et al), always driving before and trailing after my every move. This entity or force may be glimpsed but never fully or directly accessed, which means that I am forever compelled to explore it in the interest of self-preservation or simple self-interest.

In these contexts, we may see how neuroscience, particularly mirror neuron research, has provided a firm and undeniable foundation for conceptions of self/identity which are networked, emergent, and interactive. Fleckenstein et al push for an “ecological metaphor for writing research” that directly correlates with and supports such conceptions. “Such a metaphor conceives of activities, actors, situations, and phenomena as interdependent, diverse, and fused through feedback” (Fleckenstein et al 388). I only wish to add that praxis must be just as crucial as theory or research. Omar Swartz explicates this particular point brilliantly as he stresses the importance of teleological work that complements worn out and much favored archeological work. Archeological methodologies will always have their own distinct functional value but for our purposes here, rhetorical studies absolutely must look forward if we are to capitalize on this recent neuroscientific research.

Supporting such a manifesto, Riitta Hari, a brain researcher, explains how “...the progress of human brain research has rather relied on ‘bottom-up’ approaches, starting from detailed descriptions of sensory functions”(89). She goes on to contrast this approach with “...’top-down’ thinking that assumes that the organism’s experience about the world...leads to strong expectations, hypotheses, and predictions of the forthcoming

events” (89). Hari’s crucial point here is that among brain research progressions or patterns, “...the pitfall is that the methodologically limited practices of research may bias the scientists to think that the percepts and higher cognitive functions are realized *only* in a bottom-up way...” (89; emphasis mine). In other words, Hari is admitting to scientists’ particular biases, thereby alluding to an *ethical relation* which has emerged.

I read Hari as first recognizing these biases and then opening up an ethical relation in a teleological effort to constructively help her field and her fellow researchers. Put simply, she is looking forward in the interests not only of neuroscience, but also of society. More importantly and precisely to the aims of this project, she is *exposing* Davis’s ethical relation, thereby *embodying* and supporting Davis’s project and mine. *At least* as important as what is being said here is the saying.

The ethical relation—in the sense that Davis means it—is exposed in much more transparent, straightforward ways within the same anthology that Hari’s piece appears in. The truth of this statement is found in key terms, titles, and subheadings throughout the anthology... terms like “intersubjectivity, the intersubjectivity matrix, et al.” The term “matrix” especially alludes to the highly complex nature of these phenomena and to “ecologies of scale,” as Collin Brooke has used the term in his work on “new” media rhetorical studies. At any rate, if we work from our new stance which assumes that I influence my world just as my world influences me—the radically revised Davisian/Levinasian ‘subject’—we may see clearly how such a subject emerges.

In an article titled “Intersubjectivity before language: Three windows on preverbal sharing,” the intersubjective relation precedes any language, communication, or verbal relation. Authors Brooks and Meltzoff, working from departments in

psychology/learning/brain sciences, discuss the “myth of the asocial infant,” working up to “...the modern-day findings of an innate intersubjectivity...” which sees “...a deep connection between self and other” (150). Davis’s stress on Heidegger’s language explorations echo back to us here. If language speaks, this means, *first and foremost* that language speaks. There is something important behind, throughout, before, and underneath the said...this is the *saying*, the *impulse* behind the language which can only be glimpsed, never fully grasped. Also apparent in this article is the role of empathy as it relates with rhetoric, which is an embedded tool with which we work *through* relations. Empathy and rhetoric are in our bodies and we use them to first survive, and then to grow and thrive.

The authors continue as they discuss three distinct phenomena, including “action imitation, (b) joint visual attention, and (c) sensitivity to intentionality”(Brooks & Meltzoff 151). The second aspect alludes to visual rhetoric but I only want to point up the primary emphasis on intersubjectivity and our understandings of this concept as it has evolved through philosophy, neuroscience, psychology, education, and rhetorical studies. In the most concrete terms possible, here is Davis’s originary rhetoricity as it unconceals itself in so-called intersubjectivity. Here is neuroscientific evidence of the rhetoric of the saying in the form of mirror neuron systems and plain language use, as in the following assertion by these authors that “Philosophers such as Husserl...and psychologists such as Baldwin and Mead refused to portray the human from an ‘isolationist’ perspective and saw a deep connection...” (150).

I can never *not* respond, to use language that populates *Inessential Solidarity* thoroughly. And my response is to say that rhetorical inquiries into neurosciences must

be cultivated exactly as that, rhetorical inquiries. This means that I open myself to the other, to the presence of neuroscience as well as recognizing my own limitations, specifically here my subconscious which is still an Other remember. But I must first transcend my subjugation to the myth of the subject by understanding that, “Though introspection is useful, the brain is not rigged to directly know much about itself...Once philosophers appreciated that the seemingly invulnerable truths of intuition were all too vulnerable, conceptual analysis as a method stumbled to its knees(“The Impact of...” 409). In the simplest terms, I may either realize—and thusly actualize—my physical limitations or I may resist, deny, or otherwise not-actualize them, allowing myself to “stay behind.” I must come to see myself in some sort of reasonable or balanced manner.

If some of these discussions seem inaccessible it is because they are inherently so: the vast majority of our thinking is driven by the subconscious, which can never be fully or directly accessed. This is how/why metaphoric or paradoxical cognition is important because the phenomena being played out are *at least* two contradictory “things” at the same time; that is these “things,” these aspects *seem* contradictory precisely because of the way in which the human brain is built. But for our purposes here it is enough to recognize that an ethical relation and an originary rhetoricity do exist and they are worth the pain and frustration of *full* exploration.

Rhetorical studies would do well to take up Davis’s call to pay attention to the rhetoric of the saying because neuroscientific work such as mirror neuron research, empathy research, intersubjectivity research, and more, is finally and directly supporting many of the long-held beliefs/paradigms which have occupied rhetoricians for centuries...or at least decades. Network research by authors like Spinuzzi, Fleckenstein

et al, and others may be directly supported now by neuroscience research like the types mentioned above. This is no small thing but we must be very careful to pay attention to the rhetoric of the saying, *at least as much* as we pay attention to the rhetoric of the said. If we stay caught up in the words, meanings, or emotions of our arguments we are doomed to stay trapped in non-constructive cycles, cycles which, not incidentally, should be fairly self-evident by now to most rhetoric and writing scholars.

Much more exciting new work from the neurosciences is available which supports my basic arguments here but consider this: if ontology is the study of the nature of being and a vital and apparently undeniable part of our being is an originary rhetoricity, then does it not follow that rhetoric has a more prominent, a more physically-based role than some scholars may have presumed? If we follow the logic of neurophilosopher Patricia Churchland, we can readily see how many of the loci of our debates are actually moot points now that we have firm scientific evidence for the purely physiological roots and affects of rhetoric. Lakoff and Johnson say “Philosophy in the Flesh,” but I say “Rhetoric in the Flesh.” Philosophy is a name for something which still must defer to the rhetorical or communicative impulse, without which there would be no “philosophy.”

Section V. Conclusion

I mentioned at the outset that one of the vital stakes here for rhetorical studies is the very definition of rhetoric. This point cannot be overstressed because the institution of rhetoric is poised to capitalize on some rich opportunities. The most crucial stake within this context is how the academy *at large* defines and views rhetoric. More interdisciplinary work with the neurosciences is certainly important but I would say that perhaps even more important is the *nature* of such work. This is where Davis's ethical relation and originary rhetoricity comes into play, not only because rhetoricians bring their own biases to the table just as neuroscientists do, but also because our emotional development—or lack thereof—can and will affect how things play out. I realize this is a loaded statement but suffice to say that our emotions exist for a reason and we have to work together. As Davis puts it, “This is Levinas’s singular insight: it is precisely to the extent that you are a bodily creature that you are both an ethical subject and ‘in a certain sense an idiot’” (150). In other words, we can be right or we can be happy.

On a broader note, where physical, theoretical, and political boundaries separate us, mirror neuron research and other brain studies will, most likely, eventually fuse us, for better or worse. M. Chorost’s “World Wide Mind”—wherein humans are connected to each other and the internet via nanowires in the brain—is a very real possibility because the current status of social networks via the internet forecast it and because the

technology is either already here or soon to be available. I'm intentionally trying to scare us a bit because I personally like being human and don't want to become a machine.

So rhetoric, communications, or language impulses are part of our bodies just as much as they are part of our cultures. It is up to rhetorical scholars to take this how or where they may but I feel that I have opened up some vital entrance points into the relation between neuroscience and rhetoric. Even if we may never fully understand our brains and our minds, we can safely assert that rhetoric is just as much a physiological phenomenon as it is a social or cultural one. This apparent fact is enough to work with as we move through some strange days ahead. Rhetorical scholars and professionals should listen *and* hear—which, most would agree, are two different things—to neuroscientists like Damasio when they express genuine desires to work with the humanities (Damasio is far from alone, not incidentally in this desire).

Section VI. Works Cited

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