Consciousness in Interdisciplinary Perspective

Discussions from the Hall Center for the Humanities Fall Faculty Colloquium 2011

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Introduction: Consciousness in Interdisciplinary Perspective:

During fall semester 2011, nine University of Kansas faculty members and one graduate student gathered around a conference table to think about thinking. Each year, the Hall Center for the Humanities grants a group of scholars the opportunity to pursue a topic of collective interest under the auspices of the Center's Fall Faculty Colloquium. In 2011, participants from a variety of humanities, social science and science disciplines focused their discussions around an elemental and often unexamined facet of nearly every human life: consciousness, meaning our moment-to-moment awareness of ourselves and our surroundings. This volume records the product of those conversations.

Defining consciousness is a difficult task. As we read, we noticed that writers often remark on the irony that consciousness is utterly familiar to each of us, yet eludes our efforts at description. In their quest to convey the mystery and complexity of an ever-changing phenomenon whose existence creates the necessary condition for its study, they often resort to analogy and metaphor. The neuroscientist Antonio Damasio, for example, likens consciousness to a "grand symphonic piece" that somehow creates its own conductor—the knowing, conscious self—from the varied orchestra of functions in the neural matter of the brain. "The oddest thing," he writes of consciousness, "is the conspicuous absence of a conductor before the performance begins." It's the musical performance itself that eventually generates "a conductor…now leading the orchestra." The tones contributed by each neural "instrument" and guided by the conductor "[build] a mind capable of encompassing one's lived past and anticipated future, along with the lives of others added to the fabric and a capacity for reflection to boot." Using the analogy of patterned, Western polyphony, Damasio attempts to describe the complexity of human awareness as "the execution of a symphony of Mahlerian proportions"— a process of which the thinking subject is both product and agent.[1]

Consciousness may resist definition, but as the basic condition for inquiry it is clearly implicated in any humanistic project; this alone made consciousness an inviting topic for the kind of interdisciplinary dialogue the Fall Faculty Colloquium program seeks to promote. As participants discovered, reflecting on consciousness raised a host of fascinating, foundational questions about all knowledge: how do we as living organisms come to know the things we know? How do we communicate our thoughts, feelings, and experiences of the world with others of our kind (and, potentially, with beings of other kinds)? How different is the symphony playing in someone else's head from the one my "conductor" directs?

Such questions, of course, have been the subject of philosophical inquiry for millenia. Nevertheless, the disciplinary training most scholars receive tends to relay assumptions, in the form of basic theories and methods, that bracket these foundational questions about perception and

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[1] Antonio Damasio, *Self Comes to Mind: Constructing the Conscious Brain* (New York: Pantheon Books, 2010), 23-24.

understanding in the service of building more specialized knowledge. The disciplines that organize the pursuit of understanding are aptly named, as they are ways of imposing order—disciplining—processes of perception and cognition. An art historian, for example, sees a painting with eyes that function like those of other human beings. But her cognitive approach to that particular visual stimulus will, at some point, reveal the imprint of her training to look in specific ways, and perhaps to feel and react in characteristic fashion. Disciplines, in other words, shape perception and understanding as tools of their trade. They define the kinds of questions deemed worthy of asking and what counts as evidence to answer them. In response to these deeply ingrained scholarly habits, the first goal of the colloquium was to "unbracket" foundational questions about perception, feeling, judgment, decision-making and other aspects of consciousness. We turned our attention to the elemental functions of minds, those that are basic enough to proceed each discipline's characteristic modes of analysis. Why does the eye go there first, for example, or why is a line of poetry about that long, no matter what language the poet speaks? We hoped that taking a momentary step back from our disciplinary ways of knowing might facilitate more deeply interdisciplinary dialogues than those permitted in everyday scholarly exchange. We also thought this approach might prompt participants to take a fresh look at the assumptions built into their own specialized disciplinary projects, with potentially innovative consequences for their research.

Broader developments in the scholarly world also fed our interest. It is hard to miss the fact that consciousness has become fashionable. The quest to understand how material brains give rise to conscious minds has risen to the top of scientific agendas, spawning an exciting and productive realm of interdisciplinary investigation most commonly known as cognitive neuroscience. Few subjects of "hard" scientific research have made a greater splash in the popular media. Observers of this trend cite a variety of reasons to explain attention to a problem that was, for much of the twentieth century, marginalized as inimical to rigorous scientific study. For one, technological advances like the development of the functional MRI scanner have opened up new possibilities for scientists to study brains in action. Mental functions that once were accessible only through the (subjective) report of the brain's owner now seem amenable to observation, at least indirectly, in their correlates of blood flow and neural activity. Second, perhaps personalities or celebrity plays a role in explaining how consciousness has come to the fore. Consider the influence of English molecular biologist and Nobel Laureate Francis Crick. Honored for his work with DNA in the 1950s, Crick turned in his later life to the study of consciousness. His involvement lent important credibility to this scientific project in the decades before his death in 2004. With his research partner Christof Koch, Crick stridently rejected the notion that consciousness was properly a philosophical rather than scientific problem: "the time to start the scientific attack is now," they wrote in 1998, especially since philosophers "have had a very poor record, historically, of arriving at valid scientific answers."[2] Science, these scholars argued, could no longer afford to leave a topic as essential as consciousness by the wayside.

Claims about the potential breakthroughs that would come from this scientific trend have been bold. One reviewer heralded advances in cognitive neuroscience as "the most exciting set of

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[2] Francis Crick and Christof Koch, "Consciousness and Neuroscience," Cerebral Cortex 8 (1998): 97-107.

discoveries about the mind in human history."[3] Philosopher Colin McGinn, although skeptical that neuroscientists can truly deliver on their promises, has nevertheless painted the field as the crucible of a new scientific revolution, calling renewed attention to consciousness "the next big phase in human thought about the natural world, as large as the determination to understand the physical world that gathered force in the seventeenth century."[4] As McGinn's allusion to a revolutionary change in our understanding of the natural world indicates, many observers suggest that developments in cognitive neuroscience herald something much more culturally profound than more accurate and detailed descriptions of neural function. All the more reason for humanists and social scientists to take note.

Yet, as neuroscientists develop deeper knowledge about how the brain works, what is at stake for other disciplines, we wondered? Most fundamentally, developments in cognitive neuroscience pose certain challenges to modern Western conceptions of human nature, ones that are embedded in the disciplines we use to organize our knowledge, not to mention our political and even moral ideals. Some of the leading figures in the field, and especially those who seek to make cognitive neuroscience intelligible to a non-specialist reading audience, argue that enhanced scientific understanding of the physical origins of consciousness has already revealed that our "folk psychology" is riddled with misconceptions about how humans "naturally" think, look, feel, reason, and make decisions. These errors mostly have their origins, they suggest, in the previous scientific revolution of the seventeenth through nineteenth centuries. The seventeenth century scientific revolution is often characterized as having subjected matter to the ineluctable laws of physics, but defined human beings—in particular human minds—by virtue of their capacities for autonomous reasoning, individualized emotional response, and free will. But this early modern revolution remained incomplete, some modern cognitive scientists and philosophers argue, because of its stubborn refusal to acknowledge that perception, thought, feeling, and every other ingredient of human consciousness is also embedded in the physical world. It is a romantic dream, they charge, and a throwback to a pre-scientific, mystic past, to deny that: 1) consciousness is grounded in physical processes and 2) is a product of natural selection that exists because it conferred evolutionary advantage. The promise of cognitive science, as these supporters have it, is that it can demolish the "last wall" inhibiting our understanding of the "truth" about ourselves and our relationship to the world of matter of which humans are—in every sense—a part.[5]

In the scholarly world as around our colloquium table, many people express reservations about this line of argument. Following the lead of several writers we encountered, some participants in the colloquium remain skeptical that more detailed understanding of the functions, physics and chemistry of the brain can ever satisfyingly explain how "what happens" in neural terms gives rise to "what I experience" as a subjective state of consciousness; these may simply be irreconcilably different analytical stances. Others wonder if the apparent distinction between a neural event and

[3] Alan Richardson, in his review of David Rubin's *Memory in Oral Traditions* in the *Southern Humanities Review* 31 (1997): 372-4.

[4] Colin McGinn, "Can We Ever Understand Consciousness?" New York Review of Books June 10, 1999.

[5] For a good example of this viewpoint, see Steven Pinker, *The Blank Slate: The Modern Denial of Human Nature* (New York: Penguin, 2002). See also Daniel Dennett, *Consciousness Explained* (Boston: Little, Brown and Co., 1991).

a subjective state, and indeed the entire scholarly investment in arguing about their relationship, is a red herring, one that speaks to current cultural anxieties about individuality and autonomy in an increasingly technology-saturated, global world. The current fascination with how neural activity shapes perception, others pointed out, ignores equally crucial questions about the influence of culture on human consciousness. Still others worry that a focus on consciousness as a normalizing *sine qua non* of human life risks dehumanizing those who perceive, think, or feel in ways quite different from the average. But no one, we found, came away from our discussions thinking that the new interest in consciousness was irrelevant to their scholarly concerns.

These were some of the goals and issues that structured the colloquium and animated our discussions. The format for our collective work featured two distinct phases. In the first phase, we read and met in real time to discuss common readings that either addressed the definition of consciousness or deployed concepts from cognitive neuroscience to rethink conventional approaches to humanistic and social science problems (you can see the full reading list here, and read more about this phase below). In the second phase, we met in virtual space to carry out more focused interdisciplinary conversations designed to test--and share-- the fruits of our reflections on consciousness. Those conversations form the basis of this collection.

Phase One: Conversations in Real Time

Session One

Readings for Session One:
Francis Crick and Kristof Koch. "Consciousness and Neuroscience." *Cerebral Cortex* 8 (1998): 97-107.
McGinn, Colin. "Can We Ever Understand Consciousness?" *New York Review of Books* June 10, 1999
Searle, John R. "Consciousness and the Philosophers," *New York Review of Books* March 6, 1997.
Edward O. Wilson, "Resuming the Enlightenment Quest" and Richard Rorty, "Against Unity" From *The Wilson Quarterly* 22:1 (Winter 1998): 16-38.
Selections from Jean-Pierre Changeux and Paul Ricoeur, *What Makes Us Think?: A Neuroscientist and a Philosopher Argue about Ethics, Human Nature, and the Brain* (Princeton: Princeton University Press, 2000)

Our meetings began with an introductory session during which we explored some of the key debates in cross-disciplinary approaches to the "problem" of consciousness. For this first meeting, our readings included an article by Francis Crick and Kristof Koch on "Consciousness and Neuroscience." Crick and Koch's efforts to uncover the neural correlates of consciousness (NCCs) focuses on visual consciousness, showing through experiments with monkeys that primates are not directly conscious of neural activity in the primary visual cortex, but instead generate representations of the aspects of visual consciousness we experience, probably in the frontal lobes. Crick and Koch offer this experimental approach to explaining consciousness as a sound scientific alternative to the "carefree way[s]" (98) of philosophers who develop hypothetical scenarios (such as the existence of a zombie who acts like a human being but without consciousness). By using the model they apply to visual consciousness, they contend, the experimental approach may eventually offer a scientific solution to the problem of qualia, or how rich, intensely subjective experiences arise from cerebral processes.

We then discussed the possibility of discovering NCCs from the "side" of the philosophers. John

Searle argues that while it is a biological process, consciousness cannot be reduced to the terms of neuroscience because it represents a higher-level subjective process; while consciousness is caused by events in the brain, it cannot be reduced to them. Paul and Patricia Churchland, on the other hand, propose that the very notion of an inner mental state derives from folk psychology and ignores the evidence from neuroscience and other studies of human nature that we are indeed the sum of multiple patterns of activation in groups of neurons. We framed our discussion of these questions with the debate about consilience—E.O. Wilson's project for the unification of knowledge. Richard Rorty challenges consilience by stressing that each of the disciplines does its own kind of work for its own kinds of ends in a way that is entirely satisfactory to the development of knowledge. Finally, we considered a conversation between the neuroscientist Pierre Changeux and the philosopher Paul Ricoeur as a model for interdisciplinary engagement around questions of consciousness. Changeux and Ricoeur discuss the possibility of an objective science of morality, with the latter stressing that the discourses of brain science and mental experience represent "heterogeneous perspectives" (14) and that it should not be our goal to try and reconcile them.

A lively first discussion tried to identify, via this body of reading, some of the disciplinary stakes and methodological differences that would be likely to structure our conversations. Our philosopher started us off by posing the very problem of explanation. He posited two distinct kinds of explanation: the first (which he suggested might be seen in a discipline like physics) relies upon no "primitives" or prior givens or assumptions. Most explanations, he pointed out, are not like this. Instead they are intentional, or embedded within the assumptions and language of particular disciplines or folk knowledge.

This recognition of the "embeddedness" of explanation got us talking about our various methodologies and the kinds of conclusions towards which they might be biased. Our biologist stuck to the hard line that good explanations are those that can be tested experimentally, while our philosopher shifted the emphasis to suggest an explanation was better if it had fewer "primitives." One of our historians, then introduced the humanistic and cultural-historicist position, suggesting we ask what historical processes has made human consciousness into a contested phenomenon in so many disciplines. As a group, we asked what kind of "explanation" "correlation" really offers. Finally, we turned to the question of consilience. Cultural and historical approaches to consciousness, we observed, resist the very notion that a unification of knowledge is either desirable or possible.

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Readings for Session Two:
Daniel Dennett, from *Consciousness Explained*: chapter 2, "Explaining Consciousness" (pp. 21-42)

Thomas Nagel, "What Is It Like to Be a Bat?" *The Philosophical Review* 83.4 (1974), 435-50.

Ana Margarida Abrantes, "Consciousness and Self in Language: A View from Cognitive Semiotics." *TECCOGS* (September 2010): 7-24.

V. S. Ramachandran and William Hirstein, "Three Laws of Qualia: What Neurology Tells Us about the Biological Functions of Consciousness, Qualia and the Self." *Journal of Consciousness Studies* 4, no. 5-6 (1997): 429-58. Available online
www.imprint.co.uk/rama/**qualia**.pdf

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Session Two

"If physicalism is to be defended," Thomas Nagel argues, "the phenomenonological features must themselves be given a physical account. But when we examine their subjective character it seems that such a result is impossible." (323). For session two, "Self and Subjectivity: The Qualia Problem," our readings included Nagel's famous essay, "What is it Like to Be a Bat?," along with "Three Laws of Qualia" by V.S. Ramachandran and William Hirstein, and a piece by Ana

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Margarida Abrantes on consciousness and self from the perspective of cognitive semiotics. One of the touchstones among these articles was the question of language. For Nagel, language has the potential to draw us closer to others' subjective experiences, and for Abrantes, it offers even the possibility of intersubjectivity—a space in which "shared attention to a common object of reference" can help shape conceptual viewpoint. For Ramachandran and Hirstein, on the other hand, language is the obstacle that we must overcome when we try to link nerve impulses to the fundamentally subjective experiences that we call "qualia." If we could abandon the problem of translation and devise a "cable of neurons" between brains, they propose, we would no longer need to distinguish between subjective and objective phenomena.

We found the question of language and its relationship to qualia very suggestive as we endeavored to put our range of disciplines and foci into dialog. Discussion revolved around our understanding of and responsibility towards animals with and without conscious experience, our representation of qualia independent of language in the case of human infants or those who suffer from autism, and the importance of recognizing that subjective experience is constituted historically as well as neurally. We weighed what one participant described as Nagel's "humility" in addressing non-human experience against the possibilities cognitive semiotics offers for enabling communication between very different kinds of minds, and we considered how and whether we can distinguish between what we call consciousness and mere reflex action on the part of organisms unlike us. What, we wondered, might be the implications of this distinction for how we behave towards others?

Session Three

Our third session moved to the topic of "Body, World, and Self," with discussion evolving from our reading of selections from Antonio Damasio's recent *Self Comes to Mind* (2010) and Martha Nussbaum's *Upheavals of Thought: The Intelligence of Emotions* (2001). These readings invited us to consider the interaction between neuroanatomy and historical and cultural determination in the organization of self, emotional life, and conscious mind. Damasio proposes that "mind" (the system of

> **Readings for Session 3**
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> Selections from Antonio Damasio, *Self Comes to Mind* (New York: Pantheon, 2010): Ch. 1"Awakening," ch. 4 "The Body in Mind" ch. 5 " Emotions and Feelings."
>
> John Searle, "The Mystery of Consciousness Continues" *The New York Review of Books*, June 9, 2011 [Review of *Self Comes to Mind*]
>
> Selection from Martha Nussbaum, *Upheavals of Thought: The Intelligence of Emotions* (Cambridge: Cambridge U Press, 2001): Ch. 3, "Emotions and Human Societies."
>
> Selection from Raymond W. Gibbs, *Embodiment and Cognitive Science* (Cambridge: Cambridge U Press, 2006): Ch. 3, "Perception and Action."

neuronal circuits that generates momentary patterns) becomes "consciousness" when it encounters a self—the phenomenon generated out of: 1. primordial feelings; 2. the mapping of the physical body to which it "belongs;" and 3. an autobiographical assembly of facts and events about the individual and its social world. Consciousness, in this formulation, thus arises through a set of emotions that are fundamentally possessive—a sense of what is mine, or of me, as opposed to what is not mine. For Nussbaum, consciousness, or "thought" similarly arises from the emotions, which make judgments of value possible. But Nussbaum emphasizes how norms and expectations, informed by cultural differences and childhood experiences, shape what we feel.

Our conversation endeavored to navigate these two very different approaches to the place of emotion in the highest operations of the mind. We discussed the historical nature of the proprietary self, which took over in the 18th century from the notion of the Christian soul, and we also considered how even the "neuronal self" draws upon culturally specific notions (like property, patriarchalism, or even science itself). At the same time, we noted, Damasio does seem to highlight a feature of consciousness that is necessarily universal: the physical states and features of the world that present themselves to awareness must be salient—they must be vigorously of the self or directly relevant to it in some way if they are to penetrate the threshold of consciousness.

Session Four

Reading for Session Four:

 Selections from John Locke, *An Essay Concerning Human Understanding* and Étienne Bonnot de Condillac, *Essay on the Origin of Human Knowledge*

 Selections from Steven Pinker, *The Stuff of Thought*: *Language as a Window into Human Nature* (New York: Viking, 2007): "Down the Rabbit Hole"

Selection from George Lakoff and Mark Johnson, *Philosophy in the Flesh*: *The Embodied Mind and its Challenge to Western Thought* (New York: Basic, 1999): Ch. 4 "Primary Metaphor and Subjective Experience

Our topic for week four was "The Stuff of Thinking: Language, Concepts, Metaphors." For this session, we brought together a group of rather different texts. We looked at 18th-century accounts by John Locke and Etienne Bonnot de Condillac of how thought is rooted in sensory experience and then elevated via the use of signs into complex thinking. We compared these accounts with Steven Pinker's evolutionary reworking of Noam Chomsky's universal grammar, and with George Lakoff and Mark Johnson's work on "primary metaphor and subjective experience." Together these readings seemed to point to a disciplinary divide between humanists, who might want to privilege the role of experience in consciousness, and cognitive scientists/linguists, who insist upon what one participant called the "massive modularity" of innate structures in the human brain that make language possible. Yet our several already cross-disciplinary interests showed how this is largely now a straw debate as both humanist scholars and scientists increasingly explore the degree and mechanisms of cultural influence on cognition.

Rather than organizing our discussion around the somewhat outdated controversy of the "blank slate" vs. an innate capacity for language, therefore, we concentrated on the question of metaphor and its role in the development of consciousness. Lakoff and Johnson in some ways revisit 18th-century sensationalist psychology by positing that metaphors, which enable us to think abstractly (or to "make subjective judgments about abstract things"), are scaffolded onto concrete, or sensorimotor experience. One participant stressed how unidirectional this theory is, as it excludes the possibility that abstract thought, itself a repository of culture, can shape our experience of reality. This in turn prompted a discussion of the ways that metaphors may harden into clichés, and in so doing exercise normative cultural influence, rather than opening up thought to new dimensions (as P.B. Shelley famously recognized). Others returned us to the problem of privileging (in this case metaphorical) language in consciousness and thereby implying that non-language-bearing minds are not properly conscious ones, and to the question of whether, just because we speak using metaphorical language, we actually think that way.

Session Five

Readings for the next session were organized around the topic of "consciousness, cognitive science and art." Our selections included accounts of the adaptive function of verse by Brian Boyd, "mind blindness" in eighteenth-century satire by Blakey Vermeule, and a cognitive-scientific approach to theatre by scholar Amy Cook. Disciplinary tensions were somewhat heightened during this meeting. In the discussion of Boyd's article, participants debated the value of applying universal themes or assigning universal functions to

Readings for Session Five:

Boyd, Brian. "Verse: Universal? Adaptive? Aversive?" *The Evolutionary Review: Art Science, Culture*, 2.1 (2011), 186-196.

Blakey Vermeule, *Why do we care about literary* characters (Baltimore: Johns Hopkins U Press, 2010): ch. 9 "Mind Blindness," 193-214.

Amy Cook, "Interplay: The Method and Potential of a Cognitive Science Approach to Theatre," *Theatre Journal* 59 (2007) 579-594.

Marcia Moen, "Peirce's Pragmatism as Resource for Feminism," *Transactions of the Charles S. Peirce Society* 27: 4 (Fall 1991), 435-450.

works of art, as Boyd does when he proposes that literature helps us deal with the existential anxiety that accompanies consciousness. Although one literary critic in the group pointed out that the genre of gothic certainly seems to draw upon the universal "pleasure of fear," several others argued that such speculations about human psychology ranged rather too freely across enormous expanses of time and cultural distance, and resisted the idea that the interpretive method should look at how fundamental human experiences should be applied to particular cultural moments. Why, for instance, shouldn't we reverse the equation and consider how cultural configurations impact human nature?

This moved us into a discussion of studies of mirror neurons and phantom limbs, whose evidence for forms of consciousness that are both embodied and also social seemed to several people to offer fruitful ways of uniting cognitive science with humanistic concerns. Mirror neurons are thought to lie behind our intuitive capacity to "mind read," or constantly putting ourselves in the shoes of others; evidence from experiments on the phenomena of phantom limbs indicates, for Cook, that the sense of self is a projection and does not preclude "a shared neural state realized in two bodies" (Cook 594). Yet if we remain true to our skepticism about NCCs, one participant pointed out, mirror neurons don't tell us any more about the actual experience of sympathy than other neurons explain other dimensions of consciousness. Could it be, he asked, that humanists' interest in mirror neurons reflects a certain envy of the cognitive sciences? (Another participant quickly pointed out that the differences in institutional power and resources between the humanities and the social sciences gave a rather political charge to the term "envy.")

Session Six

Readings for Session Six:

Michael Tomasello, selection from *The Cultural Origins of Human Cognition* (Cambridge: Harvard UP, 1999)

Richard Schweder, "Cultural Psychology: What is it?" in Stigler, Schweder and Herdt, eds., *Cultural Pscyhology* (Cambridge: Cambridge U Press, 1990).

Our final reading session, "Social Cognition?," focused on the introduction to Michael Tomasello's The Cultural Origins of Human Cognition and Richard Schweder's "Cultural Psychology: What is it?" This topic offered one way of uniting some of our

disciplinary points of view because the field of cultural psychology combines knowledge of human evolution with an emphasis on the role of culture in cognitive development. Briefly, the vast accumulation of cultural knowledge and accelerated development that have characterized the brief history of modern homo sapiens depends upon the transmission of knowledge through cultural tools (like language) more than it does upon the adaptive structure of the human brain. An individual organism's ability must be complemented by access to these tools. At the same time, cumulative cultural evolution gives rise to an enormous variety of experiences that in turn shape interactions between mind and world. Most participants were quite persuaded by this approach, seeing it as a means of combining evolutionary with historical time and as a way of resisting normative theories of human consciousness as something given or natural. There was some discussion of the role of theory of mind (recognizing the feelings and motives of others) in evolution. Does the "ratcheting up" effect, whereby culture is able to advance independently of the physiology of culture bearers because it is accumulated and deposited in the world, depend upon the adaptive human capacity for a theory of mind? The response from cultural psychology is no, or at least not entirely, because we learn from objects and via tools themselves—they have their own intentionality independently of the human beings who use them.

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These six conversations brought us to some points of impasse and to others of synergy. They helped us to articulate the stakes of our disciplinary and research foci, as well as individually to recognize aspects of the study of consciousness outside of our fields that we might import into our work. As we moved forward into the second half of the colloquium and began to think about how to represent our progress in writing, we began planning collaborative exercises that would allow us to explore these interdisciplinary divergences and intersections in more depth. Our hope was that we could move these conversations outside the Hall Center conference room and engage a broader audience.

Phase Two: Virtual Conversations

Once we began writing, we discovered promising intersections among our various disciplines and specialties. Our goal was to produce cross-disciplinary exchanges within the topic of consciousness that engaged common themes and opened up new directions in our research while also providing an intellectually accessible introduction to the "problem" of consciousness for audiences both within and outside the academy. To this end, we began a series of blog conversations, introduced in each case by a short essay on some aspect of consciousness studies representing the participant's research interests. Two or more respondents then posted their reactions to the essay, and in most cases the author then provided some closing remarks.   These conversations often referred to readings or topics of debate from our meetings, but they moved discussion from the general themes around which those sessions were organized to specific research or creative foci. Those conversations follow this introduction.

One of the most exciting themes that crops up in many of the conversations was the way in which consciousness can be conceived as simultaneously biological and cultural.   Glenn Adams stresses how socially-constructed, or cultural-ecological technologies inform conscious experience as well

as the non-conscious, or habitual aspects of mental processing that shape how we interact with the world. This is not the same thing, however, as saying that consciousness is determined by culture, since the brain incorporates these collectively and historically evolved technologies into the various activities of consciousness (such as patterns of attention or self-awareness) as it develops.   Mark Landau's research looks at how qualia, the most profoundly personal phenomena of the conscious mind whose origins scientists are increasingly linking to neuronal circuitry, are also attached to shared abstract concepts. These concepts are experienced through conceptual metaphors ("I received a warm welcome," "I'm sinking into depression" etc.) that in turn reflect social-psychological responses to a common physical environment. Along related lines, Iris Fischer investigates the possibility that the brain's representational processing involves what she calls "contiguous" or "metonymic" mapping whereby, rather than the brain expressing top-down executive commands to the body, the physical and cultural environment shapes bodily actions that then surface in conscious awareness.

Several participants took this question of the relationships among neurophysiology, mind, and culture into the realm of art. Ann Rowland is interested in the way that studies of the mirror neuron system update the 18th-century theories of sympathy that have informed both social theory and aesthetics. Fischer grounds her questions about representational structures in the body of the theatrical performer. In another vein, Sherrie Tucker applies Tomasello's account of the role of human cultural evolution in the development of individual consciousness to her study of the effects of introducing the Adaptive Use Musical Instrument into a classroom for children with disabilities. Improvisational and socially transformative practices, she speculates, may occur at the interface of cumulative cultural history and hard-wired cognitive difference. Anna Neill explores a similar possibility as she asks whether art might constitute an environmental constraint on the development of individual consciousness. Brian Daldorph, the poet in our group, throws out the possibility that poetry might do what Nagel points out what humans can't do with regard to bats—i.e. represent a subjective state that is radically different from our own.

Yet some participants felt much less drawn to the notion that biology and culture are fundamentally inseparable. Ben Sax argues strongly that we cannot study the phenomenon of consciousness without recognizing how it emerged as a discourse in Western modernity. Furthermore, the fundamental distinction between subject and object upon which the idea of consciousness depends, he argues, is generated in language. Thus all scientific pretensions to the "truth" about what brains and/or minds do require bracketing the cultural and historical co-ordinates of the very existence of conscious experience. At the other end of the debate, Rudolf Jander (who, although not formally a member of the colloquium, generously participated in many of our live and blog conversations) objects to the loose definition of consciousness in many of the essays which, he claims, ignored the biological meaning of "consciousness." Properly speaking, he insists, conscious awareness takes place only in short-term memory (not in the long-term memories that store cultural information) and therefore belongs only to individuals, not to social groups.

Another common point of interest was the embodied nature of thought and its implications for a kind of social consciousness. Rowland's interest in mirror neurons recognizes how these

potentially reconfigure the relationships that enlightenment philosophy established between perception and feeling and between one's own body and those of other human beings. If imitation is central to perception and action, then the distance between bodies in most acts of social exchange is minimal, Indeed, she suggests, "the experience of the self [happens] across selves." In Tucker's essay, a similar formulation challenges norm-based theories of consciousness as musical compositions improvised across mixed-ability students produce "a social body in motion," some of whose component actors do not experience the kind of self-awareness or sense of individual agency that is sometimes said to define the conscious mind. In a poem cycle that addresses questions of identity and selfhood for those suffering from Alzheimer's, Daldorph raises similar questions. Here, under the pressure of disease, awareness slips in and out of the contexts that anchor it to the voices and thoughts of others.

Only one essay, Nick Simmons's, dealt directly with "the hard problem of consciousness," the question of how physical matter gives rise to subjectivity. Yet in a sense that question is implicitly present in all the essays (if only to be rejected in some cases because it represents a belligerently reductive attempt to express all human experience as equivalent to its physical substrate). Simmons makes the provocative argument that we falsely distinguish between conscious sensations, or qualia, and the brain activity that produces them. Like the difference between Bob Dylan and Robert Zimmerman, these are distinctions invented by encultured humans who invoke folk concepts that generate apparently incommensurate categories. In response, Landau objects that this proposition does not take into account neuroplasticity (where qualia may remain steady even as neural activity changes) or the very different properties belonging to each category. Adams, too, points out that the phenomena of consciousness are embedded in deep and multiple social worlds that shape their identities and that make it impossible to assert that Dylan and Zimmerman are identical. This fascinating exchange resonates, curiously, with some of Sax's arguments. Although they come from methodologically very different places, both Simmons and Sax recognize our language organizes our understanding in ways we cannot assume are given or natural. What intrigues Simmons, however, is the idea of short-circuiting language and folk assumptions to get closer to the real nature of things, while for Sax the notion that science can strip facts of the obfuscations of symbolic culture is a profoundly historical assumption that has survived in Western thought since the seventeenth century.

Together, these conversations point both inward to the disciplinary dynamics of our group, and forward to potential areas of cross-pollination that may help to shape our members' current and future research projects. As the dialogues that follow show, we discovered multiple converging interests, and our differences enriched our various approaches to the topics we explored. Perhaps—albeit it in different ways—all of the essays and the exchanges that grew out of them could be said to address the question that Daniel Dennett asks at the beginning of his book *Kinds of Minds: Towards an Understanding of Consciousness*: "Can we ever really know what is going on in someone else's mind?" Investigating consciousness, we discovered, means investigating our relationships with others as much as it involves tracing the magnificent sequence of events that links neural matter to human experience.

Participants

Glenn Adams is an associate professor in the Psychology Department. The foundation for his intellectual work lies in the conceptual framework of Cultural Psychology, an interdisciplinary field that examines how embodied structures of consciousness (and unconscious experience) exist in a bidirectional relationship with socially constructed technologies embedded in everyday cultural worlds. One focus of his research has been the sociocultural foundations of intimacy. Phrased in terms of the colloquium, this research takes a form of consciousness (what one might refer to as neoliberal subjectivity) that psychological science regards as "just natural" and attempts to identify its cultural and historical foundations. The other focus of his work has been a program of research that applies a cultural psychology analysis to investigate the production of false and liberatory varieties of consciousness that serve as tools for cultivation of ignorance. These tools in turn afford denial of racism and oppression.

Brian Daldorph is a poet and teaches in the English Department at the University of Kansas. He was interested in participating in this colloquium because of the way it tied in with the sequence of poems he is working on about Alzheimer's disease. His latest book of poems: Jail Time (Original Plus P, 2009), and (as editor) Douglas County Jail Blues: Poetry from inmates at Douglas County Correctional Facility, Lawrence, Kansas (Coal City Review P, 2010), both publications stemming from his work at the Douglas County Jail where he has been teaching a creative writing class since 2001.

Iris Smith Fischer is an associate professor in the Department of English. Because she was trained in comparative literature, which involves the study of literatures across cultural and disciplinary boundaries, she employs an interdisciplinary perspective in her teaching and research. Her teaching and research areas include American drama from 1860-present; avant-garde performance; and theory, particularly semiotics (the study of how phenomena and experiences come to have meaning for us). Currently she is researching and writing "Theatre at the Birth of Semiotics," a project that examines the surprisingly intertwined histories in the late 19th century of melodrama, performance cultures (such as then-new schools of actor training and elocution), and the science-based field of semiotics in the United States. She is interested in how cognitive science, also grounded in 19th-century evolutionary studies, can combine with semiotics to explain the collaborative work of theatre artists as communities of inquirers.

Rudolf Jander is a professor of animal behavior in the Department of Ecology and Evolutionary Biology. His research focuses on experimental analysis of behavioral mechanisms and reconstruction of behavioral macro-evolution including recent study on the special cognition of the house mouse. After participating in the colloquium, he interrupted his writing on ants and honeybees to put his biological ideas about consciousness to paper.

Mark J. Landau is an assistant professor in the Psychology Department. His research focuses on the role of existential concerns in motivating people's striving for meaning and self-esteem, and on people's use of metaphor to understand and make judgments and decisions about abstract concepts

in everyday life. In light of these research foci, Landau approached the Fall colloquium's topic of consciousness with the following questions: What function does consciousness serve for the individual and the species at large? How did the emergence of consciousness give rise to the abstract awareness of personal mortality, and how does that awareness in turn shape human thought and culture? What are the cognitive "building blocks" of consciousness – that is, what devices does the mind use to represent and process information about abstract concepts?

Anna Neill is an associate professor in the English Department. Most of her research focuses on British literature of the 18th- and 19th-centuries. Her recently-completed book manuscript, "Primitive Minds: Evolution and Spiritual Experience in Victorian Novels," combines a recent cluster of interests in evolutionary science, Victorian psychology, and spiritualism, while her most current research focus is Victorian literary accounts of cognitive development.

Ann Rowland is an associate professor in the English Department. Her recent research and scholarship has been on childhood and Romantic literary culture. In a forthcoming book, British Romanticism and Childhood, she investigates the ways in which modern literary culture and modern childhood emerged together during the Romantic period. She is currently beginning a new project on Keats' nineteenth-century American reception. Here she is interested in the question of what role American readers and writers played in shaping Keats' reputation as a major Romantic poet and shaping the literary values we have traditionally associated with Keats and with "English Romanticism." However, it was her interest in returning to earlier research on enlightenment philosophy of language that brought her to the colloquium.

Ben Sax is the author of *Images of Identity: Goethe and the Problem of Self-Conception in the 19th Century* and the co-editor of *Cultural Visions: Essays in the History of Culture*. His work focuses on the historical analysis of the foundations of modern "reality" in the positing of subjectivity and its relationship to establishing a scientific definition of objectivity. Distinguishing between cultural history and the history of culture, he investigates culture, not as a limited area of human existence but as the human mode of being. This move not only overcomes the modern scientific definition of truth but also the larger tradition of metaphysics of which science is a part. He has published articles on Goethe, Hegel, Marx, Burckhardt, Nietzsche, Heidegger, and Foucault, all of which focus on the critical stance towards modernity and the creative move beyond this criticism.

Nicholas Simmons is a Ph.D. candidate in philosophy at KU, where he is at work on a dissertation titled, "Identifying the Qualitative Dimension of Mind." The problem concerning how something like a conscious mind can arise from stuff like brain matter has always vexed and intrigued him. Indeed, he considers it one of the greatest mysteries of the universe. With these considerations in mind, he chose to focus his dissertation on the problem of consciousness. In particular, he defends the view that sensations just are brain states, using 'are' in the strict sense of identity.

Sherrie Tucker is an associate professor in American Studies at University of Kansas. She is the author of *Swing Shift: "All-Girl" Bands of the 1940s* (Duke, 2000) and co-editor, with Nichole T. Rustin, of *Big Ears: Listening for Gender in Jazz Studies* (Duke, 2008). She is co-editor, with David Katzman and Randal Jelks, of the journal, *American Studies*. She was a member of the Jazz Study Group at Columbia University, and currently facilitates the "Improvisation, Gender, and the Body"

team for an international Collaborative Research Initiative of the Social Sciences and Humanities Research Council of Canada, entitled, Improvisation, Community, and Social Practice. In 2004-2005, she was the Louis Armstrong Visiting Professor at the Center for Jazz Studies, Columbia University. Assisted by a National Endowment of the Humanities Fellowship, she is completing a book on swing culture and war memory, entitled, Dance Floor Democracy: the Social Geography of Memory at the Hollywood Canteen.

Leslie Tuttle is an associate professor in the History Department. She is the author of *Conceiving the Old Regime: Pronatalism and the Politics of Reproduction in Early Modern France* (Oxford, 2010) and co-editor, with Ann Marie Plane, of *Dreams, Dreamers and Visions in the Early Modern Atlantic World* (Penn, forthcoming). Her budding interest in cognition stems from her current research on changing conceptions of mental functions such as dreaming and imagination in early modern Europe.

Nicholas Simmons

THE HARD PROBLEM OF CONSCIOUSNESS

The Hard Problem

Understanding the mind has proven to be a difficult task. This should be no surprise, given that the brain is arguably one of the most complex devices to have ever been fashioned by natural selection. Despite this problem, it does not seem unreasonable to think that, in the future, we will come to understand how our brains have been programmed to direct human behavior – no matter how complex. So, while this problem is difficult, it doesn't seem to be intractable. There is another dimension of the mind, however, whose nature seems to preclude even the possibility any kind of understanding. As the philosopher Colin McGinn notes, even in principle, it seems beyond us that we might understand how "Technicolor phenomenology arises from soggy, grey matter." This problem has come to be known as the hard problem of consciousness.

Recently, neuroscientists such as Crick and Koch have attempted to try to solve this problem by leaving the armchair and employing a more empirical methodology. In particular, the hope is that if we can find the neural correlates of consciousness (NCC), we can come closer to meeting McGinn's challenge. For example, let's say that the sensation of redness S is perfectly correlated with a particular kind of brain activity B. If it is correct that S and B are perfectly correlated, the reasoning goes, then we are closer to understanding the physical nature of S, or the sensation of redness.

Let us grant that there are NCCs, despite the incomplete empirical picture. While pinpointing NCC might have some useful implications for, say, diagnosing certain problems, one might wonder about the explanatory status of establishing that S is correlated with B. After all, two clocks may be in perfect sync, but this doesn't tell us much. Further, it seems that S and B must not simply be correlated as a matter of fact as our clocks are, but necessarily so. That is, it would seem to be particularly problematic if, even though S happens to be instantiated any time B is, S might (read: physically possible) be instantiated without B (e.g. someone experiences the sensation of redness without the normally correlated brain activity). There are a couple of possibilities that might prevent this from happening: (1) S and B are governed by some psychophysical law connecting sensations with brain states or (2) S and B are identical. In the remainder of this discussion, I shall investigate both possibilities. I shall argue that (1) fails at giving us the kind of explanatory picture we want, while (2) does the job. That identity has any explanatory status, however, is not uncontroversial, so I shall end by sketching how this might work.

For the moment, let us assume that S and B are governed by some sort of fundamental law of nature. One problem with this hypothesis is that it is consistent with a whole host of incompatible metaphysical positions, including Descartes' substance dualism and epiphenomenalism (the idea that mental properties don't causally interact with the world, but are some sort of inessential byproduct). For both of these doctrines, S is perfectly correlated with B, but S is nevertheless fundamentally different in nature from B. Another problem with this proposal is, even if we are able to somehow maintain that S and B are causally related, physical properties, we have no further

explanation for their relationship. Fundamental laws of nature are primitive (i.e. they have no further explanation), so the law connecting S and B must be primitive. So, if we ask why S happens when B happens, our answer is simply that it is a law of nature; this doesn't meet McGinn's challenge. Finally, it would just be strange if, in addition to the few fundamental laws of nature, we had the existence of these psychophysical laws. That is, this proposal seems disturbingly unparsimonious. Now, a lack of parsimony isn't enough for us to reject this proposal, but if we have simpler hypothesis that does at least the same amount of explanatory work, then we are warranted in doing so.

Here is a simpler hypothesis: instead of S and B being two things, S and B are one and the same. That is, S and B are the very same thing that we are describing in two seemingly incommensurate vocabularies – a neurological vocabulary and a commonsense, folk vocabulary. If this is right, then instead of appealing to a primitive psychophysical law, we have an explanation for why S is correlated with B; "they" are the same thing, so, of course, "they" will be correlated. Now, one might question our appeal to identity by wondering how something can explain something about itself. In reply, consider the following case. It is a fact that wherever Bob Dylan is, Robert Zimmerman is. Why? It seems perfectly natural to explain this fact by appealing to the fact that Bob Dylan just is Robert Zimmerman.

Explaining the fact that S and B are correlated, of course, doesn't give us an answer to how the sensation of redness comes from brain activity. The fact that we are describing the same thing with two different vocabularies, however, does get us closer to answering this question. Once we accept that S is B, then we at least know what is required of us to solve the hard problem of consciousness: we need to be able to see how our folk concept of REDNESS relates to our neurological concept of BRAIN-ACTIVITY-X. To illustrate this point, consider the possibility of a person – Sally - with a prescientific conception of water being presented by a description of water in molecular terms. At first, Sally will most likely wonder how H2O could possibly give rise to certain macro-level features with which she is acquainted, such as wetness. Likewise, she will most likely be unable to grasp how her concept of WATER could refer to the same thing that H2O does. With a little schooling in chemistry and, perhaps, physics, the relationship between these two concepts becomes less elusive. I'm inclined to think that our situation with S and B is just like this.

So, what we need is a fuller understanding of the underlying physics of neurological states in order to bridge the conceptual gap between REDNESS and BRAIN-ACTIVITY-X. At this point, it is difficult to see how this might be done, but this doesn't mean that the problem is intractable. After all, Sally was able to tract a similar problem.

DALDORPH RESPONSE:

I enjoyed reading this essay. Actually it makes me think of the colloquium itself, how much I've learnt from looking at issues from other perspectives and knowledge bases. Now to try to bring them together, H2O and "wetness" and everything else that water is.

LANDAU RESPONSE:

Very provocative ideas. A number of thoughts came to mind while reading them:

1. As you note, the challenge of consciousness studies is to explain how brain state B gives rise to sensation S (or any other mental state, for that matter). You claim that one option for accomplishing this – that is, specifying the laws by which B yields S – is undesirable, because bad explanations such as substance dualism are compatible with it. But that doesn't seem compelling to me. Just because theorists have made faulty attempts to provide accounts of the laws mediating the relation between B and S doesn't mean that we can or should stop searching for such an account. You claim that we can do better to equate S and B, with the seemingly minor caveat that we'll fill in, at some later point, the details as to how B gives rise to S. The major advance, according to you, is the equation. But my concern is that this amounts to a restatement of materialism. Every self-respecting theorist and researcher agrees that B and S are the same in that they deny that S requires any special stuff over and above B. But how much explanatory power does that have? In fact, I'm tempted to say that your water-H2O example is a bit misleading. Let's say that Sally makes the realization that H20 just is water, and that water just is H20: she does not thereby have an account of how smooshing together hydrogen and oxygen molecules gives rise to the quality of wetness. In fact, Sally could learn a great deal of physics and chemistry and still lack this account. So while I agree with your claim that S "just is" B, I fear that it begs the question as to how B gives rise to S.

2. I just said that your identity account is a restatement of materialism, but in fact it is a very specific variant of materialism, because it identifies S with the activation of a specific, discrete ensemble of neurons (perhaps even one neuron). At one point you portray B as a pattern of brain activity, but otherwise I gather that you are equating S with a small ensemble of neurons that always co-occur with S (i.e., the NCC of S). But this seems problematic. For one, you would have to account for plasticity. S cannot be identical with B because B can change without changing S. Never-mind the extraordinary cases of neural plasticity documented in the neuropsychology literature – I'm referring to the more mundane fact that, at our age, we are losing hundreds of neurons every day (and they ain't coming back), and yet many of our S's and other mental states retain much of their qualitative character, or so it seems. Some of this continuity in mental states is due to the sprouting of new synapses, while some, I would argue, is due to the fact that mental states are first and foremost symbols, and symbols have unique properties that keep them intact even when the physical substrate underlying them is compromised (to a point, of course). That is, symbols refer to each other, and in this way are capable of reconstituting each other in a way that cerebral tissue cannot. Your strict identity account would seem to suggest that if a given set of 300 neurons were to fire every time I remembered my grandmother, then banging my head on a door jam and losing just one of those neurons (not to mention all of them) would permanently delete my memory of my grandmother. How does your version of materialism get around this?

3. A related concern with a strict identity account is that, if S just is B, such that the relation between them is simply yet to be explained, then at the very least we would expect that S and B have identical properties. This follows from your other example of an identity relation, namely, that which exists between the man named Robert Zimmerman and the man named Bob Dylan. They are

the same person precisely because every feature and property of Zimmerman is equally characteristic of Dylan. But this cannot be the case for a given S and its NCC. For one, B can be observed -- excised from the brain and placed in a petri dish for all to see -- whereas S cannot (note that other versions of materialism are not susceptible to this problem; for example, if you characterize B as a complex pattern of brain activity, then it doesn't follow that that pattern can be excised and observed. But your account characterizes B more definitively as a neuronal ensemble, the activation of which correlates with S, and presumably such ensembles can be observed in isolation from the rest of the brain). If B (qua neuronal ensemble) just is S, then you should be able to point at those neurons in a petri dish and say "that is S" in the same way that you can point at Zimmerman and say "that is Dylan." But that doesn't seem to be the case.

SIMMONS RESPONSE TO LANDAU:

These are great objections. I'll try to do them justice here, but an adequate response might take more room that would be feasible.

1.I don't think we shouldn't look for laws linking S to B. It is just that doing this does not get us all that we want; and it can't be the final story.

As for the water-H2O case, here is what I have in mind. First, knowing that water is H20 explains why H2O is present whenever water is present (if that was a question in the first place). Likewise, knowing that S is B explains the correlations between S and B (they are, of course, not merely correlated). Second, in terms of explanatory reduction, I was borrowing from Ned Block's paper "[Functional Reduction](#)" (pg. 23) The idea is we might think of water/H20 in terms of "macro" level and "micro" level properties (using quotes to mean that these are merely ways of describing; there are not actual levels in any ontological sense). Our explanatory goal is to figure out how the "macro" level property *being water* appears to emerge from the "micro" level property *being H20*. As it turns out, the British emergentists of the early 20th century were wrong and we can have a satisfactory reductive account for how the former seemingly emerges from the latter, despite the fact that, at the end of the day, the former just is the latter. Likewise, the hope is that something similar will happen with S and B.

2.My version of materialism is known as the (hastily rejected) identity theory (a.k.a. type-physicalism). For the identity theorist, the claim that S is B is falsified if we were to have S without B or B without S. Your objection is a variation of the standard objection to the identity theory known as the multiple realizability argument. As you know, the idea is that S can be instantiated by a multiplicity of different kinds of brains states, if not different kinds of physical states, in general. I could spend a great deal of responding to this objection, but given the limited space I will limit myself to a few comments. First, it is standard to distinguish qualitative from non-qualitative mental properties. I won't argue the point here, but I am inclined to say that symbolic or intentional properties are kinds of the latter sort. And, while the multiple realizbility argument might work for the latter kinds of properties - for instance, an android and I can both be in a state of believing despite having drastically different kinds of brains - when it comes to the former kinds of properties, I don't think it goes through. If this is right, then, I can still hold that S is B.

Second, as Bechtel and Mundale argue in "[Multiple Realizability Revisited](#)" neuroscientists individuate kinds of brain states in a much more coarse-grained way that adherents to the multiple realizability argument take them to be. That is, contra Putnam, the originator of the multiple realizability argument ("Psychological Predicates", 1967), we can and do share the same kind of brain states with creatures like the octopus, despite fine-grained differences. Indeed, as Bechtel and Mundale point out, multiple realizability arguments seem to appeal to a fine-grained notion of a brain state, but a coarse-grained notion of a qualitative mental state. For instance, it seems right to say that we can all have pains, even though each instance might vary in degree, intensity, and who knows what else. But when it comes to brain states, the idea is that fine-grained differences for some reason put different instances out of the running for being instances of the same kind.

3.Your objection here is a standard Leibniz's Law argument. I'll give the standard response: the argument is begging the question. If S is B, then, of course it can be observed. The only reason I would accept your conclusion is if I already accept that S is not B. It might not be obvious that when we observe B, we are also observing S, but this doesn't carry much weight. The materialist like myself can simply that there are two different modes of presentation for the same thing, and corresponding with these two modes are two sets of descriptions.

Consider an analogous case to see my point. If Superman is Clark Kent, then they must share all their properties. Lois Lane knows that Superman can fly, but not that Clark Kent can fly. So, it follows that Superman is not Clark Kent. The problem with this argument is that, if Superman is Clark Kent, of course whatever Lois Lane knows of Superman, she know of Clark Kent. This might not be obvious to her, but nothing turns on it. I could go on to explain exactly what is going wrong here by invoking the de re/de dicto and transparent/opaque context distinction, but I think the intuitive point is clear with this example without getting into the nitty gritty.

ADAMS RESPONSE:

Nick, I am inspired by your post to wonder about the value of framing my intellectual interests as an examination of the Ecological Correlates of Consciousness: both the historically evolved tools that afford species-typical human consciousness and the particular constructions of reality associated with different varieties of consciousness. Does the notion of ECCs (as productive contrast to NCCs) buy anything?

I appreciate the clarity and directness of your post. You get right to the point about a question— what to make of NCCs—that is important not only for intellectual/scientific discovery, but also the politics of research. Allocation of funding for scientific research is a contentious topic, even in good economic times. Research that maps NCCs has great popular appeal—it smells like science, plays into people's conception of material as "really real"—but is also typically much more costly than more traditional research using behavioral and self-report measures. I think that part of the appeal of research on NCCs is that people experience them—and researchers/reporters often talk about them—in causal-sounding language (e.g., as the substrate//foundation of behavior/experience). If NCCs are really that—i.e., correlates, rather than causal/explanatory—then one can frame questions according to value added by measuring NCCs rather than less expensive indicators with which they co-occur.

The clarity and directness of your post are especially beautiful given our purpose of engaging general readers. I think your use of examples (Dylan/Zimmerman and Sally) are very useful in this regard. They make accessible for general consumption matters that are otherwise quite abstract. Accordingly, I will try to direct my comments through these examples and perhaps another one— the Ramachandran & Hirstein example of plugging in neural feedback from one brain to another— to which your redness example alludes. In contrast to the clarity and directness, my comments (regrettably, but necessarily) will be murky and somewhat disorganized.

You use the Sally example of connecting scientific and phenomenological understandings of water to suggest how we might connect/reconcile "our folk concept of REDNESS relates to our neurological concept of BRAIN-ACTIVITY-X". You suggest that with more science, our understanding of the relationship "becomes less elusive", much like Sally's understanding of the relationship between H2O and wetness. I actually think that the example suggests limitations in our ability to understand this connection. Yes, we can appreciate that certain parts of our neural circuitry are active when we have certain experiences, but how much of the explanation of water at the molecular level helps to explain—let alone understand—wetness.

I see that my colleague Mark has already raised this issue, (I suppose it serves me right for arriving to the discussion late.). I see that he also raised another issue with a strict identity account that I had intended to raise: the issue of plasticity and the possibility of multiple brain instantiations of a particular sensation (There is probably a nice philosophy term for this, and I am sure that you'll tell me what it is.) In any case, the water example also raised for me similar questions about the strict, A-to-A') identity account (as well as the "neural substrate" or B → S account of NCCs): the multi-potential/indeterminate character of S (and associated B). Experience of water is not a monolithic thing. Here I mean not only the distinction between molecular and what you refer to as "prescientific" varieties of understanding, but also the construction of different experiences from apparently identical objects: for example, my experience of the "same" glass of water (1) after mowing the grass on a hot, Kansas August afternoon or (2) later in the evening when I desire a drink to accompany the juicy steak that I grilled. That same glass of water is cool refreshment in the first case and cruel substitute for a glass of wine in the latter. What is the B associated with this glass of water when S of the glass of water itself is not a unitary thing? To what extent is the B of the glass of water dependent on the S of the glass of water, in contrast to the typical (folk?) understanding of NCCs? For me, the point here (and in Mark's comments) is not necessary to dispute a version of B-S identity, but instead to raise interesting (social psychological) interesting complications to the idea.

When I first read your post, I also had a version of the reaction that Mark notes in point 3, except that my reaction concerned the non-symmetrical nature of the Zimmerman-Dylan relationship. I think that it is interesting to consider, contrary to the identity principle (and in line with social constructionist or dialogical theories of person), the extent to which Zimmermann and Dylan are not the same person, that Zimmerman might be places that Dylan is not.. Ontogenetically, Dylan emerged from Zimmerman, and one can imagine ecologies of self/identity—for example, the home of Zimmerman's childhood—where Dylan is not welcome and people would gradually kill him off. (I can almost hear relatives saying, "We want our boy Robert, not this Bob Dylan imposter.). Likewise,

there will be ecologies of self/identity (associated with the experience of "living in the limelight") where Dylan is welcome and Zimmerman is not. I wonder then to what extent one might regard constructionist or dialogical theories of person as theories of ECCs—or at least of a particular sort of self/identity consciousness—and what interesting complications that might raise for a strict A-to-A' account of the S-B (B-S?) relationship?

Finally (with respect to the Zimmerman/Dylan example), how does consciousness of ontogenetically subsequent Dylan reconstruct experience of ontogenetically precedent Zimmerman? One of the most interesting features of psychological experience for a social psychologist—indeed, what I think is the defining object of study that separates the discipline of psychology from similar "smells-like-science" articulations of the field as "brain science" or "behavioral science"—is what I refer to in my social psych course as the constructed character of experience. I use this phrase to refer to the idea that our experience is not a simple, mechanical reflection of objective stimuli (whether inside or outside the body), but instead arises from processes of construction—typically habitual—whereby we act upon those raw materials of objective stimuli to produce experience. The prototypical phenomena that I use in discussion of this idea are things like visual illusions, placebo effects, and like behavioral confirmation or self-fulfilling prophecy (i.e., how A's belief that B is attractive, intelligent, or hostile can lead A to relate to B in ways that induce B to behave in ways that newcomer C would regard as attractive, intelligent, or hostile). In all of these cases, consciousness of X acts on (and presumably re-organizes) NCCs. Two points are noteworthy here: (1) recognition of the fact that the A-A' correlation might (sometimes) be the result of S producing B rather than the more generally assumed, often implicit, causal account of B producing S; and (b) the possibility that blueprints for these S reproduces B cases might "originate" in some analytic moment in ECCs rather than NCCs.

And finally (with respect to my now excessively long commentary), I was reminded while reading your post of the Ramachandran & Hirstein article and their image of conveying the idea of REDNESS to a person with atypical color vision. Presumably, if REDNESS = Bx, then one would only need to transmit Bx from brain of person one to brain of person two. I think the issue here, and the question for a A-to-A' account of the B-S/S-B relationship, concerns how much of Bx one would have to transmit? Presumably, one could convey a species-typical visual experience S associated with light of a certain wavelength with some relatively small transmission of B. How much more B would one have to transmit to convey an S of that light wavelength as experience
as red (versus orange, scarlet, or rojo)? How much additional B would one have to transmit to convey an S of that light wavelength that includes its associations to fortune/luck (as in many East Asian settings), death (in Akan-speaking communities of Ghana), political philosophy, or erotic excitement? To the extent that these more content-rich associations are inseparable from a person's experience of the wavelength, and to the extent that these content-rich associations are deeply embodied—distributed throughout the nervous/motor system in acquired/habitual reflexes—how much B is necessary to convey that S?

Again, the point of this rambling, disorganized post is not to deny the possibility of a material basis for consciousness that one could transmit from one person to another, but rather to add complication to relatively simple, A-to-A' accounts of B-S relationship. Yours is perhaps not such an

account, but I think our readers might have such an account in mind, and I think they would find it illuminating to consider the complications.

SIMMONS RESPONSE TO ADAMS:

Perhaps issues concerning personhood make the Bob Dylan/Robert Zimmerman example a bad one. So, here is another one: imagine that Sally assents to the proposition (1) "(if P then Q) and (if Q then P) [e.g. if Bill goes to the party, then Jill goes; and if Jill goes, then Bill goes]" but not to the proposition (2) "P if and only if Q" [e.g. Bill goes if and only Jill goes]. As a matter of logic, (1) and (2) are logically equivalent. That is, these expressions express the very same thing. So, what goes for (1) goes for (2), necessarily. The fact that the equivalence isn't obvious to Sally doesn't mean that it isn't so.

Now, one might reply that the above case is disanalogous to our case concerning the claim that S is B. In the above case, in principle we can know that (1) and (2) are the same prior to experience. One the other hand, one might maintain that, even in principle, one cannot know that S and B are the same prior to experience. My response to this is that we can be justified in holding that S is B prior to experience because certain deductive arguments force us into holding this to be true. Namely, the exclusion problem of mental causation forces us into this view. That is, if B causes D, S can only cause D if S=B. If S is not B, then it is excluded from being causally efficacious. In terms of the explanatory gap - the great chasm between our understanding of S and our understanding of B - my reply is that we needn't maintain that holding S to be B must be intuitive; indeed, not all cases of theoretical identification are intuitive. This is why physicists resort to certain models to try to explain physical concepts in ordinary terms. For instance, we may not be able to fully wrap our heads around how a superposition works, but we have good reason to think they exist and can try at least to approximate what they are.

JANDER RESPONSE:

"Qualia", still seems to be and an endlessly controversial issue. Two writings you may find particularly challenging: The scientist G. Edelman (Nobel Prize winner)1990: *The remembered present: a biological theory of consciousness*. Basic Books. New York. 384 pages. He tries to explain qualia in terms of complex neuronal interactions.

Ramachandra, VS; Hirsten, W (1997) The three laws of qualia. What neurology tells us about the biological function of consciousness, qualia and self. *Journal of Consciousness Studies* 4:429-458. They argue qualia evolved for a biological purpose!

Philosophical Zombie issue: Otherwise normal humans lacking qualia? See Dennett, DC (2005) *Sweet dreams: Philosophical obstacles to a science of consciousness*. MIT Press

I believe Dennett, D (1995) "Facing backward on the problem of consciousness," *Journal of Consciousness Studies* 3(1) 4-6. argues that there is no 'hard problem' as originally formulated by Chalmers.

SIMMONS RESPONSE TO JANDER:

Thanks for the reading suggestions. I haven't read any stuff by Edelman before, so I can't comment on that. But, I do know a great deal about Ramachandran, Hirstein, and Dennett. My view is pretty similar to Ramachandran and Histein's. The one caveat is that I think that there are material constraints on our brains such that qualia are necessary for the execution of non-automatic mental processes.

In terms of Dennett, it has been a while since I have read his stuff, but I think I have a pretty good idea of what his arguments are in the papers you note. First, he thinks that philosophical zombies are inconceivable because when we really think about them being as complex as we are, we can't help but attribute phenomenal states to them. I'm inclined to think that we can still conceive of zombies, but this doesn't imply much, as conceivability doesn't entail possibility.

As for Dennett's stance on the hard problem of consciousness, I imagine he would call me a 'qualiaphile' in some derisive manner. He thinks 'qualia' doesn't refer to anything actual, since our corresponding concept is incoherent. He is just wrong about this. As most philosophers now agree, a word or concept can refer to something actual despite an inaccurate conception or represenation; the concept refers in virtue of some sort of causal-historical chain. Dennett can't grant this because the arguments for there being reference outside of a description in mind rely on granting that there are necessities and possibilities outside of what is physically necessary or possible. I won't go into the details here for what all of this means, however, since it would take a lot of space to explain.

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Sherrie Tucker

DODGING NEURONS

It is testimony to disciplinary differences among us that I was drawn to this seminar on consciousness fully unprepared to encounter The Brain. I am interested in modes of consciousness that underwrite and emerge from social justice movements—what we might call social consciousness. It has never occurred to me to consider neurological divisions of labor. What interests me about consciousness is not: how do those neurons make me think I'm me?, or even: what are the social processes through which individuals come to understand themselves as selves/agents/knowers/actors? I am interested in how people come to understand themselves as socially inter-connected and mutually interested, as social beings whose relationships among one another are other than hierarchical Self-Other, same-different binaries. "Women-of-color" feminism is an example of a powerful political and theoretical approach to group-identity that, as Chela Sandoval writes in her ground-breaking essay on U.S. Third World Women, arises not out of internal group sameness, or delusions of self autonomy, but "out of the matrix of the very discourses denying, permitting and producing difference."[6] Sandoval's theorizing of what she calls the "differential mode of oppositional consciousness" or "differential consciousness," builds from Gloria Anzuldua's conceptualization of the kinetic, mobile, coalitional "new mestiza consciousness," W.E.B. Du Bois's double consciousness and a long history of thinking about consciousness that presumes that power is a factor in social recognition, and that social recognition is a factor in human consciousness, and that for some groups, consciousness of power is imperative to struggles for livable lives. Women of Color Feminist Theory, Borderlands Theory, Postcolonial and Decolonial Theory, Critical Race Theory, Mixed Race Theory and Theories of Black Difference, Queer Theory, and Disability Studies are some of the fields that have produced a rich body of scholarship on difference and social consciousness.[7]

I come from a graduate program founded in the late 1960s/early 1970s (depending on whether or not the origin story begins at official sanction) as the History of Consciousness. As I understand it, the only thing the founding faculty agreed upon was the need for a center that crossed disciplinary boundaries and facilitated interdisciplinary work, and that the core seminar should be on Hegel.[8] But the first graduate students who hitched their careers to the title "History of Consciousness" had

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[6] Chela Sandoval, "U.S. Third World Feminism: The Theory and Method of Oppositional Consciousness in the Postmodern World," *Genders*, no. 10 (1991): 1. Gloria Anzaldua, *Borderlands/La Frontera: The New Mestiza* (San Francisco: Aunt Lute Books, 1987), 80.

[7].In addition to Sandoval and Anzaldua, see Johnnella E. Butler, *Color-Line to Borderlands : The Matrix of American Ethnic Studies*, American Ethnic and Cultural Studies (Seattle: University of Washington Press, 2001), Mairian Corker and Tom Shakespeare, *Disability/Postmodernity : Embodying Disability Theory* (London ; New York: Continuum, 2002), Judith Butler, *Undoing Gender* (New York: Routledge, 2004), Naomi Pabst, "Blackness/Mixedness: Contestations over Crossing Signs," *Cultural Critique* 54 (2003), Sara Ahmed, *Queer Phenomenology : Orientations, Objects, Others* (Durham [N.C.]: Duke University Press, 2006). For an intersectional approach to Borderlands Theory, Queer Theory, and Disability Studies, see Todd R. Ramlow, "Bodies in the Borderlands: Gloria Anzaldua's and David Wojnarowicz's Mobility Machines," *MELUS* 31, no. 3 (2006).

[8] "Memo to Faculty, University of California, Santa Cruz, from History of Consciousness Board, February 1, 1972," in *Documents from the Early Years of History of Consciousness,* History of Consciousness Departmental Records (Santa Cruz, California: University of California, Santa Cruz).

little interest in Hegel in particular, but were drawn to anything and anyone (including Hegel), that could help them to understand the social movements that transformed consciousness in their own times. I enrolled in the program in the 1990s to study with Angela Y. Davis, who had inspired me to consider the relationship between music and social consciousness, with a focus on jazz as a site of social struggle and change. I studied women-of-color feminism, Chicana feminism, critical race theory, and queer theory, all with a particular interest in modes of social consciousness, social movements, and communities that do not "overcome" difference or locate central selves in opposition to difference, but, in fact, are constituted through, and find critical strength in difference.

Many years later, I am still thinking about questions of social consciousness, difference, and music, but am now stretching myself to consider connections between formations of social consciousness I have studied previously, in relation to a project I have become involved with that combines disability studies, improvisation studies, and music and social consciousness. I am part of an interdisciplinary group of musicians, academics, technologists, programmers, composers, and improvisers that has been working with an adaptive musical instrument that facilitates group sound-making among people with many different kinds of bodies. I am eager to better apprehend the implications of what seems to me a powerful and easily portable practice that might, indeed, transform social consciousness through group practice that does not attempt to transcend or belittle difference, or atomize individuals, but that depends up, builds upon, and is able to exist through communities, technologies, and aesthetics of difference.

As I mentioned in my proposal, I came to this seminar with very specific questions about consciousness that emerged from another interdisciplinary collaboration, a seven-year research initiative of the Social Science and Humanities Research Council of Canada, entitled ["Improvisation, Community, and Social Practice."](#)[9] Most of my work in ICASP has taken place in a subgroup that studies the Adaptive Use Musical Instrument (AUMI), a software interface that utilizes simple camera tracking to transform any computer with a camera into a musical instrument that responds to movements as slight as a breath or as broad as a sway.[10] The AUMI is an extremely flexible instrument whose design will never be complete, as the goal of its creator, composer, improviser, and humanitarian, Pauline Oliveros, is to continuously adapt it to all bodies. Oliveros often writes and speaks about consciousness as noun and verb, thing and process, defining it as "awareness of stimuli and reactions in the moment. Consciousness is acting with awareness, presence and memory." She has developed a practice called "Deep Listening" that is a form of meditation that is "intended to expand consciousness to the whole space/time continuum of sound/silences."[11] Her goal with the AUMI is to expand musical improvisation across the widest possible range of users, thus extending access to improvising communities, extending improvising communities themselves to more improvisers, and transforming what it means to improvise community. Continuous feedback from users is factored into the upgrades of the instrument, along with adaptations required by the constant turnover of operating systems. Pauline and other members of the

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[9] See the ICASP website: http://www.improvcommunity.ca/

[10] For more information, and free download of the AUMI, see the Deep Listening Institute webpage on AUMI: http://deeplistening.org/site/adaptiveuse

[11] Pauline Oliveros, *Deep Listening: A Composer's Sound Practice* (New York, Lincoln, Shanghai: iUniverse, 2005), xiv, xii.

collaborative team of which I am a part believe that improvising across abilities is a powerful and potentially transformative social practice. The AUMI makes use of the ways that free improvisation thrives on "difference." In many other forms of musical and community practice (dependent on harmony, sameness, and unity) difference is perceived as a threat, a "wrong note," something to be resolved, but in free improvisation, where dissonance is not only tolerated, but often valued an important aesthetic and critical practice, sameness isn't a goal and difference is enabling.[12]

Over the three years I have been involved with the AUMI, our group has become convinced that the use of the instrument in mixed ability settings has transformed social relations and consciousness among students, teachers, staff, nurses, parents, and board members at Abilities First, a public school for children with disabilities in Poughkeepsie, New York that is a pilot project for the AUMI. This community was the impetus for the invention of the instrument. An occupational therapist and drummer named Leaf Miller had gone to her friend Pauline Oliveros with a problem—how could she extend her drum circle at the school to all students, not just those who could hold and move a percussion instrument? Teachers operating the arms of children holding rhythm instruments (hand-over-hand) is a typical solution, but it wasn't the answer. Pauline asked to work with the three children with the least mobility. She then assembled a team of technicians and programmers, and designed the AUMI specifically to adapt to the slight movements of the three children. As the first three children began using the instrument, it also became popular among students with wide range of mobility (voluntary as well as involuntary), and, in fact, among the full range of students, most of whom are non-verbal, and some of whom invented their own ways of playing it. Today the drum circle consists of three laptops, drums, and percussion instruments, and students take turns on the laptops, with those who are unable to participate on the drums going first. The instrument does not yet adapt to deaf or hearing-impaired users, but the team has been working on haptic interfaces, just as it continues to work on adaptability to all users in an unending process of improvisatory design, use, and practice. With the AUMI, the music class, once off limits to many, is now the most popular, most inclusive class, and most boundary-breaking class at the school. Nurses, therapists and teachers who used to take coffee breaks during the drum circle now gather to learn the instrument and watch their students do things they didn't think they could do. Students play alongside people who in other classes are charged with "improving" their bodies. It is the only hour of the week when nobody's body is seen as a problem.

Improvisers often speak of consciousness as something that can change through experimental practice. Members of an improvising group can reach a state of listening and responding in which no one seems to lead and no one seems to follow, a state where the improvisers create something together that builds on differences to make something new. This isn't a guaranteed outcome, of course, but it is this kind of critical practice that the group I am involved with is interested in. So one of the questions that began to arise for us about the AUMI was: What are the broader implications of these sessions in which therapists and patients, students and teachers, professional musicians and amateurs, people with little mobility, as well as with people with uncontrollable and sudden muscle tone and sweeping mobility, across a range of cognitive processing differences, made something new each week as a group through improvising together? Could group

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[12] Ajay Heble, *Landing on the Wrong Note : Jazz, Dissonance, and Critical Practice* (New York: Routledge, 2000).

improvisation across abilities transform social consciousness of participants in other settings, as it seemed to be happening when participants at Abilities First created moments of mutual surprise across differences, thus reshuffling social relations? These are the questions I brought to the seminar and caused me to sometimes recoil from our readings.

Aliens, bats, lesion-monkeys…

For instance, in our initial readings on neurons and qualia, I found myself balking at explanations of differences in consciousness between "humans" and "animals", especially when those distinctions would seem to cast out of the "human" realm many current users of the AUMI instrument (most of the Abilities First students, for example, are nonverbal). AUMI users are an extremely diverse group in all ways, including mobility, sensory experience, and cognitive processing. Some people have prior experience radically different from reorientation as people with disabilities (PWD), and some do not. Theories that looked at consciousness as something that emerged only through a particular set of steps, such as language acquisition, struck me as narrow and exclusive. (This is something I would not have noticed prior to my involvement with the AUMI.) What does it mean for scholars to include people with brain-damage and those on the autistic spectrum only as counter-points in the definitions of human consciousness? What does it mean to privilege individual consciousness and one particular route to subjectivity? Again and again, I recognized AUMI users only in those passages that produced examples of people who lack the right stuff. From a Disability Studies framework, cultures disable by drawing lines between normal and lacking, autonomous (really?) and cognitively dissonant exceptions that prove the rule—it seemed to me that many of the analyses of consciousness that we read and discussed were, themselves, disabling. From perspectives of women-of-color theory, borderlands theory, critical race theory, and feminist and queer theory perspectives as well, this division of the "human" from "nonhuman" (or subhuman) as determined through a test of normative subject-acquisition is a an problem of liberal humanism that ignores while it exercises power. As Judith Butler writes,

> The terms by which we are recognized as human are socially articulated and changeable. And sometimes the very terms that confer "humanness" on some individuals are those that deprive certain other individuals of the possibility of achieving that status….Certain humans are recognized as less than human, and that form of qualified recognition does not lead to a viable life.[13]

What does it mean that contemporary scholars in the consciousness boom are continuing to define consciousness as both a measure of what is valuable about being human and as off-limits to so many people?

At the same time, many of our readings and discussions have helped me to examine the imprecision of my own loose, hippie-era attachments to the word "consciousness." I want to be more knowledgeable about what scholars across the disciplines, including myself, mean when they use this term. For instance, in this seminar I have learned that many of the processes that I see as "cultural" are also biological—thus, helping me to recognize the folly of my disinterest in "neurons."

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[13] Butler, *Undoing Gender*, 2.

While I may not develop an interest in how the brain causes consciousness, I am excited about the revelation that social/cultural transmission is, among other things, a "biological mechanism." (Tomasello). I welcomed this article and felt quite surprised at how accustomed I am of thinking of historical and evolutionary time as two different disciplinary conversations. Tomasello's focus on "cumulative cultural evolution" (p. 5) or how "human beings are able to pool their cognitive resources" seemed very important to me in terms of what happens when AUMI users improvise across abilities. AUMI practice, however, would challenge Tomasello's example of the inability of an autistic child to take advantage of cultural transmission by virtue of not having "species-typical" ability to "understand other persons as intentional/mental agents like the self." (p. 6). I see the AUMI as a form of cultural transmission that does not require the intentionality that Tomasello sees as prerequisite for cultural transmission. The instrument adapts to cognitive difference, creates an environment where cognitive difference may be pooled without privileging a particular kind of self-consciousness based on intention, agency, and self-identity. Improvising across abilities seems an excellent example of "sociogenesis in which multiple individuals create something together that no one individual could have created on its own." This is as true of the supposedly autonomous individuals in the mixed-ability improvisation as it is of the people with disabilities, including those whose consciousness may not be primarily about self-identity. The improvisation sessions call into question any stark division of autonomy and dependency.

I am drawn to the insights of cognitive semiotics, in which meaning-making does not depend on a sameness of consciousness as process, but presumes that "[c]onscious experience is unlikely to be the same in two different subjects" (Abrantes, 2) and that considers intersubjectivity in ways that presume this difference, a way out of disabling Self-Other oppositions. Readings on embodied consciousness, such as Gibbs' "Perception and Action," were extremely interesting. I appreciated Gibb's attention to "body-world interactions," "perceptual experience," and in his approach to music as "a kind of empathetic cognition." All three of these formulations seemed flexible to improvising across cognitive difference as a practice related to social consciousness. I am continuing to ponder his statement about "the act of listening to rhythmic music involves the same basic processes that generate bodily motion." (54). In a sense, to rhythmically improvise across limited and broad mobilities using the AUMI is a way to produce a social body in motion that is usually fractured by structures and institutions that separate our bodies through ableist (and therefore disabling) logics.

Seeking Disability Studies of Consciousness

In thinking about consciousness more attentively, and in cross-disciplinary dialogue with other seminar members, I have at last achieved confusion over a term that should have confounded me long ago. My interests in social consciousness and difference led me to AUMI, which led me to this seminar, which led me to encounter readings I would not have looked at otherwise, which led me to question my own use of "consciousness." I have discussed my unhappiness with tendencies in the readings that define consciousness in ways that exclude many AUMI users, but perhaps what has been most challenging is the realization that I have no way of defining consciousness that can accommodate the diversity of cognitive processing among users. To talk about consciousness of a group, when many members' cognitive experience is unknown to other members, even to family, teachers, therapists and friends, seems presumptuous and utopian. Many of the children who

improvise each week with the AUMI group in Poughkeepsie neither speak nor sign; communication of preferences is not always discernible across cognitive and communicatory difference. Children are wheeled up to a computer; a therapist, teacher, or volunteer sets the "red dot" on the computer screen on whatever "moves" in that child (a breathing chest, a nose, a tongue), and select for that child a sound and range-of-motion that are instantly camera-tracked to the child. Alongside children who do communicate preferences (through smiling, heightened engagement, or relaxation), a group of children and adults sound together in a noisy free improvisation session, but there is no way of measuring mutual experience.

Thus, I have turned to Disability Studies to see how scholars have approached consciousness in relation to intention, agency, and cognitive difference, and who often point up what our seminar readings have called the "qualia problem" is not one that is limited to people with disabilities. None of us really knows perceptual experience of anyone else. None of us is ever completely in control of our body, completely able to execute our intent, completely able to function as an autonomous agent. Through my readings in Disability Studies of consciousness, I have encountered a remarkable set of readings by James Overboe, especially, his "Affirming an Impersonal Life: A Different Register for Disability Studies," in which he turns to Deleuzean "pure immanence" as a valuable theory that complicates what he sees as an over-reliance on self-consciousness in Disability Studies. The "self-reflexive subject" is a product of humanism, and is privileged in the social world that many of us operate in, but it should not, he argues, be accepted as the criterion for the entire spectrum of human experience, including consciousness. He wishes to intervene in what he sees as Disability Studies' failure to "affirm disabled lives that are simply expressed without cognition, intent, or agency." Overboe illustrates his point through his own experience. Born premature, and diagnosed from birth as having cerebral palsy, he writes, "my lived experience was measured against this 'normative shadow' and of humanistic essentialism." (Overboe 244). Yet, Overboe does not throw out consciousness, but rather argues that the "consciousness of the impersonal life differs from consciousness that derives from the self." Seizing upon Deleuze's notion of the "impersonal life" as "different from experience as it does not refer to an object or belong to a subject," he writes that "within an able-centred context, the continued flow of an impersonal vitalism is not affirmed but pathologized as impairment that must be subsumed and 'overcome' to ensure membership into a self with intent and agency." As someone who moves between self-consciousness of humanism and pure immanence of the impersonal self, Overboe urges Disability Studies to be more inclusive of "the vitalism of an impersonal life," to refrain from considering it "noise that will be filtered out, in the name of clarity, in order to facilitate the real business of social change and so-called emancipation." While this is a difficult charge to launch at a field that has formed in close relationship to the Disability Rights Movement, he makes a strong point with his caution that privileging self-consciousness and liberation "re-establishes and re-inscribes the dominant language or communication style associated with being a person or individual with agency." He imagines a scenario of living with Locked in Syndrom (LIS) in which

> my caregivers, noting I am non-communicative, robbed of my mind, and shackled with this useless body from having cerebral palsy ... decide that I have lost the last vestige of my humanity, along with my personhood, and that my life is not worth living. ... These people have no idea that this life has returned to a different plane of immanence, that of an

impersonal life without language, without metaphor, without a need to give meaning or sense of purpose.[14]

I am thinking now that AUMI, when used with free improvisation, in mixed ability groups, facilitates a flexible space for non-hierarchical co-soundings across different "vitalisms." It is a musical instrument that equally adapts not only to a range of mobility, without privileging any body over another, but without privileging the "consciousness that derives from the self" over "other planes of immanence." The AUMI can be used simultaneously with and without conscious awareness of the relationship between bodily movement and sound, with and without musical narrative, with or without metaphor (for instance, the occupational therapist holds up a picture of a lightening bolt and the improvisers use the instrument to "sound like thunder" and the group sounds together, some intending an approximation of thunder, some not, and some, who knows?, but none of it is wrong, inappropriate, or filtered out from the whole). In a sense, we could call the AUMI improvisation itself as Deleuze's "qualitative duration of consciousness without a self." which might be what is so transformative.

JANDER RESPONSE:

'Social consciousness' is a somewhat misleading shorthand for 'socially shared conscious contents' . Conscious processing takes place only in individuals. An individual is conscious (aware) of being a member of a group. The group as group has no consciousness apart from the consciousness of its members. Similarly, there is no "history of consciousness," correctly, there is a history of knowledge, opinions and theories about consciousness. Similarly, you do not transform consciousness, you transform the contents of consciousness. Oliveros' definition of 'consciousness' is woefully incomplete and simplistic, and thus potentially misleading. Note, we consciously perceive, attend, think, create, feel, fantasize, intend, decide and act. Human consciousness is extraordinarily rich and complex. Recognize Gibb's much richer concept of consciousness. Consciousness is virtually the same apparatus in all of us, what is universally different to various degrees is conscious content. If you take a class in mathematics you change skills and knowledge (conscious contents), your consciousness itself is not changing. Disease and psychoactive drugs may indeed change conscious processing. Also, it just occurred to me: Different personality traits indeed reflect quantitative differences in conscious processing.

TUCKER RESPONSE TO JANDER:

Thank you, Rudolf, for your comments, which are helpful in pushing me toward more precision. I don't think I'm talking about "contents" as what changes, or what is shared, however. I think I am talking about "consciousness processing" however, and I thank you for that distinction. I do think that group improvisation, social movements and social practices fueled by expectations of difference foster a different kind of consciousness processing than one based on a notion of the

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[14] James Overboe, "Affirming an Impersonal Life: A Different Register for Disability Studies," *Journal of Literary & Cultural Disability Studies* 3, no. 3 (2009): 247.

brain producing a mind in an individual. I am persuaded by philosopher Alva Noë, author of *Out of Our Heads: Why You are Not Your Brain and Other Lessons from the Biology of Consciousness* (2009) that "[c]onsciousness is more like dancing than it is like digestion," in that is doesn't only happeninside the brain of an individual, but "unfolds in the world and with others."[15] For Noë, "consciousness has its neural truths, but it is not only a neural event" (xii) which I taken to mean that all consciousness, even "individual" consciousness of the self-reflexive variety, would involve neurons, the social world, and others. I am aware as I write that I am still using terminology in different ways than you are, and it occurs to me that we probably mean different things by "individual," too—but that is another conversation—one of the beauties of cross-disciplinary and interdisciplinary dialogue! Thank you for that. It has been very stimulating.

DALDORPH RESPONSE:

Sherrie, this is an intriguing paper indeed, thanks for it. I was really interested in your discussion of the AUMI in the Poughkeepsie school, and the "improvisation" of community. I had the sense in reading that you believe that the AUMI sessions might be a model for a different type of community, non-hierarchical, and not restricted in any way by ability. You describe it as a "potentially transformative social practice," and I wondered as I read what sort of transformations you could imagine outside the small world of the Poughkeepsie school. I was particularly interested in what the children make of these sessions. You mention that there's "no way of knowing" how some of the non-verbal, severely disabled students experience the AUMI sessions, but I would like to know what other students say about it. I should imagine they are very excited about it, and their responses might point to ways it could be developed outside their community.

The AUMI sessions, the idea of music used in this way, made me think of the son of Japanese writer Oe Kenzaburo. Are you familiar with his music?

Like you, I was disturbed by too many of the writers we read for the seminar who could only see one type of human consciousness, and often used people with autism or brain damage or with some other disability as "other" and most definitely inferior. I also noticed what seemed to me very naive characterizations of autism, and of course no recognition of some of the strange "gifts" that often accompany autism and similar conditions.

So, I learnt so much from your paper and see it leading to all sorts of possibilities, especially with the AUMI work.

You ended with the work of Overboe, and his description of what Locked In Syndrome might feel like, and I was struck by the similarities between this condition, as it's described here, and the condition of an Alzheimer's patient who might also be seen as having a "qualitative duration of consciousness without a self." I have heard it said that the life of an Alzheimer's patient is no life at all: your quotations from Overboe made me think, who are we to judge that a life is not worth living, just because that person's consciousness has become very different from our own.

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[15] Alva Noë, *Out of Our Heads : Why You Are Not Your Brain, and Other Lessons from the Biology of Consciousness*, 1st ed. (New York: Hill and Wang, 2009), xi, 4.

TUCKER RESPONSE TO DALDORPH:

Thank you, Brian, for these comments. The AUMI is being used in other places besides the Abilities First School in Poughkeepsie, and part of our larger project is to collect and interpret data from multiple sites, purposes, and users. The instrument is a free download and all users are invited to participate, in hopes that they will become fellow researchers. It is being used at an Easter Seals music class in Newfoundland, a hospital for people with spinal injuries in Chile, and many other sites. It would be wonderful to know if the instrument is interesting to people with Alzheimer's Disease. I would think it could transform social consciousness among groups that include people with Alzheimer's, since it is so effective in facilitating group connection without the prerequisite of short term memory or the pressure of finding the right words, or even the right notes. In his book, *Musical Cognition* (2009), Henkjen Honing writes that "music is not sound," or a set of musical components, "it is listening to sound." The experience of playing and listening with others, using the AUMI with others, without the necessity of remembering "tunes," or lyrics, or even being in the same mental time and place, is one of the things I have enjoyed about the instrument myself.

Thank you for introducing me to the music of Hikari Oe. A Mozart-inspired composer, rather than a free improviser, Oe engages a different form of music than what I've been working with, so listening to Oe has extended my appreciation of what kinds of musical practices may transform social consciousness. Oe was born with a growth on his brain that affected his cognitive processing. His father, Kenzaburo Oe, writes that "had Hikari not composed, [his mother and I] would never have realized, nor would we have been able even to imagine, that he possessed this sensibility. The scope of what we have gained from this world and understood of it would have been significantly narrowed."[16]

SIMMONS RESPONSE:

If I understand you correctly, I agree that it is erroneous to conflate self-awareness with consciousness. When philosophers talk about the "hard problem" of consciousness, they are concerned with, not self-awareness, but awareness, itself. I'm inclined to think awareness is consciousness. Or, to put it another way, to be conscious is just to have sensations. While the ability to represent one's self might add interesting dimensions to consciousness, it seems unnecessary for consciousness, itself. If this is right, then consciousness is not uniquely human.

Apart from my inclinations, we might put forth the following argument against the claim that self-awareness is either a necessary or sufficient condition for consciousness. If we think of the self as something non-conscious, then we should interpret "being aware of the self" as meaning something like "being conscious of the self." But if we do that, we must already be conscious in order to be aware of ourselves; so, consciousness is primary, while self-awareness is secondary. Now, again, if we think of the self as non-conscious, and we think awareness is non-conscious, too, then there is

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[16] Kenzaburo Oe, "If Music Were Not to Exist," liner notes to *Music of Hikari Oe* CD, Columbia CO-78952.

no consciousness. Indeed, the ability for self-representation comes on the cheap and, so, it is not a sufficient condition for consciousness. For example, "This sentence has five words" represents itself, but it surely isn't conscious. If we think of the self as something conscious, on the other hand, the self-awareness is not necessary for consciousness because it is already present. In short, it seems like we must be committed to holding that consciousness is something more basic than self-awareness.

TUCKER RESPONSE TO SIMMONS:

Nicholas, you bring in two points that intrigue me especially: 1) that "consciousness is not uniquely human," and 2) that consciousness is "more basic" than the "self." Like many scholars of gender, race, nation, and sexuality, I tread cautiously on the animal/human divide, since I am so aware of the ways that this line has been used as a power-play by humans to disqualify other humans from social recognition, rights, and access. But then, again, Donna Haraway has written a great deal of work that does not confine consciousness only to the human, while at the same time developing a socially and politically astute ongoing analysis of power. If I understand a bit of her work on dogs, it is that companion-species and humans are mutually constitutive, which definitely would put an interesting spin on consciousness as it pertains to humans and other animals.[17] I have not read deeply into Posthuman Theory, but I'd be very interested in learning more about what is being said in those quarters about consciousness.

It has been great reading with you. I was delighted to be reminded that we first met on a highly improvisational dance floor prior to this interdisciplinary colloquium.

Sherrie Tucker's Works Cited

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[17] Donna Jeanne Haraway, *When Species Meet*, Posthumanities (Minneapolis: University of Minnesota Press, 2008).

Glenn Adams

THE ECOLOGICAL CORRELATES OF CONSCIOUSNESS

I was late in delivering my original post to the HCH Fall Faculty Colloquium Blog. My delay was partly the result of a mistaken belief (consciousness?) that, when I sat down to write, the emergent thoughts I was composing in my head would flow easily (if not without effort) onto the screen. Of course, I should have known better and planned accordingly—and at some level I did ("know better", not "plan accordingly")—but I somehow deluded myself that it would be easier than it was. It turns out that this tendency to underestimate the effort necessary to accomplish tasks is fairly common, and some observers have suggested that it is an adaptive (if not accurate) feature of human consciousness. That is, if people were not mistaken about the enormous amounts of effort involved in accomplishing their imaginative goals and creative projects, they might not undertake them, and our world would lack the benefits of their industry and invention.

This may seem like a tangent; however, I think the question of such "delusions" raises some issues about consciousness that are of interest to me, but that have not been sustained topics of discussion in our colloquium. Consider some of the following phenomena:

- Epidemic outbreaks of "penis-theft panic", whereby men in some West African settings report that their penis has disappeared (or is shrinking) and subject people suspected of such penis theft to "instant justice" (i.e., lynching; see Adams & Dzokoto, 2007; Jon Stewart commented on similar incidents in Congolese settings on the April 28, 2008 episode of The Daily Show with Jon Stewart)
- The sense among many people in North American settings that they have had been abducted or had other "close encounters" with extraterrestrial beings (see Clancy, 2005).
- The tendency for people in many African settings to refuse vaccinations due to concern that the WHO campaigns for eradication of polio (or other diseases) are really a genocidal weapon intended to render Africans infertile (see Adams & Salter, 2007).
- The tendency in American setting for people to refuse vaccinations due to concerns that they are linked to autism.
- The tendency for European Americans to experience their relative affluence as a meritorious product of their individual effort and hard work (rather than the accumulated historical residue of genocidal conquest, slave labor, and neocolonial violence); to underestimate the extent to which the United States of America is a society based on racial domination; and to actively cultivate their lack of consciousness about these matters (see Adams, O'Brien, & Nelson, 2006; Adams, Tormala, & O'Brien, 2006; Salter, 2010).
- The tendency for a large percentage of Americans to disbelieve "scientific" evidence regarding the human sources of global climate change.

To the extent that such beliefs are false (an open question in some cases), one might be inclined to treat them in accordance with a biomedical model as an organic pathology: the product of something gone awry in the species-typical functioning of consciousness (in the sense of a unitary

capacity that has informed much of our reading and discussion) that would "normally" (in deliberate opposition to the connotations of "abnormal" psychology associated with delusion) promote a correspondence between consciousness and reality. However, this biomedical notion of organic pathology becomes untenable when "false beliefs" are widespread among otherwise "normally" functioning individuals within a community. At that point, one has to consider such beliefs are the product of organically intact, internal structures for consciousness that exist in faithful attunement to cultural-ecological tools/affordances for local varieties of consciousness built into the structure of everyday worlds. To the extent that cultural-ecological tools/affordances promote local varieties of consciousness that are atypical (deviant?) in relation to reigning, conventional standards, one might call them alternative or even "false" consciousness.

This brings me to the post I intended to write when I sat down to do so. The foundation for my work lies in the conceptual framework of Cultural Psychology, an interdisciplinary field that examines how embodied structures of psychological experience exist in a bidirectional relationship with socially constructed technologies for consciousness embedded in everyday cultural worlds.[18] One direction of this bidirectional relationship emphasizes the cultural constitution of psychological experience. From this perspective, species-typical consciousness is not simply the natural unfolding of some inborn potential; instead, it reflects and requires the incorporation (i.e., taking into the body) of cultural-ecological affordances for consciousness developed over historical time through successive generations of human activity. The other direction of this relationship emphasizes the psychological constitution of everyday worlds. Everyday worlds are likewise not "just" natural; instead, people in the course of everyday activity reproduce cultural ecologies that bear the material traces of their beliefs and desires.

In the context of this Colloquium, one noteworthy feature of this perspective is that

> taking these processes seriously enables us to explain not only the universal features of uniquely human cognition [can we add here "consciousness"?]—such as the creation and uses of material, symbolic, and institutional artifacts with accumulated histories—but also the particularities of particular cultures, each of which has developed for itself via these

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[18]I spent an inordinate amount of time pondering whether to use "consciousness" in place of "psychological experience". To what extent are these terms overlapping? What is the relationship between them? We have not devoted much attention in the colloquium to how various "unconscious" psychological experiences or processes relate to consciousness. I am fairly certain that the phenomena I have in mind in the sentence to which I refer are not limited to conscious experience. For example, I definitely have in mind the patterns of "implicit associations" that inform people's implicit beliefs/stereotypes and preferences/prejudices. I can behave in ways that demonstrate that I prefer one option over others without necessarily having conscious awareness that I prefer that option. If someone alerts me to the fact that I am show a preference, I can have conscious awareness of having the preference without any consciousness of its source. However, I remain uncertain about what kinds of psychological experience count as consciousness, especially when one thinks about forms of cultivated ignorance whereby people are sufficiently conscious that they don't want to know something (e.g., their participation in neocolonial oppression) that they participate in and reproduce cultural technologies of denial (see Cohen, 2001).

same historical and ontogenetic processes a variety of culturally unique cognitive skills and products during the past several millennia of human history. (Tomasello, 1999; p. 12)

In other words, this perspective provides a way for thinking not only about (a) the emergence (phylogenetic or ontogenetic) of a singular human capacity called consciousness, built on some foundation of genetic adaptations and widely disseminated human inventions; but also (b) the emergence of particular forms of consciousness built on particular tools that vary (along with varieties of consciousness) across different communities.

This issue of "varieties of consciousness" rather than a unitary capacity for a singular consciousness is again something that has not featured as prominently as I thought it might in the readings and discussions of this Fall Faculty Colloquium. I think that some interesting questions emerge from consideration of this issue/notion:

1. To what extent do different cultural ecologies provide affordances for self and identity that promote different habitual tendencies of consciousness (e.g., different patterns of attention)?
2. Do different tools/affordances give rise to qualitatively distinct forms of consciousness? I think the discussion about "what is it like to be a bat" (Nagel, 1974; one of the reading selections that informed the Fall Faculty Colloquium) is relevant here. To what extent does the quality of consciousness vary as a function of whether the primary mode of experiencing the world—the primary window for consciousness of reality—is through vision or echolocation? Even within the human species, communities vary in the extent to which they emphasize relatively distal forms of visually oriented/mediated interaction (as opposed to more proximal forms of tactile interaction; e.g., Keller, 2007). Are these different practices of perception a source of (or associated with) different experiences of reality. Are there different qualities of qualia (meta-qualia?)?
3. Is the consciousness in this notion of "varieties" or plurality distinct from the consciousness that is the topic of much of our reading and discussions? When I refer to varieties of consciousness, am I talking about the same consciousness that is the topic of our colloquium, or something that bears a superficial resemblance but is not worthy of our discussion?
4. To what extent does the notion of consciousness imply consciousness of? Is there a process of consciousness separate from the object of consciousness? To the extent that consciousness is consciousness of, then it implies that the experience of consciousness might vary as a function of the object (e.g., consciousness of self, consciousness of reality, etc.).
5. If there are different varieties of consciousness, what do we make of the tendency for normative science (and other institutions) to privilege certain varieties of consciousness as normative standard (both descriptive and prescriptive) and judge other varieties of consciousness as (pathological) deviations from the presumed normal standard? In my application of a cultural psychology analysis (e.g., Adams, Kurtiş, Salter, & Anderson, 2012), there are two problems with this stance/tendency. First, there is a danger that this stance misapprehends and unduly pathologizes viable forms of consciousness, some of which (e.g.,

consciousness rather than denial of the interconnected nature of human beings, finite nature of wealth, or consequences of one person's consumption for another person's quality of life) might reflect more faithful attunement to "objective" reality than scientifically normative varieties of consciousness.

6. Second, there is a danger that this stance misapprehends the nature of that unitary human capacity for consciousness that has been a frequent topic of discussion in the Fall Faculty Colloquium. To the extent that different cultural ecologies do provide the foundation for different forms of consciousness, it suggests that the emergence of the more singular consciousness that we regard to be a species-typical human capacity may depend less on genetically encoded, evolutionary adaptations and more on historically evolved, cultural-psychological technologies than conventional accounts suggest. Alternatively, even if there is something approaching a genetically encoded, biological core to consciousness, work in (or informed by) psychological science may misapprehend the character of that core to the extent that it fails to appreciate the extent to which the patterns it observes are tied to socially constructed, cultural ecologies characteristic of most human communities rather than some "just" natural world.

A useful example of the distinction between uses of the word consciousness is in phrases like "race-conscious" or "identity-conscious." These phrases can mean either "consciousness of race/identity" or "racial or identity-relevant variety of consciousness." How are these meanings different, and what are the implications of different meanings for discussions of consciousness in the Fall Faculty Colloquium?

My interest in various identity-conscious forms of inquiry (e.g., critical race studies, African Studies, etc.) lies in their potential to provide epistemological alternatives to standard, allegedly "identity-unconscious" forms of inquiry. What is the character of race/identity unconsciousness? What various forms of "identity-conscious" inquiry suggest is that these forms of identity un-consciousness are not really forms of non-consciousness or "lack" of consciousness. Rather, these forms of un-consciousness are what Mills (1997) has referred to as "epistemologies of ignorance": cultural-ecological affordances or cultural technologies that have evolved over generations of cultural activity to promote lack of awareness about the role of race and identity in shaping life chances—an awareness that might otherwise constitute a threat to people's sense of moral integrity.

JANDER RESPONSE:

There is a big monster of a problem here: Conscious processing handles only a small number of items and for a short time, less than 10 and usually around four items only. However, a local culture comprises more than a million items (language and all) and it takes 10-20 years of individual learning to put this information into long-term memory. What differs from culture to culture are the contents of long-term memories and their uses. Consciousness and its linkage to long-term memory does not change and long-term memory is not part of consciousness. By analogy: You can fill a bucket with sand or with water. The bucket stays the same, the contents are

changing. And if you use the contents of the bucket, the bucket is still the same. Thus, consciousness itself does not change from culture to culture, what is changing is what goes in and out (contents) and how it is being used. Consciousness has one and only one form in all cultures. 'Psychological experience' refers to contents, 'consciousness' refers to a process that attends to and manipulates and uses experience. The items of conscious processing are located in the short-term or working memory. Long-term memory is outside the realm of consciousness. The 'mind' comprises consciousness, long-term memory and more. 'Lack of awareness' is lack of some contents or lack of access to some contents in long-term memory. Again, there is no 'variety of consciousness', what you probably mean is variety of conscious experience or variety of conscious contents.

ADAMS RESPONSE TO JANDER:

Thanks for the opportunity to re-affirm the original post. By "varieties of consciousness", I do indeed mean (dare?) to consider the possibility of variation in processes of consciousness rather than merely the contents. That is, my interest is the extent to which human beings fashion tools that affect the bucket/container of consciousness itself, rather than merely the content inside the bucket. More generally, a cultural psychology perspective blurs that distinction between contents and processes, considers the extent to which different contents exert effects on the process.

TUCKER RESPONSE:

Glenn, your post raises some questions that interest me very much, particularly your points about the cultural and historical aspects of consciousness as process; the question about the phenomenology of consciousness--and to what extent do we think about the intentional object; the relationship between consciousness and knowledge (or facts, or evidence, or Truth), and how we might direct our attention in this discussion to include a conception of consciousness as something that comes in varieties.

I'll begin with the question of consciousness that is shared regardless of evidence to the contrary. I had several questions for you first, just to make sure I understand. What is the place of "belief" in cultural psychology? It seems to me that "belief" often flies in the fact of facts. Does it matter whether consciousness is directed toward something that is verifiable or contradictory to facts? As an oral historian, I am interested in Alessandro Portelli's charge to oral history "on both the narrative and factual plane," and to listen to them as interrelated (Portelli 2003, 15). I'd love to know more about your interest in shared consciousness that veers from the "factual plane." How do you, as a cultural psychologist, differentiate between group consciousness based on "facts" and those without such a basis. Are you thinking of false consciousness in a Marxian sense in which people believe they are benefiting from a system that actually exploits them? For Portelli, the difference between narrative and factual plane is not the same as false consciousness, necessarily, in that he sees the narrative plane as a site for resistance, for cultural memory, for a way to keep a

critical memory in relation to what becomes official memory. Can you say more about what interests you, as a cultural psychologist, in consciousness that runs counter to the facts?

We've tended to talk about consciousness as a process in the singular sense--how the brain produces a mind--but your question about varieties of different kinds of consciousness that might differ across cultures, or even within cultural contexts, or even within the same person, is very interesting to me. I'm interested in knowing more about what Cultural Psychology says about this.

In your discussion of "consciousness of," I would also think about "consciousness as," in consciousness as a group, which I would think of as social consciousness, coming to consciousness not as a self separate from others, but coming to consciousness as a socially produced and directed group—not a completely coherent group, but processes of consciousness that are done with others, are not primarily about individual selves. To me, this is what "race consciousness" would be about. Is that what you think?

SAX RESPONSE:

Glenn, as far as I understand the field (and my understanding is severely limited), I fully support the move to cultural psychology. I particularly like that what you find persuasive in Tomasello is the interplay between universality and particularity. In addition, I found your list of questions especially thought provoking.

I approach the question of the varieties of consciousness through the prism of the history of culture. Although in my discipline the notion of cultural history is all the rage, there is no agreement or even an attempt at a definition for a definition for either culture or cultural history. In opposition to the rage for cultural history, I think in terms of the history of culture, which for me has a define set of terms, a specific methodology, and a number of heuristic devices. Against the assumptions of modern philosophy and science, the cultural understanding of meaning neither positions meaning within the space of theory nor aims at establishing a single, true definition of each and every meaning. Rather, meanings circulate and become stabilized within distinct boundaries, established by identifiable cultures. One of the devices employed by historians of culture is that of horizon. A culture or cultural epoch is defined by its generally geographically and generally temporally circumscribed horizon. Although at once a heuristic device and a 'designation' of the real, the idea of a horizon allows a culture to be comprehended as a whole. A culture is not a sector or segment of a larger whole; for it is inclusive of the political, the religious, and the social. This notion of culture has too often been associated with the nation-states of recent times, which limits the scope and power of the concept of a horizon. For the purposes of interpretation, a cultural horizon forms a boundary within which meanings are determined, or, when no horizon is established, fail to be determined. Moreover, a culture need not recognize its horizon for this boundary to function in the stabilization of meanings and for it to become the subject of cultural investigation.

The interpretation of a culture calls for an understanding of how meanings and practices cohere, conflict, or simply coincide with other meanings. Within such a horizon, various aspects of a

time period can be brought forth, evaluated as to their significance vis-à-vis one another (and not in direct relationship to its present form), and we can develop a notion of what unifies or fails to unify a culture in a particular period. In addition, a culture does not necessarily constitute a harmonious unity, an internal consistency or even a clear articulation of a hierarchy of meanings. More often than not, there are multiple and competing claims to determine meaning. In other words, instead of positing a totalizing unity, a culture includes battlegrounds of competing truths and conflicting meanings. As a result a culture becomes an open site of investigation of how its various forms (including meanings in the narrow sense) do or do not re-enforce each other, compete or harmonize with each another, change or do not change over time, and are taken from and given to other cultures. In addition, a cultural horizon is not an impermeable boundary; it allows for a selective transposition of meanings into other, alien cultures.

Another device employed by historians of culture, especially the school of cultural history to which I belong, is that of the notion of cultural form. The notion of a cultural form is very open and labile. It ranges from poetic forms to forms of the state, types of military organization, thoughts of social organization, to ways in which economies are organized. In most epochs cultural forms reproduce themselves as they acculturate new generations and give shape to individual and collective existence. Within each horizon, itself an ideal form, the historian can establish with the notion of cultural forms relationships between parts and whole. Certain identifiable forms become dominant within a culture; they constitute the center of the culture, around which the horizon is circumscribed. These forms and the relationships among them are not stable; they change over time. By making culture the subject matter of historical inquiry, historians of culture are most interested in the change among these forms. On the level of culture, the emergence of new cultural forms indicates a transformation of the dominant forms. In some cases it represents a break to a new culture or the emergence of a new world.

In a preliminary fashion a culture can be understood in terms of its various forms, including a circumscribed set of practices and the more varied meanings that are ascribed to them. The various components of a culture, therefore, do not always re-enforce each other, for at times they harmonize with each other and at other times they compete with one another for dominance. These processes take place only within a culture. In other words the historian of culture analyzes how in practice meanings are determined by a culture epoch and can only fully function within the horizon of this cultural epoch. In "advanced" cultures especially, meanings become complex and confusing. While I contend that a culture possesses an identifiable and meaningful integrity, I am not claiming that a culture by definition constitutes an internally unified semantic field. A culture consists of multiple, often competing meanings, and diverse and often contradictory cultural forms, which on various levels and at different times compete and destroy each other and at other times mutually interact and reinforce each other. A culture thus constitutes a site of competing "truths" and meanings.

To my understanding of culture is derived from the historians of culture, Jacob Burckhardt, Jan Huizinga, and Abby Warburg. To them I add Nietzsche's attempt to expand the concept of culture and position it on a philosophical basis. As part of this positioning, Nietzsche turns to the problem of meaning and thus to the problem of language. In *The Genealogy of Morals*, Nietzsche claims that, amongst the great multiplicity of meanings ascribed to the actions, institutions, and beliefs of a culture, individual meanings and entire meaning structures change in

relation to other and generally earlier meanings as new ones come to dominance and others recede. Not just individual meanings or practices but cultural wholes experience a process of synthesis.[19]

It is within the whole of the culture that Nietzsche understands the conflict and coming to dominance of specific sets of moral values. In other words, it is not the truth of "the good" or even the "truth" of "the good" that matters. Rather, these moral values, themselves a synthesis of meanings, are also in play within the larger competitions for determining meaning within the culture in a more general sense. In this sense, Nietzsche speaks of meanings playing themselves out "under certain circumstances," within a specific culture (GM 80).

Against a scientific (positivistic) approach to the understanding of culture, Nietzsche develops what he calls an "art of interpretation." By "interpretation" he does not mean either an alternative perspective upon a common set of facts or processes nor a different arrangement of these facts or processes. Interpretation is both an analysis of the assumed categories that are employed to disclose reality and the study of the consequences of deploying these categories.

With this understanding of cultural interpretation, Nietzsche criticizes the methodology of the human sciences and the concept of truth that sustains them. The question of meaning cannot be subsumed under such a method because meaning is comprehensible only within the horizon of a specific culture. Within the disparity of meanings and domains Nietzsche finds not universal concepts or unified fields but competing meanings and fields of meaning within the relative unity of a culture. As a result, Nietzsche contends that a culture can neither be comprehended through a positivistic methodology, which purports to "discover" the facts of the human domain nor subsumed under a universal concept of the human or even a general theory of culture. Nietzsche, therefore, neither develops a theory of culture nor opposes truth to interpretation.

I also appreciate the question of the "cultural constitution of psychological experience." Another device employed by historians of culture is that of the personality type. Nietzsche does not develop these types in order to establish a science of the psyche; but he also does not employ these types to construct a social psychology. His mode of cultural interpretation is thus not a form of cultural psychology like those of Karl Lamprecht or Oswald Spengler. The noble and the priest of the First Essay of *The Genealogy* are the best known and most frequently analyzed of these types, even when they are misunderstood as somehow real and not Nietzsche's own interpretative constructions. He employs both identifiable individuals (e.g. Richard Wagner and Arthur Schopenhauer in the Third Essay) as well as a number of constructed "abstract" types (e.g. "the scientist," "the scholar," "the priest," and "the noble" throughout the three essays) in order to bring forth and analyze the thinking, feeling, and especially the values of these types.

In a general formulation: personality types need to be understood in a language other than the one in which they understand themselves. In Section Twenty of the Third Essay of *The Genealogy of Morals*, Nietzsche translates the religious language of bad conscience and sin into the language of affects with the result that Christianity presents a hidden and perverted psychology. In the face of priestly interpretations of the psyche, Nietzschean genealogy must

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[19] Nietzsche, *On the Genealogy of Morals*. Walter Kaufmann, trans. (New York: Random House, 1968). Hereafter, GM.

become a means of diagnosis that needs another language than that established by the priest. Genealogy must become a mode of translation; it translates the language of Christian moralism and Christian theology into the language of psychology (and even physiology). This change of language allows Nietzsche to reinterpret morals from another point of view and another level of interpretation. Psychologically diagnosed, bad conscience as sin is reinterpreted as psychological depression, and more importantly, "physiological inhibition." Nietzsche describes the Second Essay "as a piece of animal psychology, no more: there we encountered the sense of guilt in its raw state, so to speak" (GM 140). As a reinterpretation of moral values, this language must first identify those original internal "symptoms" to which the priests offered their fictitious cures and then re-encodes these "symptoms" in languages alien to their site of origin and to the tradition they have handed down through the tradition.

Genealogy is thus transformed from an interpretation of moral values into a form of psychological diagnosis. What Nietzsche means by genealogy in its most aggressive and intense form consists of this process of "unmasking"—the removal of "the masks and cocoon" (on the level of "truth" and conscious meaning) of diverse personality types (functioning on the level of basic drives and values) (GM 115). In fact, genealogy assumes its distinct Nietzschean form (and thus its distinguishing marks from Burckhardtian cultural interpretations and Foucauldian genealogy) with this move from the deciphering of meanings to the psychological diagnosis of personality types. In a second distinguishing move, he disentangles present-day meanings and the diagnosis of modern personality types resulting from diagnosis of past psychic economies.

Nietzschean genealogy thus moves to the unconscious level of the basic drives and impulses of the type. All truth claims and determinations of meaning are thus undermined first by identifying the personality type associated with them and then by developing a psychological reading of the type. The type is made to exhibit its inner tensions and psychic struggles. The type in other words is the site at which Nietzsche locates a deep divide, a radical break, between the various forms of consciousness, and the psychology that underlies them. Not "truth" and morals but affects and personality types—what cannot precisely be known or brought to consciousness—establish the variety of truths and meanings.

This assumption rests on the further assumption that reality itself consists of the dynamic interplay of various psychic drives and forces. If genealogy could be reduced to psychology, then Nietzsche would have to contend that the language of psychology offers a more accurate description or at least a "deeper" analysis of reality. He would therefore have to assume that the language of psychology comprehends reality that other language usages either totally miss or grossly distort. More devastating, however, than any of these contradictions is that, if Nietzsche is simply constructing a general psychology as a new organon or foundational science, his whole project would be far less radical than he led his readers to believe. It could easily be accommodated to the legitimating narrative of modernity itself.

Nietzsche, however, does not posit psychology as the basis of epistemology or even hint at a neo-Kantian "grounding" of the sciences through a reflection upon their positive findings. In fact genealogy is not concerned with establishing a more scientific psychology or even with creating a new field of social (or cultural) psychology. Nietzsche speaks of genealogy in very different terms. By the same token, personality types neither constitute the basis for defining a set number

of ahistorical psychological types (a science of the psyche) nor establish a philosophy of values (an ethics). These values also "determine" the definition of the self. As in the case of the Christian soul, the interpretation of basic drives and affects leads to a distinct notion of human nature. Nietzschean psychology points out how culturally relative and historically distinct are all attempts to understand the self.

Beyond this interpretive stance, when psychology claims to be a basis for a direct or indirect grasp of truth or a general theory of knowledge, it, just as philosophy and the sciences, calls forth a genealogical critique. Nietzschean genealogy must by necessity begin with a critique of the currently dominant concepts of truth. Nietzsche includes himself among these modern psychologists but with only one critical difference. With the process of translation into the language of psychology, the psychologists himself must raise the same questions of his own discourse. In other words, he must become self-critical not only of psychology but of all the languages of modern science. Against the false claims to truth of the priest, Nietzsche does not posit the truth of psychology or any other claim to grasp instincts, drives, and affects directly. Instead he merely points to the fact that they are all interpretations.

The use of the language of psychology or of any of these other science is in fact governed by the act of interpretation. After diagnosing the psychic economies of the basic personality types, Nietzsche returns to the language of interpretation. The language of psychology like the personality types that engender it provides Nietzsche with a diagnostic tool to be used within the limits of the art of interpretation and not a method to uncover what he calls the "granite foundations" for a science of reality. As with all signs and symptoms, these types call for interpretation, not scientific verification.

In establishing the origin of meaning, Nietzsche moves in a sense in two opposite directions. It goes outward to comprehend the practices that determine a culture and downward to identify an underlying set of moral values. Pursuing this second line, he decodes these values in psychological and even physiological terms. The personality type thus joins culture to psyche. Nietzsche associates personality types with collective forms of consciousness and with entire cultural epochs. In this sense he at once deepens his analysis of the type and broadens his understanding of culture. Nietzsche understands the type as a means of comprehending the larger (often comprehended in too general and abstract terms) cultural complex. The personality type points outward to the full play of meanings, including the multiple competing definitions of "truth" which come to dominance within specific cultures or cultural epochs. The type, or rather in Nietzsche's fully developed argument, the dominant and subdominant types are what need to be interpreted; they are, in other words, the "entities" that call for interpretation.

The device of the personality type both makes concrete what would otherwise be an abstract problem of volition and clearly establishes a relationship between specific moral values and cultural shapes of the will. Through the psychological diagnosis of personality types, Nietzsche not only "personifies" a cultural whole through the dominant personality type but also identifies a culturally and historically distinct shape of the will or, as he says, "direction" of the will. Nietzsche interprets the will as hidden and at its source unknowable. It is multilayered, most often divided against itself and sometimes in opposition to the values that dominate its culture. The origin of the will remains unknown to those who act and even to those who think they

freely, consciously think they know why they act. Again Nietzsche defines consciousness as a skin. As a result, the psychological origin of the will lies deep, deeper than philosophical reflection or scientific can penetrate.

In my own work I attempt to extend Nietzsche's interpretation of culture to an understanding of world. For Nietzsche a culture brings forth the definition of truth that prevails in a given world and thus determines its "reality." In this sense, a culture constitutes its "reality" within its own horizon. Reality for Nietzsche has to do with the question of how meanings and values function within a cultural horizon. This living out constitutes a world. A world for Nietzsche is both a culture and what exceeds a culture's practical interpretation of reality. Although interpretive, reality is for Nietzsche a problem of world. More importantly a culture calls forth a world, what is beyond the self-consciousness of a culture. It is the way of understanding the reality of a world. Nietzsche is not arguing that culture is simply Being or even in itself a mode of Being. Instead of thinking culture as Being, he rethinks how culture as an interpretation of life precipitates a world.

The relationship between culture and world opens another level of interpretation. The problem of world are not questions of reality and appearances (or fictions) or of truth versus falsehood. For Nietzsche reality is unknowable in this sense, though revealed religion, metaphysics, and science claim that this reality is known or at least knowable. While reality for Nietzsche is unknowable, the world can be known. In itself, reality lies beyond consciousness and the capacities of consciousness, but the world can be brought to consciousness. Nietzsche does not argue that what escapes a culture's interpretation is reality. What lies behind the interpretations of a culture is another set of interpretations, what is called reality is not yet one more level of interpretation.

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ADAMS RESPONSE TO SAX AND TUCKER:

Among other interesting points that I will not address, Sherrie and Ben raise questions about the status of truth/reality and its implications for discussions of consciousness. As Sherrie put it, "How do you, as a cultural psychologist, differentiate between group consciousness based on "facts" and those without such a basis? … Can you say more about what interests you, as a cultural psychologist, in consciousness that runs counter to the facts?"

A first point to note in answer to that question is one of the most important ideas to emerge from a century of "psychological science". This idea, which I refer to as the "dynamic construction of experience" and others have referred to as "subjective construal" (e.g., Ross & Nisbett, 1991), holds that human beings do not have direct access to some objective reality. Instead, we (re)construct an experience of reality from some combination of sense data and (typically implicit) theories about how things work. Just as any historical narrative necessarily entails a bundle of silences (Truilloit, 1994), so too does any account of ongoing events necessarily privilege some

details/understandings and silence others. Rather than argue for a hard distinction between true and false belief/consciousness, I might be inclined to say that any construction of reality is only one of several accounts that are all more or less true and false.

Accordingly, my interest in cases of apparently false belief is not hold to provide a set of deviant cases for which discussions of consciousness must account. Rather I am interested in these cases for their potential to reveal the social production of consciousness (and social construction of reality) that applies even in the more "standard" case of everyday life where consciousness appears to entail more faithful reproduction of some objective reality. If one can briefly inhabit the epistemic position of the pathologized other in these "exotic" cases, one can use that perspective to turn the analytic lens on processes of perception and consciousness that mainstream psychological science (and similar fields) portrays as "just natural".

A second point to note is another relevant idea from psychological research that complicates the idea of "false belief": the recognition that belief can create its own reality. This is one of the main points that I propose in my work on penis-shrinking panic (PSP; Adams & Dzokoto, 2007). From this perspective, the forceful growth of PSP consciousness is partly due to the fact that people's reactions to isolated reports of PSP reconstitute and reinforce the ecological correlates (see below) that afford PSP consciousness in the first place. When these ecological correlates of PSP consciousness are less active, the people find alternative interpretations for the same cues that might otherwise trigger a bodily experience of PSP. From this perspective, PSP belief is "true" to extent that people make it so.

In short, my interest in these cases of apparently false belief is that they help to illuminate more general insights regarding the ecological correlates of consciousness (ECCs). In part, my emphasis on ECCs is a reaction to an enduring concern of the Fall Faculty Colloquium throughout the semester, which Nick Simmons' summarizes nicely in his blog post about "the hard problem of consciousness": the question of how our conscious experience arises from its neural correlates. Nick proposes that one understand the relationship between the neural correlates of consciousness (NCCs) and subjective experience of consciousness (e.g., sensation) as one of identity: consciousness is what is happening in those neural correlates.

Although I think that the "hard problem of consciousness" and its NCCs is perfectly appropriate as a central focus of the Fall Faculty Colloquium, I want to note two qualifications/concerns. The first concern is that an exclusive focus on NCCs excludes topics—associated with what one might refer to as the "history of consciousness" (see Sherrie Tucker's blog post)—that also seem like reasonable themes. Personally, I thought that "history of consciousness" was quite appropriate as a central focus of this interdisciplinary seminar, so I was somewhat surprised to read resistance to including this and similar notions as the proper object of our inquiry (see responses to Sherrie's blog post).

The second concern is that, given currently prevalent modes of interpretation, discussions of neural correlates can easily slip into unfounded (in my opinion) causal statements about "neural foundations" of experience. One frequently reads about research in which investigators have observed consistent patterns of brain activation when a person reports (or is induced to

experience) a particular variety of subjective/conscious experience, which the researchers then report as the discovery of the "neural substrate" (underpinning? source?) of that variety of experience. It is not clear that NCCs are necessarily the source/cause/foundation of subjective experience. Indeed, perspectives of empirical psychology that attempt to transcend Cartesian dualism and emphasize the embodied brain note that influence often runs in the opposite direction; that is, subjective experience/interpretation is often the source/foundation of variation in neural correlates.[20]

In the context of popular and scientific fascination about NCCs, I propose a parallel discussion of ECCs. This discussion would consider the extent to which particular culturally/historically evolved practices, institutions, and artifacts serve as ecological scaffolding for the development (in interaction with NCCs) of specific forms of consciousness. Although Rudolf Jander does not discuss them as such, he notes a potential example of ECCs in his response to Sherrie Tucker's blog. In particular, he admits that one might consider psychoactive drugs as an ecological trigger for changes in varieties of consciousness (by which I think he means process rather than mere content of consciousness). This example suggests additional ways in which other cultural psychological tools provide ecological foundations for different varieties of consciousness. From cultural technologies related to production and consumption of psychoactive substances, one does not have to leap far to imagine that different traditions/histories of practice associated with movement (e.g., trance) and thought (e.g., meditation) are likewise productive of different varieties of consciousness processes. In turn, one can use consideration of these relatively "exotic" practices to consider the more familiar, everyday practices (e.g., different constructions of reality implicit in language) that might also serve as tools or ecological correlates for the production of different varieties of conscious process.

To refer again to Tomasello's (1999; p. 12) distinction, a discussion of ECCs would consider both the historically evolved tools that afford species-typical human varieties of consciousness processes (in its singular form) and the particular constructions of reality associated with different varieties of consciousness. Regarding the former, one might take Tomasello's (1999) example of language. Humans appear to have genetically evolved predispositions/abilities for language-in-general, but the realization of those predispositions requires particular, culturally evolved languages. Tomasello proposes that the species typical tool of language works in tandem with genetically evolved dispositions—one cannot act without the other[21]—to afford/promote certain processes of consciousness (e.g., processes of conscious imagination that affect ease of experiencing qualia for which the referent is not immediately present).

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[20]Similarly, consider that phrase "induced to experience". Unless researchers act directly to provide patterns of brain activation (in the manner of the Ramachandran and Hirstein (1997) thought experiment of "plugging neurons into the brain"), then the source of the neural activation is itself in a form of subjective experience: interpretation of an ecological event that that researcher intentionally constructed as a tool to trigger a particular interpretation and resulting neural activation.

[21]This is the point of his otherwise problematic distinction between an autistic child who inherits cultural tools but not the species-typical ability to use them and a "wild child" with species-typical ability but not the benefit of cultural scaffolding.

Regarding the latter—how differential cultural evolution across human communities produces divergence in institutions, practices, and artifacts that produce corresponding differences in consciousness—I will briefly cite two examples. The first example concerns variation across communities in processes of attention.[22] Researchers have hypothesized and observed that variable patterns of social arrangements differentially afford habitual tendencies to focus attention on properties of focal objects versus relationships with background concepts (e.g., Nisbett et al., 2001). Attention to background of everyday events is greater among research participants in various East Asian settings than participants in various European and North American settings. Conversely, attention to figural objects in everyday events is greater among participants in European and North American settings than East Asian settings (Masuda & Nisbett, 2001; 2006). Rather than locate the structure for these tendencies in embodied habits or perceptual dispositions that reside in subjectivity of persons, recent research in this tradition has emphasized the dynamic resonance between these tendencies and ECCs that reflect and afford these tendencies. For example, relevant to the discussion of imaginative literature as cultural technology for the production of particular modes of psychological experience (see Anna Neill's post), researchers considered the possibility that differences in processes of attention are the product and source of parallel differences in traditions of artistic production in these communities. In support of this possibility, an analysis of paintings displayed in European and East Asian museums indicated that figures in portraits were much larger in Western pictures than they were in East Asian ones (on average the Western faces were three times as large; Masuda et al., 2008)). More generally, the same group of researchers examined everyday scenes in Japanese and American cities (Miyamoto, Nisbett, & Masuda, 2006). Results suggested not only (a) that Japanese scenes contained more elements and were more ambiguous (i.e., featured less clear separation into discrete objects), but also (b) that exposure to Japanese (versus American) scenes led both Japanese and American students to show greater attention to contextual (versus figural) information in subsequent perceptual tasks.

The second example concerns forms or "racialized" consciousness that promote awareness or ignorance of structural constraints and affordances on the exercise of individual agency. For example, scientific research and media surveys indicate that perception/awareness of racism in the structure of everyday American society is much greater among people from various historically oppressed ethnic minority groups than among White Americans. One stream of my research has considered ECCs—including representations of history (e.g., that silence information about past atrocities; Kurtiş, Adams, & Yellowbird, 2010), models of identity (e.g., Eurocentric conceptions of American; Mukherjee, Adams, & Molina, 2011), and scientific conceptions of racism (e.g., as individual prejudice; Adams, Edkins, et al., 2008)—that serve as cultural technologies for awareness or denial of racism and reproduction of domination. Concerning the psychological constitution of cultural reality, I am interested in the way that these technologies or ECCs reflect White American beliefs and desires (such that people who are highly identified with Mainstream American society invest in the reproduction of these cultural tools). Concerning the cultural constitution of psychological experience, I am interested in the how these technologies serve as cultural tools for reproduction of domination. Regardless of individual intention or awareness,

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[22] Here I will pause to note, in the context of distinctions about content and process, that many observers regard attention to be a fundamental component process of consciousness.

these ECCs promote both denial of racism and opposition to energetic measures to repair the destructive legacy of racism. Again, one might consider these cultural tools as examples of what Mills (1997) has referred to as "epistemologies of ignorance": culturally evolved ways of knowing/consciousness that provide the foundation for not-knowing/unconsciousness. An interesting implication of this perspective is that ignorance or non-consciousness is not a passive absence or lack of consciousness, but instead reflects particular varieties of consciousness.

To conclude, I admit that these examples may not address the "hard problem of consciousness" (even though I do think that they may have implications for thinking about that problem). However, I do think that these examples **reveal** something about social processes of consciousness, and not merely social contents of consciousness. Accordingly, I propose that discussions about the hard problem of consciousness—the search for its material structures—might fruitfully consider not only NCCs, but also ECCs.

Glenn Adams Work Cited

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Mark Landau

ON CONCEPTUAL METAPHOR

Here I present comments and questions that pertain to three broad themes that emerged from our discussions thus far: (1) the nature of the mental events involved in the experience of "qualia"; (2) language's role in shaping conscious experience; and (3) cross-cultural and cross-historical variations in conscious experience.

Overview of the conceptual metaphor perspective

Consider these expressions: *The economy went from bad to worse; I don't feel like opening up and revealing who I truly am to you; the folks at the Hall Center gave me a warm welcome.* These expressions seem perfectly natural to native English speakers, and so most of us would not interpret them as particularly poetic. Note, though, that the literal meaning of these expressions is, well, meaningless. Economies do not "go" anywhere, a person's authentic sense of self is not an object located inside of a container, and a friendly welcome does not raise the temperature in the Hall Center. Indeed, our everyday discourse is pervaded with metaphorical linguistic expressions that compare an abstract concept to something that it is not.

Although such expressions may be nothing more than colorful figures of speech, they may provide a window into the nature of our conceptual system. According to conceptual metaphor theory (CMT; Gibbs, 1994; Lakoff & Johnson, 1980), people talk using metaphor because they *think* using metaphor. More specifically, people routinely and automatically use metaphor to understand an abstract concept using their knowledge of a dissimilar concept that is more concrete and thus easier to grasp. This perspective would suggest, for example, that people talk about the state of the economy in spatial terms because they understand the economy – an otherwise abstract and complex concept – metaphorically in terms of an object that can move along a path.

Metaphor and qualia

What implications does the conceptual metaphor perspective have for the study of human consciousness? I believe that it can inform our understanding of "qualia." The proper definition of qualia is a hotly debated topic, but we can define them simply as a person's qualitative experiences – "what it is like" for a person to experience something. For instance, when you drink a cup of coffee, there is a particular way in which the coffee tastes and the steam tickles your nose; these make up some of the qualia that you experience while drinking coffee. Over the past few decades philosophers have invested a great deal of energy into the study of qualia. In particular, they have struggled to explain how the human brain – a mere mass of gray matter – gives rise to an internal theater of qualitative experiences. In this discourse, sensations such as tastes and pains are treated as qualia *par excellence*. But for now let's consider the nature of qualia associated with abstract concepts: What is it like for you to think about and experience concepts such as time, happiness, authenticity, freedom, power, and guilt – concepts that lack a tangible referent that can be seen, tasted, or touched?

I propose that, through the mechanism of metaphor, qualia for such abstract concepts are "grounded" in qualia for superficially unrelated, more concrete concepts. To unpack this proposal, take as an example the conventional metaphor *happiness is up/sadness is down*. According to CMT, our ideas of happiness and sadness borrow their conceptual structure from our knowledge of high and low vertical spatial location (as reflected in common expressions such as "You're in *high* spirits today!" and "I'm *sinking* into a *deep* depression"). Indeed, research inspired by CMT has provided experimental evidence that the concept *happiness/sadness* is closely associated with the concept *up/down*. Meier and Robinson (2004) found that people were quick to correctly categorize words related to happiness when they flashed on a computer screen in a high position (i.e., near the top of the screen), and were similarly quick to spot sadness-related words that appeared in a low position, whereas switching this correspondence (i.e., happy words low, sad words high) interfered with people's ability to correctly categorize the words. These results show that even when people are not using conventional metaphorical expressions to talk about *happiness/sadness*, their perceptions related to this abstract concept are shaped by the concept *up/down* – a concrete concept that, to reiterate, has nothing to do with *happiness/sadness* in any literal sense. Might it be the case, then, that "what it is like" for you to privately think about and experience *happiness/sadness* borrows some of its content and form from your qualia for *up/down*? Extrapolating from this example, I propose that metaphor structures not only how we talk about and perceive abstract concepts, but also the subjective quality that these concepts have in our private conscious experience. "What it is like" for a person to experience and think about a friendly reception at the Hall Center is interwoven with her qualia for the sensation of physical warmth.

If this is true, then qualia for abstract concepts are distinct from qualia for concrete concepts. A person's qualia for the concrete concept "orange," for instance, probably involves representations of knowledge about orange *per se*. Certainly, there may be semantically remote associations – perhaps my orange qualia are tied to my memory of the car from the TV show "Dukes of Hazard." But the point is that orange qualia are *not systematically structured in terms of another concept* – they are represented in their own terms. In contrast, I propose, qualia for an abstract concept are built upon conceptual scaffolding borrowed from a semantically unrelated concept. This distinction stands to inform current philosophical discourse on qualia, which tends to avoid categorizing qualia into different types. For the philosophers, qualia are qualia, and they are difficult enough to understand as it is without positing additional classifications.

Metaphor, qualia, and culture

Qualia are by definition *private* phenomena: Your qualia are "your own" in that only you can experience them. This raises the perennial question as to whether two people can have the "same" qualia. When you and I eat Rocky Road ice cream, are you experiencing the same subjective qualities that I am? Although this line of inquiry is a favorite topic in Philosophy 101, it seems to have remained stagnant in scholarly circles. The reason is that theorists have not yet agreed upon a theoretical framework that might be used to predict, *a priori*, *why* some individuals or groups may have similar or different qualia than others. Rather, they have pondered the *very possibility* that qualia may be shared.

The metaphor perspective provides just such a framework. It begins with the uncontroversial observation that individuals' daily functioning takes place in a physical environment – an ecology, if you will – populated by flora, fauna, a particular climate, and cultural artifacts such as buildings and ceremonial objects. From routine interactions with their local ecology, people develop concepts for the physical things around them – they learn what those things can do and how they relate to each other. Through the use of conceptual metaphor, people use their physical concepts to understand and talk about abstract concepts. Furthermore, as I proposed earlier, these physical concepts provide the basis for people's qualitative experience of abstract concepts. Here is the extension: Insofar as individuals who live and function within the same ecology have developed similar physical concepts, their qualia for abstract concepts built upon those physical concepts will be similar, and they will differ from the qualia experienced by individuals who engage with a different ecology.

To illustrate, the predominant modern Western conception of time is linear – events are points plotted along a line. Based on my earlier proposal, we can hypothesize that individuals who live in this cultural context have qualia for time that borrow their form and content from their qualia for lines and linear motion. But here I am going further to speculate that these individuals have these particular qualia because their formative physical ecology is saturated with straight lines (e.g., buildings, consumer packaging, manicured lawns). Groups of individuals raised in a physical environment with a lower saturation of straight lines – perhaps those who live around forests – would likely draw on different physical concepts to conceptualize time. As a result, their qualia for time will be different from individuals raised in industrialized Western cultural contexts. Thus, we have a theoretical basis for predicting between-group differences in qualia. In a nutshell, insofar as the physical ecology provides the toolbox of basic physical concepts that are used to structure people's understanding and, critically, qualitative experience of abstract concepts, then individuals inhabiting the same ecology will share similar qualia for a given abstract concept, and groups of individuals who inhabit different ecologies will have different qualia for the "same" abstract concept. The scare quotes around "same" indicate that it is possible that as the difference between groups' ecologies increases, their qualia for a given abstract concept become so dissimilar that at some point it may not be accurate to say that those qualia refer to the same abstract concept.

FISCHER RESPONSE:

Mark, I am intrigued by your statement that "[a]ccording to conceptual metaphor theory … people talk using metaphor because they think using metaphor." Similarly, the idea that metaphor "grounds" abstract concepts in qualia seems to offer an exciting opportunity to talk about how "ecologies" shape "physical concepts," and by extension abstract concepts—possibly even worldviews, and differences among them.

The developing theoretical framework that you draw from conceptual metaphor theory reminds me of related, also developing frameworks in cognitive semiotics. I am an expert in neither field so, after a brief definition of cognitive semiotics, I'd like to narrow down my comments to the relation of your terms metaphor and qualia to what I understand of metaphor as a cognitive sign. Here I'm setting aside my own preference for Abrantes's approach to cognitive semiotics for an approach grounded in another variety of cognitive studies.

Jordan Zlatev situates cognitive semiotics (CS) as an emerging field conceived in the 1950s but gaining ground in the last twenty years.[23] It is distinct from other types of semiotics, whether drawn from the work of Saussure, Peirce, Greimas, or others, although it draws from a variety of semiotic sources. It "integrat[es] methods and theories developed in the disciplines of cognitive science with methods and theories developed in semiotics and the humanities, with the ultimate aim of providing new insights into the realm of human signification and its manifestation in cultural practices" (quoted from www.cognitivesemiotics.com). Zlatev notes that "human cognitive-semiotic specificity can only be properly understood in a comparative and evolutionary framework." Among researchers in the field he counts Thomas Daddasio as a pioneer, with Tomasello hailing from developmental and cognitive psychology and Lakoff from linguistics. Zlatev attributes to CS a reductionist approach of the sort we've seen in Dennett, although its "physicalist" take on mind--a take that he suggests is "computational and/or neuroscientific"—also has a more pluralist and humanist commitment.

The CS work of Per Aage Brandt, who founded the Center for Semiotics in Arhus, Denmark, seems distinctly influenced by conceptual metaphor theory. Currently in the Department of Cognitive Science founded by Mark Turner at Case Western Reserve University, he has apparently sought to broaden cognitive semantic blending theory. His journal *Cognitive Semiotics* is devoted to topics such as agency, consciousness, and cognitive poetics. I report all this, you understand, from Zlatev, since I have little direct knowledge of Brandt's work, other than his article "The Mental Architecture of Meaning: A View from Cognitive Semiotics."[24] His piece appears next to the piece by Abrantes that we all read and in which, frankly, I find a view closer to my own. But I'll try to tease out a few of Brandt's ideas that seem relevant here.

In his article, Brandt attempts to outline the organization of mental content in a "layered architecture based on integration of material from lower to higher levels." He finds that there are "significant transversal bindings connecting material of non-adjacent levels" (Brandt 25). These bindings (more often called "integrations") are signs considered as structural entities. The most basic mental architecture he constructs is a kind of input/output model in which bodily perceptions inform the mind, which then integrates the various types of semiosis (sign action) and produces motor reactions. The five levels of mind at work are qualia, objects or events, situations, contexts or narratives, and affects. These five layers are all served by memory; cognition takes place by means of integrative processes "upwards" (toward abstract thought) or "imaginative retroprocessing" "downwards" (to prepare response acts). I don't claim to understand his entire model or the analysis that goes with it, but he does seem to take on the questions you raise about how the brain links physical qualia to abstract qualia.

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[23] Jordan Zlatev, "What Is Cognitive Semiotics?" SemiotiX. October 2011. 9 November 2011. http://www.semioticon.com/semiotix/2011/10/what-is-cognitive-semiotics/.

[24] Per Aage Brandt, "The Mental Architecture of Meaning: A View from Cognitive Semiotics," TECCOGS (September 2010): 25-36. To view the article, click on "Artigos" at http://www.pucsp.br/pos/tidd/teccogs.

For example, Brandt does not claim that qualia are private. Nor does he claim that they are public or shared, but he assumes that they (as well as affects) are culturally and ethnically invariable. The three intervening levels of integration between qualia and affect are variable as to "the actual objects, situations, and knowledge forms that they contain" (28). The phenomenological character of semiosis has two aspects: "it can be perceived and it can call our attention to some idea; it has a "sensibilis" side and an "intelligibilis" side" (29). In common structuralist and post-structuralist parlance, we would call these the signifier and the signified, but Brandt usefully points to the gap between. How does the mind bridge what he calls the semantic gap?

Brandt goes on to say that what happens in the gap is interpretation taken as a symbolic act, an act that produces meaning. So what is an image, he asks. A visual artist intentionally reproduces qualia observed in objects, events, and acts. He imitates the object by creating another object. The qualia of this object then "induce the idea of the original . . . object" as an image. If we consider Brandt's example of the painting of an apple as an instance of semiosis, the viewer may consider the painting's connotations and denotations—the connections with the symbolic, or meaning. The painting also connotes social information about the painter and his milieu: the painting considered as indexical sign. Brandt is most concerned, though, with the iconic relation of similarity that is intrinsic to the relation of painting to its object.

None of this breaks new ground, but bear with me for a moment. Brandt reveals very quickly why he focuses on artistic images rather than commonplace ones. An apple as iconic sign "offers its qualia … not in any important way dependent on culture: it is natural (even if its perception will edit the way it is culturally experienced, especially if it is symbolically significant). The sensory material is naturally integrated as qualia of their material source in the pheno-physical world. This is why icons allow communication across cultures, while symbols do not" (32). This use of the word natural could be troublesome, but again let's push on.

On an aesthetic level, human perception can stop qualia from "integrating on the next level of meaning, that is, they can be experienced … as "forms". In such perceptions, a person experiences "free qualia," a phenomenon he calls "composition" (32). In music, a series of tones is experienced as a scale, for example. "Compositions of free qualia," Brandt says, "are still iconic signs" (32). Just as qualia can evoke affect, different "styles" of qualia evoke different "styles" of affect.

So how might we view Brandt's ideas in relation to conceptual metaphor theory? He obviously chooses the iconic sign, rather than metaphor, as the broader category of integrative processing that grounds abstract concepts in qualia. Brandt concludes: "The aesthetic and the functional modes of perception are distinct processes within the same mental architecture; their difference gives rise to iconicity, which drives symbolization but stays distinct from it. … [T]he underlying [cognitive] point is . . . that the mind indeed has an architecture of integrations by stable levels of complexity— not of increasing complexity but rather of different complexity—which makes the semiotic evolution of our species possible" (35).

Mark, I began with a simple goal: to consider the metaphor, with its qualia, as an iconic sign! I hope that the correspondences between Brandt's account and the questions you raised have not disappeared completely.

LANDAU RESPONSE TO FISCHER

Thank you, Iris, for sharing these interesting reflections on my post. I cannot say that I understand Brandt's account in its entirety. While your summary is clear, Brandt's account is obviously complex and, at times, highly nuanced. He seems to be tying together diverse strands from linguistics, semiotics, and consciousness studies to construct a comprehensive model of mental representation and qualia. This is an ambitious goal, and I value your comments primarily for directing my attention to this literature. That said, it is not clear to me how Brandt's account deepens our understanding of metaphor or qualia.

I was most intrigued by his claim that icons offer up their qualia independent of culture, such that they can be communicated directly and without translation. This would seem to suggest that our experience of icons is free of metaphor, since the icon is so transparent to understanding that it does not need to borrow conceptual structure from other concepts; the qualia of icons are qualitatively distinct from the qualia that are offered by non-iconic signs. My concern with the first part of this claim is that we know from research on the psychology of art that the experience of viewing and interpreting art is massively informed by the use of metaphor. For example, we may interpret the high vertical position of Christ (relative to other figures) in a Renaissance painting to metaphorically represent Christ's power, while we may interpret fire to represent passion. Indeed, the use of metaphor to "decode" icons is for many people integral to the experience of aesthetic pleasure.

Beyond the psychology of art, we know that many signs that may be considered icons, such as gestures, are in fact heavily dependent on metaphor for their interpretation. And what's more, the metaphors used in their interpretation vary across culture. For example, a visual representation of the past as "down" and the future as "up" would not mean much to a Western viewer, who conventionally conceptualizes the progression of time metaphorically as running from front (future) to back (past), but it would evoke conceptions of time for viewers representing other cultures.

These examples seem to militate against the notion that icons -- visually depicted signs -- are processed independently of both metaphor and culture. Now, there are many other aspects of your response that deserve comment, but for now I thought I would comment on this aspect of Brandt's analysis, since it stood out to me as the most provocative, or at least the most controversial from the vantage of our contemporary understanding of metaphor and thought.

FISCHER SECOND RESPONSE

Mark, I appreciate your thoughtful response. Let me just respond briefly to one point. I too am disturbed by Brandt's idea that icons "offer" their qualia "not in any important way dependent on culture." I don't know exactly what Brandt means by that, but I can shed some light on why cognitive semiotics might seem to assert that iconic signs do not depend on culture.

In fact, cognitive semiotics in general does assert that iconic signs, and signs in general, are dependent on culture. In cognitive semiotics, though, the terminology is used differently. An icon is not an iconic sign. The term icon, I now realize, refers to a phenomenon very similar to what you call a qualia. Like the qualia, the icon is a potential, not a complete sign. By contrast, the iconic sign (a category that includes metaphor) features a complete sign relation based on a shared understanding of some sort. Metaphor is indeed a type of iconic sign.

Regarding your example of the position of Christ's figure in a Renaissance painting, there is no disagreement between conceptual metaphor theory and cognitive semiotics on the point that any interpretation of the positioning would be culturally informed. Massively so, as you say. For cognitive semiotics, the figure functions culturally as an iconic sign. But the figure has other characteristics. The "offering" of its qualia is a separate issue, one that has to do with the qualia (or icon) as qualia, apart from the figure as interpreted. This potential exists, but in and of itself it does not constitute signification.

 Thanks, Iris

SAX RESPONSE TO LANDAU

Mark, I agree that contemporary problem of knowledge involve a questioning language (what is language, how does language limit, ground, or provide new possibilities) and that language (instead of being understood merely as a tool – of communication or of knowledge or some such, something that humans or human consciousness can manipulate) is what "creates" both what is known and what knows this known. But can we understand metaphor as a trope. Even when we take it out of the sphere of literary embellishment and relate it to conceptual thought as Lakoff argues have we comprehended the full extent of metaphor or the relationships between metaphor and language or metaphor and reality? You establish a truth pole of language (supposedly prosaic in nature) that knows reality and then extends this reality through metaphor or metaphoric transformation and thus provides the possibility of semantic innovation.

The Deconstructive and specifically Derridean questioning of such a truth pole (the representational theory of truth that still dominates modern Western notions of scientific and commonsensical concepts of truth) and thus putting into play language itself, emphasizing the arbitrary and conventional nature of all and every restrictions upon this play. My own thinking is an attempt to understand this Deconstructive move, accept its unavoidable critique of the representational theory of truth, and move beyond it to a different understanding of truth and even of an alternate comprehensive and experience of reality.

The problem of metaphor has arisen for me as a result of a larger question I have been trying to work out for several years now. Words and things seem to have been splitting apart. This separation includes the various discourses of the sciences (in the broad sense of the term). They seem less to discover reality than to posit and even create a reality. This is not the reality they posit as the object of research but the "reality" created by the practices that brings forth the sciences themselves and the reality they precipitate. We live in this precipitate. Individually and collectively, we act and find meaning in this reality. I turn to Deconstruction because such thinking demands as

its starting point a critique of the presently dominant concepts of truth. Its leading question is: Why do we accept the discourses of the sciences (natural and human) as truth, as the source of truth, of our understanding of reality? What is reality? At least, what is reality that is accepted in modernity as reality? The problem that I have set myself is: how has reality been constructed in modernity.

Please excuse the length of the reflections that follow, but I have been thinking about these questions for a while. For Derrida the limits of language are the limits of philosophy and thus of all attempts to define a concept of truth. Accordingly he undermines all concepts of language based communication or its universal structure. By its very structure, language is incapable of copying reality. Because we can only speak of language in language, language is never wholly present to itself. Derrida bases the illogicity of referring to what is outside language to the "arbitrariness" of the sign. All claims to truth, Derrida continues, are founded upon a process of adding one mark to another. Only as re-marking can the mark produces the illusion of referent. All claims to referentiality (of truth but also of meaning) are possible within a play of application of one sign to another. The referent is set aside in infinite reference so that what appears to be truth is only the limitation of this infinite play. What Derrida calls syntax is not the formal arrangement of words and signs, their connection and relation in phrases or sentences, or their established usages of grammatical construction and the rules deduced therefrom. Derrida opposes syntax to semantics and pragmatics. It is realized in the Other.

Language cannot break out of its own play of signification. Difference makes all semiotic and linguistic intelligibility possible. Diacritical characteristics in fact make all signs and systems of signs possible (P 28). The principle of diacritical differentiality is thus the condition of possibility of signification in general. The elements of constitution of language —speaking, writing, message — are never fully under control and this fully knowable. Truth, Derrida concludes, is simply indeterminate. By undermining all claims to truth based upon oppositional thinking as well as upon any type of essentialism or foundationalism, Derrida points both to the illegitimate attempt to "represent" non-linguistic "reality" and to stabilize the supposed meaning of this "reality" through the textual construction of a totalizing meaning. The initial interpretive move for each is to expose and then undermine the various ways in which a science or text attempts to bring about full and complete explanation or understanding.

As Derrida's concept of syntax makes clear, they are never present to themselves. And yet in their absence, they allow truth to come forth (P 57; M 329). The hidden syntax of truth thus functions as an unacknowledged ground (M 50). One aspect of this non-appearing syntax is *differance.* *Différanc*e undermines the notion of basic dichotomies upon which philosophy and science are founded. "Thus one could reconsider all the pairs of opposites on which philosophy is constructed and on which our discourses live, not in order to see opposition erase itself," he argues, "but to see what indicates that each of the terms must appear as the difference of the other, as the other different and deferred in the economy of the same" (MP 17). The subordinating term can never be anything but language itself.

In this way science covers over difference. As the non-structure of structure, difference brings forth the impossibility of speaking truth or deciding upon meaning. Différance is also the impossibility of ground —the falling into the *abysme*. It is the absence of ground, the abyss, the *Abgrund.* By

"grounding" truth in Being, philosophy unintentionally makes truth the absence of truth. This lack of ground, upon which all claims to truth are grounded, makes philosophy for Derrida a contradictory and self-defeating project. As a result of this lack of ground, philosophy itself is no longer the search for truth and falls back into the tricks of syntax. Although always intended by language, reality (Being) lies beyond the grasp of language. In this sense Being, reality, is always unknowable.

The "origins" of philosophy are thus both non-logical and pre-logical (M 235). There is, therefore, no ground for philosophy, only the relationship of a self and an other, repeating itself infinitely as the same by referring to an other. (OG 112). The oppositional order of philosophy is demanded by the syntactical order of language, not by philosophical questioning itself. The aporias and contradictions uncovered in the discourse of philosophy constitute an unthought syntax of philosophy's conceptualization and argumentation. Syntax sets the limit of the metaphysical claims of language to master reality by defining truth. From the decentered, fractured structure of language itself, the excess of the signifier over the signified, there is no way to determine truth that is not itself self-contradictory and philosophically unsound. In all such claims to truth, philosophical discourse passes into its other. The other of philosophy is exteriority and unintelligibility.

Derrida claims to base his theory of language upon Nietzsche. He points directly to Nietzsche's essay "Truth and Lies in a Non-Moral Sense." Through this theory of language, Derrida brings to the fore Nietzsche's now famous definition of truth. Nietzsche asks: "What then is truth?" and more intriguingly: "is language the adequate expression of truth?" Nietzsche answers through another metaphor. "Truths are illusions which we have forgotten are illusion; they are metaphors that have become worn out and have been drained of sensuous force," he declares; they are "coins which have lost their embossing and are now considered as metal and no longer as coins" (TL 84). Forgotten as and dissociated with their original metaphoric functions, these metaphors "become worn out and have been drained of the sensuous force of human relations, which became poetically and rhetorically intensified, metamorphosed, adorned, and after long usage seem to a nation fixed, canonic and binding" (TL 84). What then is truth? It is a product of these "defaced coins."

Derrida, as Nietzsche before him, turns directly to the metaphoric essence of all languages. In "White Mythology" Derrida rethinks the difference between metaphor and concept. Derrida thinks back to the establishing dichotomy between metaphor and concept. Derrida questions the philosophical concept of metaphor in order to show the unthought ground of all philosophical concepts. His claim is simple: metaphor cannot be dominated by the concept. "It cannot dominate itself, cannot be dominated by what it itself has engendered, has made to grow on its own soil, supported on it own base. Therefore, it gets 'carried away' each time that one of its products – here, the concept of metaphor – attempts in vain to include under its own law the totality of the field to which the product belongs." Derrida is not simply pointing to a logical contradiction (M 219-220).

Derrida does not search for a better or a truer definition of metaphor or of the concept of the metaphor. Coming from the Nietzschean critique of the philosophical concept, the need for a more embracing discourse on figure becomes evident. Derrida does not as is often assumed reverse this relationship of concept and metaphor. Instead, Derrida shows how our understanding of metaphor is a philosophical concept through and through. "Metaphors remain, in all its essential

characteristics, a classical philosopheme, a metaphysical concept. It is therefore enveloped in the field that a general metaphorology of philosophy would seek to dominate. Metaphor has been issued from a network of philosophemes which themselves correspond to tropes or to figures and these philosophemes are contemporaneous to or in a systematic solidarity with these tropes or figures" (M 219).

"White Mythology" explores the more general analogy that allows metaphor and concept to relate to one another and organizes the exchanges that take place between them. This area of common exchange he calls metaphoricity. It concerns the general conditions and limits of generalization. Concept in its universality is irreducible to metaphor, figure, or trope. Its status as concept (its intelligibility and universality) hinges on its possibility of lending itself to metaphorization. General metaphoricity is the name for that possibility that inaugurates the concept's university. At the same time it limits the university by virtue of its generality,which cannot be subsumed under universality inasmuch as the latter has grown on its soil.

At least one metaphor, Derrida argues, the metaphor of the concept of metaphor, is required to make a philosophical metaphorology possible. What escapes metaphorology is the metaphor of metaphors; the philosophical concept of metaphor that one presumes in order to reduce all other concepts to the metaphors they conceal. The notion of metaphor is always a concept. Subordination of the syntactic to the metaphoric is characteristic of the concept of metaphor that valorization of metaphor over concept is radically excluded by Derrida.

As the metaphor of metaphor, metaphorology itself is derivative of something else, what Derrida calls metaphoricity. Metaphoricity is no longer a simple metaphor. It cannot be identical with the improper figure of a proper concept, but is not a concept either. Derrida problem of general and universal is question of metaphoricity. The study of metaphors (morphology), he maintains, shows that metaphors are based upon a general metaphoricity that allows the metaphor and the concept to entire into a relationship in the first place. Thought through, the distinction between them rests upon a common "ground." From this common ground the separation between concept and metaphor is exorbitant. It escapes the logic upon which this distinction is based (M 255).

In the face of this irreducibility, Derrida argues that the conditions of possibility of a general philosophical metaphorology are by right its conditions of impossibility. If all concepts are worn out then concept of metaphor is worn out too. "Metaphor, then," Derrida contends, "always carries its own death within itself" (M 271). If there are living and dead metaphors as Nietzsche contends, then all metaphors self-destruct.

My own thinking arises from the rethinking of the thought of Nietzsche, freed from both Derrida and Heidegger. Like Derrida, Nietzsche, I contend, defines metaphors in opposition to truth, but he also develops this understanding of metaphors in a different direction. Through the confusion of language with the world, Nietzsche like Derrida contends that philosophy makes unjustified claims to truth. Instead of trying to find the limits of language to speak the truth, Nietzsche points to the metaphoric nature of language and all language uses. Since we know only in and through language, we can only know something metaphorically, Nietzsche claims, know something "as" something. In turning to metaphors, however, he does not disqualify all truth claims or restrict truthful language

to its poetic use. Just as metaphors do not call for "translation" into the "proper" discourses of philosophy or science—into prosaic language – metaphors do not just point to the linguistic nature of all knowledge or to the unknowability of reality. As with many others, Derrida reads "True and Lies" as a reduction of the philosophical concept to metaphor and thus to an undermining of philosophy to literature. Against this argument, I contend that Nietzsche does provide a way of rethinking the concept of truth.

Nietzsche does not undermine the philosophic project because of its inability to grasp the truth or for its occultation of its metaphoric foundation. Instead of claiming that all determinations of truth are inherently false because they are inherently metaphoric, however, Nietzsche takes a different tack than Derrida and questions how can metaphors be true. As the tradition has worked itself out, the founding metaphor of philosophy eventuates in the modern notions of a "subject" standing off against an "object," soul against its body, consciousness opposed to the world. These splits do not just found a theoretical stance; it establishes the conditions of possibility for defining truth in theoretical terms. In modern culture, theology, metaphysics, and science claim to know not "reality" but reality. Consciousness claims to grab it directly; and in grabbing a "world" it dogmatically insists that it knows the world both in part and as a whole.

Nietzsche, however, takes this argument in a different direction than Derrida. Nietzsche does speak of language in terms of the sign. Derrida's theory of the sign remains a system of abstract signifiers. It shows how close poststructuralism to structuralism. Linguistic structure. Not language (natural language or as Nietzsche would claim language family) but only virtual language. Language as Nietzsche understands it is not a virtual system based upon a structure or decentered structure of signs (la langue). He does not therefore move in the direction of a notion of arch-writing or the free play of the signifier. Neither is language the parole of natural languages and therefore open to empirical research. Nietzsche also has a definition of the sign.

Language is not an abstract system of signs and its functions cannot be understood in terms of a theoretical framework of all possible signs. Nietzsche is not even concerned with language as the establisher or conveyor of meaning and does not analyze the problem of meaning in general. Instead of moving to a universal definition of language, Nietzsche examines how language functions. It functions, he contends, as a sign of affects. By providing images and names to "fear" and "joy," language provides these affects with a sign. Through this process signs interpret these inchoate feelings, drives, and desires and transform them into discrete images and give them names. As a result of this attaching a sign to an emotion, Nietzsche contends that the origin of language is to be found in its metaphoric functions.

The sign for Nietzsche is not defined in their arbitrariness. What Nietzsche indicates by "signs" is quite broad. "Signs" indicate written signs and non-written signs, signs in texts and signs in the world. They point not just to themselves or to other signs, for they reveal in ways that belie any notion of reference to entities outside the system of signs. All such uses of signs are, Nietzsche argues, dependent upon other and more fundamental ones. At least from the writing of "Truth and Lies in a Non-Moral Sense," Nietzsche conceived of the origin of language as the expression of affects. As signs, language registers, not the affects themselves, but the mediations of these affects and in this sense they function, as Nietzsche says, metaphorically. Life, the sensation of being alive,

is "knowable" only "as" something. Only through language can these affects be read onto the world. Language in this sense speaks metaphorically of what is external to language. Through this metaphorical process of translating affects into signs, signs also take on lives of their own. Signs become a means of defining and shaping affects. The sign calls forth the affect. Over time and through common usage the language of affects becomes standardized within a culture to such an extent that the sign gets separated from the affect. The sign then becomes confused and distortive of the original affect. Language is thus a metaphor of life or better yet of the sense of being alive. Interpreted as something, affects constitute the metaphorical basis of interpretation (and by extension of all knowledge).

Language, Nietzsche further contends, expresses man's relation to his immediate surroundings. They express the affects arising from "the brutal conditions of existence," but they do not represent these conditions in themselves. Rather signs arise as expressions of man's basic feeling, drives, and desires. Nietzsche thus moves to what can be called a psychology of language. There are no distinct affects, Nietzsche contends, but only an array of sensations without language to define them and discriminate among them. Nietzsche then reaches a major conclusion, one that lay at the foundation of his later philosophy. What looks like a foundation for knowledge in the sensory is already in language and possible only through language (19 [217]).

In "Truth and Lies" he extends the notion of conventionality to rethink the relationship between language and reality. In the fullness of its many forms and functions as a conveyor of meaning, however imperfect and defective it might be, language conforms to no system or theory, but it also is not graspable in terms of an anti-systemic system, or anti-theoretical theory. To understand language in this sense is to comprehend it "on the wrong level." Based on the interpretation of affects and bound to a specific culture, these signs cannot be abstracted and systematized. In all such cases, language is understood abstractly, as a general condition of its possibility/impossibility of performing certain functions. The question of meaning is thus never concluded for Nietzsche once it is understood as a non-system of signs. Nietzsche thus exposes the unexamined assumptions of all truth claims in order to analyze the diversity of meanings and how they function culturally. Meanings are not stabilized in themselves; rather, Nietzsche understands how meanings function within a culture or, more precisely, within what Nietzsche calls "a true culture. Nietzsche thus exposes the unexamined assumptions of all truth claims in order to analyze the diversity of meanings and how they function culturally.

Sax Works Cited (with explanations for parenthetical citation codes)

LANDAU RESPONSE TO SAX

Ben: Wow. Your reflection on my post is truly a tour de force of post-modern analysis of language, truth, and reality. I cannot pretend to understand all of it. In fact, quite a few sentences flew completely over my head. Nevertheless, you raise a number of ideas that piqued my interest. One is the following:

"All such uses of signs are, Nietzsche argues, dependent upon other and more fundamental ones. At least from the writing of 'Truth and Lies in a Non-Moral Sense,' Nietzsche conceived of the origin of

language as the expression of affects. As signs, language registers, not the affects themselves, but the mediations of these affects and in this sense they function, as Nietzsche says, metaphorically. Life, the sensation of being alive, is 'knowable' only 'as' something. Only through language can these affects be read onto the world…signs arise as expressions of man's basic feeling, drives, and desires."

It is difficult to argue with Nietzsche that language, and other systems of signs and symbols, are useful for expressing and communicating about our phenomenological experience – our qualia, if you will. In order to share our grief, joy, or hunger with each other, we avail ourselves to a rich array of signs, from gestures and words to dance and song.

But I wonder whether Nietzsche took his claim too far. It seems that people use many mechanisms besides metaphor to translate their qualia into signs. One is metonymy – referring to an experience as one part of its subjective profile. For example, I can express the happiness I felt when I discovered I was invited to participate in the Fall Faculty Colloquium by saying "The acceptance email put a smile on my face." In a similar way, if I am driving to the Hall Center and someone cuts me off, I can express my anger by saying "I was hot under the collar." Strictly speaking, these are metonymies, because they express an emotional state as one element of the entire behavioral/physiological profile of that emotional state. We smile when we are happy, and we experience increased body temperature when we are angry. By referring to these elements of my experience, I am really referring to the underlying emotional state (i.e., the Colloquium invitation did not just put a smile on my face – it made me happy).

If we take metaphor to mean the understanding of one concept in terms of a dissimilar concept, these are not metaphors. I do not understand happiness using my knowledge of smiling. Rather, smiling is a behavior that correlates with happiness. A metaphorical linguistic expression for happiness might be "Being part of this colloquium was an uplifting experience." I am not literally being elevated as a result of my participation; rather, through metaphor I can think and talk about happiness in terms of vertical spatial location.

So, Nietzsche is certainly correct in postulating that there is a "gap" between my experiences and my expressions thereof; I am simply questioning whether metaphor is the only tool that we use to bridge that gap. I have tried above to illustrate how one other mechanism – metonymy – might accomplish this same goal. A similar analysis might be provided for other mechanisms, such as relating an experience to another experience that shares a literal, rather than a figurative, similarity (e.g., expressing satisfaction using the language of happiness: when I say "I'm glad you could make it," I probably do not mean that I am jumping with joy over your presence; rather, I'm using the language of happiness to express something else, namely, satisfaction). As much as I am enthralled with the significance of metaphor in our everyday thought, feeling, and behavior, I think it is important to be continually aware that metaphor is one of many mechanisms by which humans construct and communicate meaning. If Nietzsche's claim is that metaphor is involved any time we understand X "as" Y, then the foregoing is moot. But if that's the case, I think that we can build on Nietzsche's analysis to construct a more sophisticated typology of signifying mechanisms.

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Ann Rowland

SYMPATHY AND MIRROR NEURONS

Sorry for the excessive quotation of Adam Smith. I realize that not everyone finds the language and rhetorical formulations of these 18th-century writers as fascinating as I do, but I couldn't resist!

The readings and conversations of this colloquium have prompted me to return with new way of thinking to an old topic of research (one from graduate school!): the importance of sympathy in eighteenth-century moral philosophy and the central role of art (whether literature, theatre, or painting) in encouraging the experience and cultural work of sympathy. Adam Smith's Theory of Moral Sentiments (1759), the earlier and lesser known companion text to his economic magna opus, The Wealth of Nations (1776), discusses sympathy in the first section of the study in a section entitled "Of the Sense of Propriety" and devoted to the topic of the social affections, the sentiments and ties that bind men together into social groups.[25] Sympathy, according to Smith, is a term used "to denote our fellow-feeling with any passion whatever." More particularly, it is our imaginative capacity to place ourselves in the situation of another, to "enter as it were into his body and become in some measure the same person with him and thence form some idea of his sensations, and even feel something which, though weaker in degree, is not altogether unlike them."[2] [26]

As an explanation for how men understand and respond to each other, sympathy, with its assumption that man is a creature of sentiment and sensation, is an idea that plays a significant part in the Enlightenment's larger project of transforming the human self from a spiritual to a bodily being, from a divine soul to a human nature. Sympathy also plays a key role in shaping what has been called the "theatrical structure" of both self-consciousness and social relations in the writings of the Enlightenment: that is to say, the description of the self and other as "spectator" and "spectacle," "sufferer," or "agent."[27] This theatrical, as well as specular, language and structure shapes conceptions of self and consciousness, as well as relations between people, as in Smith's account of the workings of self-consciousness and conscience:

> When I endeavour to examine my own conduct, when I endeavour to pass sentence upon it, and either to approve or condemn it, it is evident that, in all such cases, I divide myself, as it were, into two persons; . . . . The first is the spectator, whose sentiments with regard to my own conduct I endeavour to enter into, by placing myself in his situation, and by

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[25] In another important Enlightenment discussion of sympathy, Edmund Burke makes it even more explicit that sympathy is one of what he calls the social passions. See Burke, *A Philosophical Enquiry into the Origin of our Ideas of the Sublime and the Beautiful* (1757), ed. James T. Boulton (Notre Dame: University of Notre Dame Press, 1986) 44 ff.

[26] Adam Smith, *The Theory of Moral Sentiments*, ed. D. D. Raphael and A. L. Macfie (Indianapolis: Liberty Fund, 1982) 10 & 9.

[27] David Marshall, *The Surprising Effects of Sympathy* (Chicago: University of Chicago Press, 1988), 11. Hereafter quoted parenthetically.

considering how it would appear to me, when seen from that particular point of view. The second is the agent, the person whom I properly call myself, and of whose conduct, under the character of a spectator, I was endeavouring to form some opinion. (113)

Here the self seems to internalize the divisions between self and other – conceived in the theatrical or specular language of "spectator" and "agent" or actor – that Smith sees as inherent to social relations and that sympathy works to minimize or manage.

Sympathy is certainly understood and deployed by Smith to surmount and think beyond the physical and mental boundaries separating self and other. And yet Smith repeatedly reminds his readers of the extent to which the embodied self is a necessary limit to the knowledge of others. "As we have no immediate experience of what other men feel," Smith writes:

we can form no idea of the manner in which they are affected, but by conceiving what we ourselves should feel in the like situation. Though our brother is upon the rack, as long as we ourselves are at our ease, our sense will never inform us of what he suffers. They never did, and never can, carry us beyond our own person, and it is by the imagination only that we can form any conception of what are his sensations. Neither can that faculty help us to this any other way, than by representing to us what would be our own, if we were in his case. (9)

Because we are always limited to "the impressions of our own senses only," sympathetic interactions always fall short of full communication and remain a matter of compromise.

Here is Smith's more detailed account of the work of sympathy:

In all such cases, that there may be some correspondence of sentiments between the spectator and the person principally concerned, the spectator must, first of all, endeavour, as much as he can, to put himself in the situation of the other, and to bring home to himself every little circumstance of distress which can possibly occur to the sufferer. . . . After all this, however, the emotions of the spectator will still be very apt to fall short of the violence of what is felt by the sufferer. . . . The thought of their own safety, the thought that they themselves are not really the sufferers, continually intrudes itself upon them; and though it does not hinder them from conceiving a passion somewhat analogous to what is felt by the sufferer, hinders them from conceiving any thing that approaches to the same degree of violence. The person principally concerned is sensible of this, and at the same time passionately desires a more complete sympathy. . . . But he can only hope to obtain this by lowering his passion to that pitch, in which the spectators are capable of going along with him. He must flatten, if I may be allowed to say so, the sharpness of its natural tone, in order to reduce it to harmony and concord with the motions of those who are about him. (21-22)

Here Smith suggests that a sympathetic interaction requires not only the spectator to "put himself in the situation of the other," but also the sufferer who, when faced with the inevitable fact that the spectator cannot share his emotions "to the same degree of violence," necessarily "lowers" or "flattens" his feelings to come closer to the state of the spectator. The two may be said to meet in an emotional middle. What is achieved is precisely not a "unison" or a full communication of passion

from one person to another, but a "correspondence . . . sufficient for the harmony of society." Indeed, Smith understands sympathy to exert a moderating influence on the passions, one that is beneficial to self and society, promoting rational and temperate social interactions and helping to restore the suffering, violently emotional mind to tranquility.

One might expect such visions of rational society from an Enlightenment philosopher, but elsewhere Smith assembles a number of examples that suggest a less moderate and rational version of sympathy. These are violent examples, fitting for The more radical exchanges of emotion and sensation that they evidence:

When we see a stroke aimed and just ready to fall upon the leg or arm of another person, we naturally shrink and draw back our own leg or our own arm; and when it does fall, we feel it in some measure, and are hurt by it as well as the sufferer. The mob, when they are gazing at a dancer on the slack rope, naturally writhe and twist and balance their own bodies, as they see him do, and as they feel that they themselves must do if in his situation. Persons of delicate fibres and weak constitution of body complain, that in looking on the sores and ulcers which are exposed by beggars in the streets, they are apt to feel an itching or uneasy sensation in the correspondent part of their own bodies. (10)

Once again the structure of these sympathetic exchanges is specular or theatrical, involving a spectacle and a spectator and the act of seeing, watching or viewing. In these examples of physical suffering, the sympathetic transfer of emotion or sensation occurs instantaneously through the eyes: "Upon some occasions sympathy may seem to arise merely from the view of a certain emotion in another person. The passions, upon some occasions, may seem to be transfused from one man to another, instantaneously, and antecedent to any knowledge of what excited them in the person principally concerned" (11).

Such examples describe a phenomenon that is currently being studied by neuroscientists who have theorized what they call "mirror neurons" which fire both when an action is performed and when the same action is seen performed by another.[28] The name for these neurons reflects and draws on the specular and theatrical metaphoric traditions that we have found in Enlightenment writing on sympathy, self and other. Such research is, not surprisingly, interesting to scholars of drama, performance theory and artistic representations. As Amy Cook writes, "Mirror neurons suggest that neurons in the motor cortex do not just code for action, but also a representation of the action." Similarly, Adam Smith insisted that the imagination must "represent" to us the sufferings and emotions of the other.

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[28] Cited in Amy Cook, "Interplay: The Method and Potential of a Cognitive Scientific Approach to Theatre," Theatre Journal, Vol. 59, no 4 (December 2007) 588. The volume she cites for discussion of this science is *Mirror Neurons and the Evolution of Brain and Language*, ed. Maxim I. Stamenov and Vittorio Gallese (Amsterdam: John Benjamins, 2002). Hereafter quoted parenthetically.

Where Smith, however, maintains the dualistic division between self and other and assumes the stability of bodily, sensory and mental distinctions between individuals, current work in both the sciences and the humanities is questioning these distinctions and dualities. Where Smith reminds us repeatedly that sympathy can never produce "unisons" of feeling and consciousness, only "concords," Cook suggests that "seeing and doing are not as different as one might think" (Smith, 22; Cook, 588). If, as recent research suggests, our mirror neuron system "projects information from a witnessed action to a perception" – if our brain "simulates" or "represents" action in order to understand action – then, as Cook suggests, "imagining" and "understanding" are much closer than Adam Smith ever thought possible. Indeed, to witness another perform an action is, in this precise physical way that neuroscience has made visible to us, to experience it oneself. This has radical implications for how we understand the relations between self and other, but also for how we understand the role of imitation in those relations as well as in our experience of art. As Cook argues, the mimetic basis of drama "requires a doer and an observer/imitator; without both sides, there cannot be imitation." But, she questions, "if the distance between your act and my act is so minimal, is 'imitation' the right way of understanding it" (591)? How can we then re-describe not only what an actor does on stage, but how an audience reacts to the emotions and events depicted on stage? Rather than understanding them as acts of imitation, performance and imaginative sympathetic reception, we need a vocabulary that radically emphasizes the extent to which everyone in the theatre experiences these actions.

Finally, it seems to me that this work has the potential to revise completely the paradigm of self and consciousness that has been in place since the Enlightenment. The belabored relations between self and other, our very understanding of the self as necessarily distinct from the other, are all reconceived in a theory that understands the experience of the self as happening across selves, rather than in interactions, both internalized and externalized, between self and other. Cook quotes Vittorio Gallese's work on infant attachment to the mother to capture the radical implications of mirror neuron theory, which Gallese describes as a "shared neural state": "By means of a shared neural state realized in two different bodies, the 'objectual other' becomes 'another self'" (590). At this point, I feel I don't yet have the vocabulary to talk about these ideas. I want to say something like "the self is realized or experienced in the body of an other," but that statement remains trapped in the self/other paradigm that is under question. "The self is realized or experienced in multiple bodies" is perhaps a better articulation of what Gallese suggests.

I am out my depth here and stumbling around in ideas that are new to me, but perfectly clear to scholars working in other disciplines. I welcome the ideas, additions, and rejoinders of others.

DALDORPH RESPONSE

Reading Ann's paper made me think of the way that I tell my students that "successful" poetry brings the reader in to the writer's experience. Surely we've all experienced this: writing so "vivid" (let's say) that we seem to be sharing in the experience. I also think of my autistic nephew, so involved in the movie or TV show that he's watching that he's not just a spectator, he is right in there with what's going on. Brian Daldorph

JANDER RESPONSE:

Let me add the latest relevant updates concerning Adam Smith:

Decety, J and Ickes, W (Editors) 2011: *The Social Neuroscience of Empathy*. MIT Press 255.

Also, very informative is D. Kahneman 2011 *Thinking Fast and Slow* . Straus and Giroux, New York 499 pages. The psychologist Kahneman got the Nobel Prize in Economics 2002. This is his latest account of our conscious and unconscious decision making. I gained much new insight from this book. Good read. Read both books to find out what Adam Smith did not yet know.

LANDAU RESPONSE:

Ann: I found your presentation of Adam Smith's ideas illuminating; in this comment I attempt to build on your analysis to illustrate one way in which Smith's ideas have relevance for the social problems that we face today. The context for my comments is intergroup conflict. When one group (e.g., a nation, an ethnic group, a political party) harms another group in some way, it can take decades for the resulting wounds to heal and for the parties involved to begin a process of rebuilding and forgiveness. What factors promote reconciliation between groups that have engaged in open conflict? One important condition that has emerged in the social psychology literature is an acknowledgement on the part of both groups of the harm that they have done to one another. In short, members of a perpetrator group must acknowledge that their group is responsible for illegitimate harm, and thereby experience what is called "collective guilt," if the groups are to achieve reconciliation. To specify, collective guilt is experienced when one's group is perceived as responsible for having illegitimately committed harm against another group. Although there are clear social benefits that can result from collective guilt, the emotion is somewhat rare because people employ a variety of psychological strategies to avoid it. Perhaps the most common strategy is to minimize the severity of the harm experienced by the victimized group ("It wasn't really that bad"). In fact, research shows that when you focus people on the harm that their group has caused another group, it fails to elicit collective guilt because such a focus encourages people to minimize the harm that members of the other group have suffered. The reason that people can so deftly dodge the collective guilt bullet is captured perfectly by Smith: one can never get completely inside the head of another individual or group of individuals so as to fully sympathize with them. As a result, one's own subjectively felt suffering is always more vivid than another's. As Adam Smith (1975/2002) noted, "Every man feels…his own pains more sensibly than those of other people."

So, people rarely experience collective guilt because it is too easy to minimize the harm that others have experienced as a result of their group's actions. And the reason it is so easy to minimize the harm experienced is, as Smith notes, because it's difficult to get inside others' heads. My students and I recently applied this analysis to find ways of encouraging people to experience collective guilt. What happens, we wondered, if we focus people on the harm that their group has caused itself in the process of harming another group? People should be less capable of minimizing the harm done because it would be salient (i.e., conspicuous and vivid). As a result, they may be forced to confront the fact that their group caused a lot of harm, which may in turn lead them to feel guilty for causing

that harm. In fact – and this is where our reasoning gets counter-intuitive – it's possible that leading people to confront the harm that they have done to themselves may actually lead them to feel more guilt over how their group's actions have harmed another group than focusing people directly on the harm suffered by members of that other group. To state this hypothesis in interpersonal (rather than inter-group) terms: if you insulted me and then thought about how your insult affected me, you may not feel much guilt because it would be so easy for you to minimize how much pain I suffered as a result of your insult. But if you focus on how your act of insulting me hurt yourself – perhaps because you fell short of your resolution to be nicer to people – then the pain you caused is vivid and salient, and you cannot easily minimize it. Thus, you might feel guiltier about the harm you caused me if you focus on your own pain than if you focus directly on mine.

We performed an experiment to test this hypothesis. We asked American citizens to read an essay about the harm that has resulted from the U.S. invasion of Iraq. While some participants read an essay that focused on negative consequences for the Iraqi people (that is, focusing on others' harm), other participants read an essay that focused on ways in which the ingroup's (the United States') decision to invade has harmed the ingroup itself. We then measured how much participants felt guilty for the harm done to the Iraqi people. Consistent with our Smith-inspired hypothesis, we found that participants who focused on the harm they have collectively caused themselves reported stronger feelings of collective guilt over their group's harmful actions toward Iraqis compared to participants who focused directly on the harm suffered by Iraqis. Even more in line with Smith's analysis, the results of follow-up studies demonstrated that the mechanism behind this effect is in fact that participants cannot easily minimize the suffering that they have experienced as a result of their own actions, whereas they can easily minimize others' suffering.

I believe this analysis, and the supporting evidence, provide an interesting extension of Smith's take on the difficulties involved in genuine sympathy. In applying Smith's ideas to find ways to promote reconciliation between groups with a history of conflict (and probably individuals too – we're testing that now), it suggests that we should stop forcing groups to dwell on how their actions have harmed others. People may simply find it too difficult to get inside people's heads and directly experience the suffering they experience. But focusing them on how they have harmed themselves may actually make them feel guiltier for the harm they have caused others, because the pain that one has suffered is hard to ignore. High levels of collective guilt may, in turn, prompt people put effort into reconciliation.

FISCHER RESPONSE:

Another Smith

Ann, thanks for a most thought provoking post on the role of sympathy in eighteenth century moral philosophy. Adam Smith's framing of sympathy as a theatrical structure in interpersonal relations sets up resonances with Cook, Abrantes, and Tomasello—and possibly others. In my response I'd like to work my way to Tomasello by way of the OED and a writer/performer whose work is all about sympathy: Anna Deavere Smith.

I have to admit that until I read the OED definitions for "sympathy" and "empathy" I did not quite see how important it is to use the term "sympathy" for this discussion. Empathy, I was reminded, is a relatively recent coinage in psychology and aesthetics, with the first usage traced to 1904 as a translation of *Einfühling*, or "the power of projecting one's personality into (and so fully comprehending) the object of contemplation." In 1912, a source identified only as Academy writes, "[T. Lipps] propounded the theory that the appreciation of a work of art depended upon the capacity of the spectator to project his personality into the object of contemplation. One had to 'feel oneself into it'." Later sources attribute an "active" empathy to the performer, while the spectator assumes a "passive" appreciation.

While there is some crossover between the usages of "empathy" and "sympathy," particularly in recent decades, I was interested to see that the latter term has an entirely different etymology (from the late Latin *sympathia* and earlier from the Greek) and a focus on both the role of the body and the difficulty of feeling another's suffering.[29] The first, now largely obsolete, definition in fact notes that from its first usage in English the term suggested that sympathy existed both within and between the physical and spiritual worlds: "A (real or supposed) affinity between certain things, by virtue of which they are similarly or correspondingly affected by the same influence, affect or influence one another (esp. in some occult way), or attract or tend towards each other." This definition includes "relations between bodily organs or parts (or between two persons), where we find some reference to what you (Ann, that is) call the "shared neural state" of mother and infant. In one OED example, the rising and falling of stock prices are described as moving in sympathy with one another, i.e., as quantifiable shifts in price, and thus in profit or loss, arising from the less traceable shared perceptions and collective behaviors of market investors.

Usages more immediately relevant to your essay focus on "conformity of feelings, inclinations, or temperament, which makes persons agreeable to each other" as well as "the fact or capacity of entering into or sharing the feelings of another or others; … also, a feeling or frame of mind evoked by and responsive to some external influence." This last seems most relevant to your discussion of Adam Smith; E. Burke is quoted: "Sympathy must be considered as a sort of substitution, by which we are put into the place of another man, and affected in a good measure as he is affected" (1757). Perhaps Smith wouldn't use the word "substitution."

 In keeping with your approach, Ann, I'd like to ignore "empathy" and continue with "sympathy" as it seems more open to the "correspondence of sentiments" and thence to the rethinking of that correspondence as experience structured theatrically. In the past week I've been teaching *Fires in the Mirror*, a play (and then a film) performed by another Smith—Anna Deavere Smith.[30] *Fires* treats the 1991 events in Crown Heights, Brooklyn, in which the Lubavitcher Hasidic community came into conflict with the African- and Caribbean-American communities. The spark was the death of a young Caribbean-American boy, hit by a car driven by a Hasidic man. Protests and riots

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[29] "Empathy" and "Sympathy." Oxford English Dictionary. 11 November 2011. http://www.oed.com.
[30] Anna Deavere Smith. *Fires in the Mirror: Crown Heights, Brooklyn and Other Identities* (New York: Anchor Doubleday, 1993).

followed in Crown Heights, and a young Hasidic man from Australia was killed. Smith interviewed 125 individuals about these events and their aftermath. In keeping with methods she developed for her larger project, *On the Road: A Search for American Character*, she selected and organized about twenty of these interviews for her performance. She studied the words, vocal inflections, pacing, pauses, bodily stance, clothing, gestures, and props used by each speaker and reproduced them in her performance. Segueing quickly in *Fires* from one to another, she changes a minor element of her dress, such as a hat or jacket, or lays down one prop and picks up another. Yet the re-presentation (as opposed to representation) of the individual's self-presentation is quite striking. She does not parody or attempt to editorialize through each character; rather, she presents the complexity of the situation by evoking the spectator's sympathy for each speaker in turn.

Somewhat confusingly, Smith uses the word empathy to describe what she's doing. Her description, though, belies that term for she recognizes that her performance in some ways breaks with conventional theatrical representation. She neither attributes an active empathy to herself as performer nor a passive empathy to the spectator. In fact, in re-presenting the words and gestures of the interviewee to the spectator, the spectator takes the place of Smith the interviewer. The spectator becomes particularly aware of this positioning at moments when Smith, playing a male leader of the Black Muslim brotherhood, addresses her (us) as "sister", or when a Hasidic woman discussing her refusal to wear the traditional married woman's wig seems to look at us with a sudden sense of connection, leans forward and says, smiling, "Maybe you know already…" It's true that the moment is empathetic as well as an instance of sympathy, for the spectator retains his/her aesthetic distance from the stage and the character. Still, Smith is after the element of sympathy that suddenly emerges between two people who have never actually met. She is addressing inhibitions that block sympathy. The cultural divisions in American cultural life that make it difficult for a Hasidic woman in Crown Heights to meet my students in a KU classroom are, for a few minutes, surmounted.

But what's really happening in these scenes, from a cognitive point of view? Well (gulp), with a little help from Tomasello, I'm going to try out a few ideas.[31] In the introduction to the published version of *Fires in the Mirror*, Smith writes: "My goal has been to find American character in the ways that people speak" (xxiii). From the outset, she did not use a familiar subject/object frame of reference. Her focus on language and its ability to shape something called character is clearly related to post-structuralist developments in literary and theatre studies in the 1970s and early 1980s, when she first conceived of *On the Road*. But she was also trained as an actor to think of speech as an action. "The act of speech is a physical act. It is powerful enough that it can create, with the rest of the body, a kind of cooperative dance. … I came to realize that if I were able to record part of the dance—that is, the spoken part—and reenact it, the rest of the body would follow" (xxv-xxvi). Acting grounded in psychological realism orients the character to the actor's own experience and memories—"to get the character to walk in the actor's shoes." Smith instead has adopted "a spirit of acting [which] is the travel from the self to the other." She describes acting

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[31] Michael Tomasello, *The Cultural Origins of Human Cognition* (Cambridge: Harvard U P, 1999).

as a "search for character" in which the actor is "constantly in motion." "The frame of reference for the other would be the other" (xxvii). Similarly, she sees in America "the tension of identity in motion" (xxxiv). She wants to interest audiences in experiencing this tension by engaging them in the pauses where character lives: "The break from the pattern is where character lives, and where dialogue, ironically begins, in the uh, in the pause, in the thought as captured for the first time in a moment of speech, rather than in the rehearsed, the proven" (xxxix). By bringing people together in the space of performance, she wants them to experience that "American character lives not in one place or the other, but in the gaps between the places, and in our struggle to be together in our differences" (xli).

It seems to me that Anna Deavere Smith is asking audiences to develop sympathy by means of what Tomasello calls "collaborative learning." This is the third of the types of cultural learning he discusses, the first two being imitative learning and instructed learning. He speaks of the child's development as reflecting a "cumulative cultural evolution" (5) taking place over several thousand years, in which humans developed "a very special form of social cognition, namely the ability of individual organisms to understand conspecifics as beings like themselves who have intentional and mental lives like their own" (5). Tomasello does not seem as interested as are Adam Smith and Anna Deavere Smith in the difficulties human beings have in experiencing sympathy for others. Still, his emphasis on "conspecifics" and the role of tools and symbols in tracing children's developing ability to understand "'intentional significance,' i.e., what 'we' the users of this tool or symbol, do with it" (6), might be quite useful here.

Like Smith Tomasello seems to focus on, not the subject/object binary, but "cultural artifacts and social practices—exemplified prototypically by the use of tools and linguistic symbols—[which] invariably point beyond themselves to other outside entities: tools point to the problems they are designed to solve and linguistic symbols point to the communicative situations they are designed to represent" (6, my emphasis). Thus cognitive processes we share with other primates ("space, objects, tools, quantities, categories, social relationships, communication, and social learning") might afford us the criteria for an examination of what he calls "culturally based cognitive skills with a social-collective dimension" (7).

Perhaps Anna Deavere Smith is engaging audiences in what Tomasello calls "dialogical thinking," which children learn in encountering "conflicting perspectives." It may be useful to examine the tools implicated in the cognitive processes at work in *Fires in the Mirror*. Smith, re-presenting the words she has heard from another, engages the spectator in sympathetic practices that would normally lie well beyond his or her comfort zone.

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Iris Fischer

COGNITIVE SCIENCE, PERFORMANCE, AND METAPHOR

Introduction

The central focus of my research is the role of the modern theatre artist—i.e., the dramatist, director, and performer—in shaping cultural paradigms. In modernity the performer has become an iconic figure, admired and imitated. Performance, considered as "twice-behaved behavior" (Richard Schechner's phrase), is inherent in everyday life and links stage acting to social behaviors and cultural trends.

Another of my interests is recent theatre theory as it has grown out of both group and individual practices. Theatre artists of the 1970s and 1980s anticipated and embodied cultural developments of the 1990s such as gender studies and critical race theory. Actor training today provides a medium for testing exciting ideas regarding behavior and consciousness. Not just a metaphor for the operations of cognition, performance takes part in them.

I am seeking empirical tools to reframe my investigation of the theatrical experience. Most promising for theatre are cognitive studies principles of embodied mind, primary metaphors, and object relations. Rhonda Blair's work, for example, has draw on Antonio Damasio's idea that "in order to understand consciousness, we must understand how the sense of a self comes into being. . . derive[d] from the organism's sense of its relationship to an object; this mirrors the centrality of the character's relationship to immediate given circumstances in [the work of Russian director] Stanislavsky" (253). Bruce McConachie notes that cognitive scientists, in addition to challenging the truth value of theories already employed in theatre studies, are finding in theatrical phenomena "a rich body of evidence with which to test and elaborate their theories" (xiv).

During the first half of the colloquium I have discovered that my own theoretical vocabulary--with its roots in U.S. semiotics and pragmatism and, to a lesser extent, French semiology and post-structuralism—is sometimes difficult to reconcile with the vocabulary and assumptions of cognitive science. Cognitive semiotics asks questions similar to those of cognitive neuroscience, but importing language from the realm of semiotics into our discussions has proven more difficult than expected. I can see correlations: it is easier to reconcile the vocabulary of, say, Ana Margarida Abrantes with that of Thomas Nagel, than with the vocabulary of V. S. Ramachandran and William Hirstein. So, initially, I am setting aside the vocabulary of semiotics in order to pursue an issue, metaphor, in cognitive science that may bring me closer to accounting for the embodied sociality of thought that audiences and actors experience in the theatre.

Part I: How does metaphor perform?

> "The mind is a muscle."
>
> > –dancer/choreographer Yvonne Rainer

In my current research I am seeking new ways of accounting for the formation of habitual behaviors in actors working on a production—a cast or company understood as a community of inquirers. KU student productions are a particularly useful instance for me as the participants tend to be of roughly the same age and background (college-age, white, Midwestern, middle class) and are being trained in methods that bear the coherent stamp of a well-established approach that we might call motivational acting. The student actor-subject is asked to relate to two objects, the fictional character being played and the unseen audience watching from a darkened auditorium. A successful production is, of course, one that the audience understands and enjoys. In addition, whatever the viewers' response might be, a production constitutes an embodied experience for the actors, whose work in rehearsal, interactions with one another and the director, and discoveries on opening night--when the pieces of the show somehow "come together"--have presumably allowed them to find and experience new meaning. As a community of inquirers these student-actors are developing habits that they "remember" with not only their minds but also their bodies. It does not go too far to say that the mind would have no way to recall the words and lines without the gestures and movements that accompany them. The challenge of memorizing is eased by embodied cues that allow them to match line with bodily sensation—indeed, often as a single "memory"—seemingly without thinking about it. (Of course, some actors are better at this than others.)

Thus, when Yvonne Rainer comments that "the mind is a muscle," she speaks from a performer's perspective, which assumes no set hierarchy between body and mind. The mind is not necessarily in charge. Body may be privileged, or the two may be seen as working in tandem. Of course the mind is not literally a muscle; the word functions as a metaphor, suggesting that the brain, like the performer's back, arms, or legs, needs training. And that training often involves getting the mind out of the body's way. Director Jerzy Grotowski wrote of actor training as the group process of working together to remove psycho-physical obstacles (e.g. bodily tension or stiffness) by jointly investigating the obstacles' causes. Or physical improvisation might be needed to produce a different way of looking at the shared object of the company's attention. As Blair notes about the role of training in motivational acting, "the actor puts her body where her mind needs to go" (253).

Before I go on to approach metaphor in cognitive science terms, which are still new to me, I'd like to think a bit more about it in terms of performance and performance theory. Metaphor is a tricky business in performance, as it is in literature. Let me give two examples, both of which use the connected images of a dog and its human master to elaborate on the travails of jealousy in love. The first is an excerpt from "Perfect Love…Gone Wrong," a popular song about ten years ago:

I've had a question that's been preying

on my mind for some time

I won't be wagging my tail for one good reason

It has to be a crime

This doghouse was never the place for me

Runner up and second best just ain't my pedigree

I was so happy, just the two of us

Until this alpha male

turned up in the January sale

(Refrain)

He won't love you

Like I love you

Won't be long now before that puppy goes astray

And what I like about this guy the most?

He'd be my favourite lamppost

Devil take the hindmost…

Anna Neill gives you Shakespeare (see below); I give you Sting…what can I say? The humorous image of the jilted lover reduced to sulking in his "doghouse" is a familiar joining of elements. What keeps this metaphor interesting for the listener is the way each successive element ("alpha male," "puppy") communicates the lover's frustration as he works himself up. We also note that the lover, trying in turn to cast his rival as a dog, reveals that the rival appears as an intimidating "alpha male" that the speaker quickly reduces to a "puppy." What we may not consider, though, are the metonymic qualities of the song that refresh the metaphor. Some contiguous elements, such as clever rhyming, we can appreciate from the written lines, but others emerge only in the shifting tempos of Sting's vocal performance, and in the parodic touches in the "ups and downs" of the musical phrasing. These are not metaphoric but metonymic elements essential for the song's success. (to watch the song click here: http://www.youtube.com/watch?v=Cl4PC324Yec)

 Let me pause for a moment to consider the ways in which metonymy differs from metaphor. Some view metonymy as a type of metaphor. For example, Denis Salter notes that while "metaphor functions to establish a resemblance or similarity between one thing, idea, or action and another," metonymy "foreground[s] interrelated dissimilar properties, to open up an uncommon ground, in which the parts/whole, margins/centre nexus is radically problematised." For Salter, metaphor is always culturally reductive (dying if not dead), while metonymy invites imaginative rethinking. In my view, though, metonymy generally configures the image to its target object by contiguity and thus is cognitively separate from metaphor. Linguist Roman Jakobson has made a compelling case for the metaphoric and metonymic as very different mental processes of selection and combination respectively. In 19th-century Russian novels, such as those of Dostoevsky, as in the speech of

certain aphasics, the dominance of metonymic speech—in which functional descriptions or expressions such as "she who writes" are used rather than the word "writer"—indicates a type of thinking that relies on physical connections or relations of contiguity. Hence Dostoevsky does not usually describe a room in metaphorical terms of its resemblance (or lack of resemblance) to other enclosed spaces ("the kitchen was a prison cell") that then colors our understanding of the people in the room as being trapped in some way. Dostoevsky chooses instead to offer details, creating a picture of the room and its occupants by describing a worn table, dented and discolored pots and pans on the stove, and so on. This is a metonymic process of accretion. So metaphor and metonymy are usefully considered as separate. What interests me is that, when metaphor and metonymy work together, they can produce particularly imaginative and thought-provoking results.

 My second example emerges from the 1978 performance piece (it can't really be called a play) The Shaggy Dog Animation, by the avant-garde theatre company Mabou Mines, many of whose productions have been written or directed by Lee Breuer. Breuer claims that he "writes into the metaphor." Metaphor is central to his work, and he takes a metaphor as far as it can go. He brutalizes the metaphor deliberately: "The key is the moment I can formulate the metaphor, when it reverberates. A dog. A dog as the precise metaphor for the male-female sociopolitical entity in terms of feminism today [this interview took place in 1988]. A dog and a master. A leash. A chain. That kind of a thing" (qtd. in Savran 12). Breuer's intent, while artistically innovative, has sometimes seemed culturally and socially regressive. That is, he does not hesitate to appropriate for his scripts thinly veiled autobiographical material from his relationships with others, in an effort to drive into the heart of the metaphor and articulate all of its meanings. For Breuer, the point is to literalize metaphor—in a sense, to reduce it to stereotype. In Shaggy Dog, the lover is John (any "john") unable to free himself from Rose, his adoring dog. Breuer is parodying the 1950s term "dog" to refer to a woman who slavishly adores a man. And, to that end, popular 1950s love songs are parodied during the performance. Performance scholar Peggy Phelan, though, outlines the cultural dangers of cultivating metaphor's ability to appropriate and colonize meaning: "Metaphor works to secure a vertical hierarchy of value and is reproductive; it works by erasing dissimilarity and negating difference; it turns two into one" (Phelan). Here Phelan is particularly interested in metaphor considered as representation, imitation, mimesis. In conventional theatre, metaphor is used to reproduce cultural beliefs, while experimental or avant-garde artists tend to interrogate metaphor or use performance techniques invested in open-ended, denaturalized, or disruptive forms of the metonymic. Breuer writes into the metaphor, but, when he directs his own metaphor-laden writing, an interesting transformation occurs. The imaginative reshaping of reality that he seeks emerges in the staging of the metaphor. Breuer and the performers resort to metonymic means, such as sensory distortion, juxtaposition or layering of voices, and changes in tempo. Thus each actor does not represent a single character—an autobiographical self, to use Damasio's term—but lover and beloved are shattered into fragmented selves. In a sense, they are spread metonymically across the bodies of several performers who voice their lines. This avant-garde example is quite layered with irony. And yet, as with the more straightforward song by Sting, metonym works with metaphor to contribute materially to an audience's discursive understanding and emotional response.

Part II: Maps and mapping--metaphoric or metonymic performance?

By juxtaposing metonymy with metaphor we may be able to account for what's happening in everyday situations as well as on the stage. I mentioned earlier that in performance theory, Richard Schechner finds performance as essential to common, everyday behaviors. I'd like to juxtapose some ideas from Schechner with those of Antonio Damasio on the ability of "map-making brains" to perform.

Damasio interests me because he himself is interested in the mediating role of the body between the brain and the world. Also, he sees this role as primarily one of representation, a term he uses often. When we discussed Amy Cook and the imaginative character of understanding, Ann Rowland suggested that the discussion of phantom limbs "provides a way of rethinking the body/consciousness duality (our bodies are fluidly mapped in consciousness) as well as explaining how the self gets linked to the other through a similar mapping process." That discussion of metaphor, mapping, and mirror neurons can be traced back to our earlier reading of Damasio. Damasio hypothesizes the as-if body loop system, described as "the simulation, in the brain's body maps, of a body state that is not actually taking place in the organism." He follows up by saying, "I suggest that the as-if system applied to others would not have developed had there not first been an as-if system applied to the brain's own organism." And a page later, he concludes: "The fact that the body of a given organism can be represented in the brain is essential for the creation of the [autobiographical] self. . . . But the brain's representation of the body has another major implication: because we can depict our own body states, we can more easily simulate the equivalent body states of others" (103-104). According to Damasio, representation leads to simulation, which creates the possibility for empathy.

I have to say that this schema, based on the ability of the brain to map the body, is very attractive. While earlier in the reading Damasio identifies the "autobiographical self" as the highest form of consciousness, here he suggests that the mapping effected by mirror neurons goes beyond or perhaps shows an additional dimension to that self, i.e., to an embodied sociality of thought.

On the other hand, consider how Damasio constructs the argument leading to this attractive possibility. Returning to page 18, we read:

> Minds emerge when the activity of small circuits is organized across large networks so as to compose momentary patterns. The patterns represent things and events located outside the brain, either in the body or in the external world, but some patterns also represent the brain's own processing of other patterns.

Note that these patterns are called representations. The patterns may operate metonymically ("organized across large networks"), as he conceives them, but his diction casts them as metaphors ("the patterns represent…")—that is, in terms of similarity or difference rather than contiguity. I suggest that the most precise term, in place of representation, would be iconic sign, where the relation of sign to object is explicitly one of resemblance. The term iconic sign I draw from the work of Charles Sanders Peirce, the 19th-century U.S. philosopher who (along with William James and

others) contributed crucially to the development of pragmatism and evolution-based semiotics. (For an account of the iconic sign, see, for example, Peirce and Welby 33.)

Now, back to Damasio, who introduces mapping as a metaphor:

> The term map applies to all those representational patterns, some of which are coarse, while others are very refined, some concrete, others abstract. In brief, the brain maps the world around it and maps its own doings. Those maps are experienced as images in our minds, and the term image refers not just to the visual kind but to images of any sense origin such as auditory, visceral, tactile, and so forth.

While he focuses exclusively on iconic signs (in this case metaphor), Damasio's account of "maps experienced as images" suggests the operation of both iconic signs and indexical ones (e.g. metonymy). And perhaps it is so. As Damasio describes it, mapping seems to me a performance in which body and brain participate. But he does not acknowledge the metonymic element. Information is described as being swapped back and forth between body and brain, but it quickly becomes clear that for Damasio the relationship is more one-sided that it first appeared. The body reports on its state, and the brain gives orders to keep bodily functions on an even keel. The brain as Commander of the good ship Body, if you will. Damasio's language here seems almost naïve in exclusively employing metaphors of representation.

In closing, I'd like to consider another passage where Damasio accounts for the operation of mapping itself: "Because, as we have seen, brain maps are the substrate of mental images, map-making brains have the power of literally introducing the body as content into the mind process. Thanks to the brain, the body becomes a natural topic of the mind" (89). Here, when body-map becomes brain-topic or idea, both iconic and indexical disappear into a complete abstraction (called a "sign" in semiology or a "symbol" in semiotics). I could be misreading Damasio; I'm intrigued by his metonymic concept of the "body border," with its vestigial elements of "old flesh," such as the outer ear, and more evolved "neural probes" such as the eye (91). But such distinctions seem to get lost as the mapping operation returns exclusively to the captain's deck, where the brain (now seemingly isolated from the body) processes the body as "content". Doesn't metonymy collapse back into metaphor at this point in his account?

Brain/body/world mapping may indeed be a performative operation that involves both the iconic element of resemblance and the indexical element of contiguity. When Schechner discusses the making and reading of geographical maps as performance, he points to how that behavior is embedded in "a particular interpretation of the world. . . . Every [global] map not only represents the Earth in a specific way, but also enacts power relationships" (41-42). Perhaps, within the world of the autobiographical self, this is the metonymic element that seems missing from Damasio's account.

TUCKER RESPONSE:

"What does my motivation feel like?"

Iris, I am so happy you bring up the relationship of the brain and the body, as this is a sticking point for me. I'm no scientist, but it is my understanding that not all the neurons are assigned to the captain's quarters. What about the "little neurons"—the ones that get left out when those in the brain are privileged? What can cognitive science tell us about how actors' lines are learned through embodiment, or the pianist who messes up when they think about what they are doing, or the body that stretches into space making new subjects and worlds? Something else must be going on in the rest of the Good Ship Body besides just obeying orders. I believe I share your critique of Damasio, who writes, "When the brain manages to introduce a knower in the mind, subjectivity follows" (11). I don't understand what is to be gained by separating the brain from other parts of the body in theorizing subjectivity. I also get a picture of the isolated brain, sitting up there at the head office, making decisions, and it seems off. I just can't buy that the brain is the only body part that "manages to introduce a knower in the mind."

Periscope down. What do we do about embodied knowledge, the body that thinks? I am intrigued by how dance theorists talk about the thinking body. Like Susan Leigh Foster's use of "Corporeality" as a theoretical "refusal to let bodies be used merely as vehicles or instruments for the expression of something else." She writes that "bodies always gesture towards other fields of meaning, but at the same time instantiate both physical mobility and articulability. Bodies do not only pass meaning along, or pass it along in their uniquely responsive way. They develop choreographies of signs through which they discourse...." (Foster 1996, xi). I'm not sure I understand you correctly here when you talk about what performance theory can do that Damasio's discussion of "brain/body/world mapping" seems to lose, but I am intrigued by the difference between metaphor and metynomy that you are using. Is it that when the "brain" and "body" get split apart, that the "brain" is used as a metaphor for "mind" and the "body" is used as a metaphor for "matter," and we're back to that problematic binary on which power relations in the west have hinged so long: rational / irrational, civilized / primitive, etc. I am not familiar with metonymy in the way you are using it, but am very intrigued. How is it that metonymy can help us think of better ways to talk about the relationship between mind / matter, brain / body? I get how performance theory brings us to a discussion of mapping as performance, as interpretative, and as "enacting power relationships," but I'm unsure where metynomy is in this distinction. I'd love to hear more.

ROWLAND RESPONSE:

Reading your post, Iris, made me return to the Damasio reading which, I must admit, I find both admirable and frustrating in equal measures. While he insists that "the body is a foundation of the conscious mind" and wishes to problematize the idea of a "border separating body and brain," his proprietary language tends to create a "mind" and a "self" that is, in your words, the Commander of the Good Ship Body. He reproduces Enlightenment hierarchies in his rhetorical expressions even as his avowed intent is to question them. I think we see this most strongly in his evolutionary assumptions, his understanding of what he calls "the march of mind progress" (surely an Enlightenment phrase!), which he understands as unfolding in the individual's development as well

as in the history of the species (and is the primary way he acknowledges the role of culture in the construction of consciousness).

I did, however, find it interesting in my rereading of these excerpts to note that the one time he self-consciously reflects on one of his authoritative metaphors for consciousness, it is that of the conductor of a symphony and he works quite hard to deconstruct the assumptions of authority that the metaphor carries. He writes:

> The oddest thing about the upper reaches of a consciousness performance is the conspicuous absence of a conductor before the performance begins, although, as the performance unfolds, a conductor comes into being. For all intents and purposes, a conductor is now leading the orchestra, although the performance has created the conductor--the self--not the other way around. The conductor is cobbled together by feelings and by a narrative brain device, although this fact does not make the conductor any less real. The conductor undeniably exists in our minds, and nothing is gained by dismissing it as an illusion. (23-24)

Another performance inspired moment in Damasio's text is his wonderful question: "Why was I thinking of Dr. B now?" (105). This is the anecdote where he relates how he found himself suddenly thinking of a colleague, Dr. B, and tries to figure out how Dr. B came to mind. What he realizes is that, unconsciously inspired by an earlier sighting of Dr. B, he had just moved across his lab in the manner that Dr. B moves. He had just walked like Dr. B, and the "visual images I had formed were prompted--better still, shaped--by the image of my own muscles and bones' adopting the distinctive motion patterns of my colleague B." This seems quite close to what Sherrie, quoting Susan Leigh Foster, refers to as the "choreographies of signs through which [bodies] discourse."

I must admit that I have trouble following your use of metaphor and metonymy when you move into a discussion of performance and then into your discussion of Damasio's theories. I was raised on Jakobson's distinction and found it fascinating to try to think about the sorts of staging devices and strategies that you describe Lee Breuer using as metonymic disruptions of the play's metaphoric ideas. But I found the distinction harder to follow when you turned to Damasio's use of iconic (metaphoric) and indexical (metonymic) signs. I did want to direct your attention to one aspect of his argument where, I think, he might respond to your charge that he does not acknowledge the metonymic element in the brain/body relationship and that he collapses metonymy back into metaphor in describing consciousness. The implication of this collapse, as I understand you, is that he returns to a metaphorical conception of the controlling mind, which governs from the captain's deck.

The point toward which I'd like to direct your attention and about which I'd like to hear thoughts is Damasio's discussion of William James's notion of the "self-as-object" (9). He quotes James's description of this self as the "sum total of all that a man could call his," from his body to his wife, children, land, horses and yacht. Captain of the Good Ship Body indeed. Damasio shrugs off the "political incorrectness" of James too lightly; the possibility that his version of self captains his body and his yacht in a similar fashion is not so easily dismissed. But he goes on to agree with James on another related point: that "what allows the mind to know that such dominions exist and belong to

their mental owners--body, mind, past and present, and all the rest--is that the perception of any of these items generates emotions and feelings, and, in turn, the feelings accomplish the separation between the contents that belong to the self and those that do not." Damasio returns here to the question that he poses at the beginning of the book: how, when he awoke on the plane, he knew that "this was me, sitting on an airplane." How does consciousness as wakefulness become consciousness of and as self? He uses James to suggest that the conscious mind and self are created through what he calls "somatic markers":

> When contents that pertain to the self occur in the mind stream, they provoke the appearance of a marker, which joins the mind stream as an image, juxtaposed to the image that prompted it. These feelings accomplish a distinction between self and nonself. They are, in a nutshell, feelings of knowing. We shall see that the construction of a conscious mind depends, at several stages, on the generation of such feelings. (9)

The self takes shape out of these feelings; our sense of self--our sense that "this is me"--is a feeling, a felt sense, created from the juxtaposition and conjoining of somatic markers to other images. I would understand this process as metonymic, involving contiguity, proximity, coincidence and simultaneity. What do you think of this account of the formation of the self through feeling? Is this interesting for your metaphoric and metonymic framework?

FISCHER RESPONSE TO TUCKER AND ROWLAND:

Thanks to both of you for your perceptive and thoughtful comments on my post. I'll try to answer a few of your questions.

Sherrie asks, "How is it that metonymy can help us think of better ways to talk about the relationship between mind/matter, brain/body?" I'd like to attempt an answer by working from metonymy to other conceptions of contiguity.

Let me return to Jakobson's essay "Two Aspects of Language" for a moment. In his long career in linguistics, Jakobson mapped language use in a variety of ways, but in this essay he isolates the dynamic between metaphor and metonymy in order to demonstrate how an oscillation between, on the one hand, contiguous relationships and, on the other, relations of association exists in a variety of sign systems, including literature and art. While his notion of an oscillation from romantic to realist and modernist literary and artistic forms seems dated (akin in some ways to Northrop Frye's archetypal criticism of the same period), Jakobson's fundamental notion of the operations of metaphor and metonymy is still valid. I particularly appreciate his ability to discuss language without reducing the complexity and richness of experience to a mere operation of signs. He's interested in the sound and texture of language as well as meaning and semantics. Jakobson seems to anticipate the basis for conceptual metaphor theory when he asserts that discussion of metaphor has a rich and suggestive history, while metonymy in its various forms remains distinctly under-discussed. Why is this so? He speculates: "When constructing a metalanguage to interpret tropes,

the researcher possesses more homogeneous means to handle metaphor, whereas metonymy, based on a different principle, easily defies interpretation" (79). We employ metonymy continuously, but recognizing it as a separate realm of experience and nature seems to be difficult. That suggests a need to explore further.

Marcia Moen's essay on epistemological inquiry usefully addresses a type of metonymical thinking marked by "attentive feeling." Such thought "moves by carefully sensing forward, into a situation, often one that claims our attention by feeling blocked" (440). Through a variety of steps, the individual experiences a "bodily-felt shift" that marks a release of tension. Such attentive feeling is metonymic, a mental foregrounding of contiguity. Here is Moen's example:

> Suppose I am writing a poem, and I can't get the next line right. I have a sense of what it needs, but I can't say it yet. I write something down, but it doesn't feel right. So, I attend again to my bodily-felt sense of what I want. When the right line does come, I experience a bodily-felt shift. The right line 'carries forward,' and I can now proceed to work on the next one. (440)

The thought process does not stop with this shift. "Feeling, bodily-life, and thought are carried forward—toward a new understanding, delivered by the shifts in body and feeling" (441). In some ways Moen's example seems similar to one Ann cites from Damasio's chapter: the conductor who "comes into being" through the unfolding of the performance. In this case the conductor represents the self, which emerges through images and sensations that create a shared narrative in which the conductor takes his very real place. Setting aside for the moment the question of how the self is formed, I'd like to look more closely at this scenario for the respective roles played by feeling, bodily-life, and thought. Where does metonymy enter the scene?

I suspect you're right, Ann, that Damasio's account of somatic markers offers useful ideas. But where are these markers in the circumstances of, say, a performance of classical music? In what ways do the participants—the conductor, the musicians, the soloist, the technicians, the audience--experience the contiguous circumstances, i.e., the necessary and helpful constraints, within which the concert exists? Let's isolate one moment in this scene. The conductor has taken his place on the podium, where he is framed for convenient viewing by both the orchestra and the audience. The conductor raises his baton, and there is a pause before the performers sound the first notes. What is happening in that pause? How does the conductor know when to begin?

We could say that he experiences a bodily-felt shift that allows him to carry forward with the motion of his arm and thus the musicians' almost simultaneous playing of those first notes. But conceptual thought has not been suspended in that pause. In fact, the conductor might be frozen in place if that were so. "It is not the case," says Moen, "that first we feel and then cognition corrects what was first suggested by feeling." Instead, "bodily image-schemata are actually functioning in the constraint of propositional thought" (440-1). The conductor continues to focus attentively on somatic markers even as he conceptualizes what is happening / will happen as the playing continues. Sensing that some element is awry in the horn section, he might shift his stance or technique slightly to help the musicians regain their energy or coordinate more closely. According

to Moen, there are several types of inference at work in such a situation, the most relevant here being what Peirce calls abduction, the sensing process involved in hypothesizing.

Moen encourages discussion of such feeling and sensing processes as they appear in research practices of the sciences and humanities, as well as the arts. She goes to pragmatism (in this case Peirce, not James) for ways of situating abductive inference within disciplined practices. "Abduction," she says, "is not a rationally self-controlled process" (445). As a feminist Moen wants to discover how such bodily-felt shifts contribute to good thinking, i.e., thinking that ameliorates. Rather than approaching research practices from a postmodern, post-structuralist focus on discourse, she turns to pragmatism. Pragmatists do not deny (as postmodern semiologists such as Foucault and Derrida have done) the existence of natural signs. On the involvement of feeling and the body in thinking, Moen notes, "[Peirce] distinguishes three aspects of thought, namely the 'feeling of thought'; its 'denotative applications' or relation to the world of facticity and otherness; and its 'representative' or interpretive function." This multiple capacity for feeling, acting, and learning has to be accounted for in terms of its operations in the social process of inquiry—the ways in which the community of inquirers moves knowledge forward. There is something important to be gained from (a) hinging thought on its engagement with feeling and bodily felt-sense, and (b) admitting that thought, when engaged in this way, gears research into the world.

Ann, I'm intrigued by your question about the uses of somatic markers for formation of the self, but my answer has tended away from questions of self to those of community. Still, I think your turn to James at this moment is spot-on. You say,

> The self takes shape out of these feelings [Damasio's feelings of knowing]: our sense of self—our sense that 'this is me'—is a feeling, a felt sense, created from the juxtaposition and conjoining of somatic markers to other images. I would understand this process as metonymic, involving contiguity, proximity, coincidence and simultaneity. … Is this interesting for your metaphoric and metonymic framework?

Yes, it is! I am turning in my own work to James for corollary ideas, but I don't know his work well enough at this point to comment. I sense that, as with Peirce, we should be careful in how we employ James's ideas. Both were sons of privilege whose accounts of the self are sometimes troubling. But in their shared interest in the self-as-object, Peirce and James were on to something important, in my opinion. In his later work, Peirce may have gone further than James, though, in dissociating his ego from the negative side of conceptualizing the self as one who knows who he is by claiming the things he owns—his house, his yacht, his wife. Peirce came to understand another type of claiming as a necessary element in the sociality of thought, i.e., the metonymic or contiguous relations that constrain a sovereign sense of individuality. This sort of claim is marked somatically but differently so, in (for example) the rush of feeling a parent might have when finding his or her child's face in a crowd. That's a valuable kind of claiming we all try to foster as human beings—and hopefully as researchers. Moen, careful reader of Peirce that she is, repeats his assertion that "a person is not entirely an individual." He or she reaches fullest capacity by being "in two places at once" (quoted on 444). He situates the self in an evolutionary process of shared inquiry in which "concrete reasonableness," informed by bodily felt-sense, "exceeds abstract, intellectual rationality"

and thus can carry the life of the community forward. (446) As you can see, this approach is exciting for my work on companies of actors as communities of inquirers.

What Peirce, as a 19th-century scientist and philosopher, cannot tell me is how bodily felt-sense works in terms of mirror neurons, mapping, or image schemata. I am also sensitive to the need to continue questioning the realist frames of reference used by Peirce, James, and Moen, et al. by employing materialist-based findings in 21st-century cognitive science. I do think that in many ways the pragmatists anticipated questions asked by cognitive scientists and may still provide useful frameworks for selected answers.

DALDORPH REPONSE:

Iris: I enjoyed your paper: wide-ranging indeed! From Sting to Dostoyevsky to Shaggy Dog Animation, then to some of the theorists we've discussed in the colloquium. The Sting song, new to me, seemed to me like one of those show tunes that is just delighted by its own cleverness.

I was particularly interested in where you started out, with discussion of performance, actors "remembering" with their bodies too. This tied in very well with your quite detailed discussion of Damasio in the final section, and his notion of the "as-if body loop system": the "simulation, in the brain's body maps, of a body state that is not actually taking place in the organism." Damasio claims that the representation of the organism is essential for the creation of the [autobiographical] self, and that because we can depict our own body states, "we can more easily simulate the equivalent body states of others." You say that that "Representation leads to simulation, which creates the possibility for empathy."

This made me think of what Ann wrote about mirror neurons, and how they "fire" in order to simulate in us the experience of another. I think you might more closely tie in what Damasio has to say with performance. Maybe our experience in the theatre is a sort of "mapping" of the experience of others in a similar way to the mapping of our own physical selves? This seems quite true to my own experience watching a play or movie, say.

It seems to me that this direction would bring together a number of your interests--in performance, in theory--in a very promising way.

FISCHER RESPONSE TO DALDORPH:

Thanks for your comments, Brian. I'd like to address briefly your excellent suggestion about thinking of theatre as a mapping of others' experience. I suspect that researchers are at work on this approach, but to date I have not located any substantive discussions. As a follow-up to Amy Cook's article, I'm reading her recent book Shakespearean Neuroplay, which uses conceptual blending theory to "provide an articulation of meaning construction that is theatrical by its very nature" (12). In her analysis of Hamlet, Cook demonstrates how the text manipulates the idea of the mirror (an image frequently used by Shakespeare); in this way she opens new questions about the

play. Cook wants to follow Shakespeare's innovations in mirror-metaphors to explore how he not only reflects early modern English usage of the term but may have helped to change such usage. For example, she notes that Hamlet is seeking a "mirror" that will not so much reflect Claudius's guilt back to him but will function as a tool to extract it from him (20). The metonymic framing of the mirror as a tool is somewhat interesting but, contained within her orientation to cognitive linguistics, it's unclear how she might use the mirror-as-mapping-tool in discussing performance. Nor does Cook set out to discuss how the play might map a specific performance of Hamlet onto the actor's or spectator's sense of self.

There's much more in the chapters I haven't yet had a chance to read. Still, Cook isn't delving into the working of mirror neurons, which I imagine researchers would need to do in order to "map the other." As much as Cook's approach resonates with my interest in refiguring the mind / body and self / world dualities, I don't yet see her interpreting theatre (performance as well as text) as a mapping of our physical selves through others' experiences. Perhaps that book remains to be written!

Fischer Works Cited

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Anna Neill

ON EVOLUTION, THE BRAIN, AND IMAGINATIVE LITERATURE

I would like to make a few, very speculative comments here in response to Brian Boyd's "Verse: Universal? Adaptive? Reversive?," which we read together late in September. I like Boyd's work enormously, because it remains sensitive to the contours of text even as it makes possibly the largest claim one can make about imaginative literacy—namely, that it participates in the evolutionary history of human cognition. What is sometimes controversial about his and other evolutionist approaches to literature is the emphasis on universal themes (especially, in this essay, the transcendence of death in art.) This is sometimes seen to limit our understanding of the specific historical content of text. It can also make the interaction between mind and culture seem unidirectional, as the latter becomes primarily a tool for the increasing efficiency of the former. Building upon his argument, however, I will try to keep in focus the way that developing mind and world act upon one another in the production and reproduction of specific cultural forms and meanings.

For Boyd, the arts tap into the evolved human predisposition toward mental play. By delivering information in pattern, poetry "enables minds to understand their environment efficiently." It fine-tunes our neural wiring by demanding repeated and focused attention, while at the same time, by violating the patterns it works with, forces us to extend our mental reach. This in turn secures us greater mastery of our environment. It also wins attention from others with all the emotional satisfaction that brings, while at the same time, shared attention to things "unforeseen, hypothetical, counterfactual, or impossible" enhances our cognitive flexibility, encouraging us to imagine alternative scenarios for action, say in the face of danger. Boyd also argues that the patterns in familiar rhymes and proverbs deliver information efficiently because as mnemonic devices, they enable us to navigate "the vast flux of information we face." Finally, in the context of TMT (Terror Management Theory), art may help us to overcome our existential anxiety as the sharing of symbolic meaning across generations offsets the incapacitating fear of death (the price we pay for rich conscious awareness).

By looking at text and mind from a great evolutionary distance, what we do not observe is the interface between the mind (by which I mean the totality of mental states, conscious and non-conscious, created by the brain) and text as an object in the world—a reciprocity that allows the particular, local meanings of a work of art to influence the physical organization of the brain even as brains deposit and fix meaning in the world in the form of cultural objects like literary text.

In *The Physiology of Truth*, the neurobiologist Jean-Pierre Changeux suggests that when we think about the formation of synapses and neural functioning in the human brain, we pay attention not only to deep human evolution (the influence of genes) but also to developmental evolution. It is through epigenetic processes that many synaptic combinations form and stabilize. While genes set development in motion—including the division and differentiation of cell types and the formation of the molecular structures that form the synapse—epigenetic events after birth, which involve interactions with the outside world (understood physically, socially, and culturally) help to shape and regulate the creation of neural networks. Through "epigenetic opening up of cerebral

connectivity to the external world" (Changeux, Physiology of Truth 209) the brain is shaped by learning and experience. At the same time, the epigenetic interfacing of brain and world, operating through the workspace of consciousness, allow the brain to create and store representations that can then be transmitted to future generations. In the form of culture, these representations condense into norms that in turn form part of the environment in which epigenetic evolution takes place.

When Changeux introduces imagination and art into what could be described as a "dialectic" between epigenesis and culture he too invokes universal themes, albeit in the spirit of Kant rather than Darwin. With its faculty of stimulating the mind by suddenly reviving images, art "inspire[s] new plans for a shared and harmonious future…. [and] by its evocative power, calls forth responsibility for others" (What Makes Us Think, 305). But what interests me more is the way he implies this dialectic operates in historical or social rather than evolutionary time. He cites the sociologist Pierre Bourdieu's concept of "habitus" or the deep system of dispositions (perceptual schemata) that an individual develops in response to the objective social conditions into which she is born. For Changeux, habitus is a synthesis of genetic endowment, circumstances of upbringing, and experience of the social environment. Neurally structured disposition (if I may put it that way) is shaped by a combination of nature and nurture. At the same time, the long period of brain development in humans, during which information about the world is incorporated, stored, and shared, is in fact what makes the transmission and evolution of culture and thus particular forms of social life possible.

For Changeux, one of the defining properties of art is that it enables a shared conception of the world. By triggering empathy art "makes one aware of oneself as another" (What Makes Us Think, 229). Yet this universal, ethical function is complicated by art's role in the reproduction of culture. As what Bourdieu calls a "field" it represents an organized social space that helps to create habitus and thus to consolidate particular social norms. Changeux traces this process all the way down to the epigenetic formation of neural networks, which both lie at the origin of culture (making culture possible) and which are themselves shaped by culture as one of the key environmental constraints in brain development. Even as our slow-developing brains make it more possible for us to act upon the world than any other species, the world that we make also acts upon us.

I'd like to close by looking at Boyd's account of Shakespeare's sonnet 81. For convenience, I'll type out the poem here:

Or I shall live, your epitaph to make;

Or you survive, when I in earth am rotten;

From hence your memory death cannot take,

Although in me each part will be forgotten.

Your name from hence immortal life shall have,

Though I, once gone, to all the world must die;

The earth can yield me but a common grave,

When you entombed in men's eyes shall lie.

Your monument shall be my gentle verse,

Which eyes not yet created shall o'er read,

And tongues to be your being shall rehearse,

When all the breathers of this world are dead.

You shall live, such virtue hath my pen,

Where breath most breathes, even in the mouths of men.

Boyd argues that Shakespeare creates an alternating pattern of assertions between survival and oblivion within each of the quatrains, culminating in a "death-defying affirmation" (Boyd, 192) in the final couplet, where the speaker asserts the addressee's immortality in the very lines he has written to him. Boyd's exquisite reading shows how Shakespeare stretches idiom to jointly capture the inevitability of death and the promise of resurrection in the minds and reciting mouths of future readers, while all the time promoting the power of the poet –speaker (as the one able to confer immortality) over the addressee who is implicitly his social superior. In this reading, the sonnet invokes two timeless themes: the power of art to overcome death and "the universal pattern of…our wishing to assert our rights, where we can, in the face of the dominance of others."

Here's another way of reading the sonnet. As Boyd points out, the poem is structured around the contrast between "I" and "you." It therefore dramatizes the intersubjective space that Changeux sees as a fundamental property of art. It also points simultaneously to death and decay as the destiny of organic beings and to the cultural artifact in which the experience of mortality is shared, preserved and handed down to future generations. Both the form (sonnet) and the implied social subordination of the poet who serves (and yet in memory outlives) the noble addressee locate the poem in the particular time and place of late 16th-century England. The dramatization of a consciousness of the self as both mortal and immortal that takes place in the sonnet is made possible by the very enculturation of that process in the work of art. Intersubjective experience + print culture = production of an enduring cultural truth, yet one that is profoundly of its time. Both the speaker and the addressee are readers of this "future" text, which is (in a mind-twistingly circular fashion) the occasion of their coming together in thought about death and immortality. Their social relationship (together with the speaker's ambivalence about it) is recorded in this text and reproduced in their "reading" of it. The final line, then, says less about the immortality of art, than the reproduction of particular social meanings in the bodies of living, culture-bound, human beings.

I would also like to think about the implications of this approach for the kinds of texts that actually resist intersubjective space by deploying "mind blindness" in the way that Vermeule describes. And I wonder whether Brian's poem "Eve" falls into this category, or whether it moves in between "blindness" and intersubjectivity. But I think I've said enough for now.

Neill Works Cited

DALDORPH RESPONSE:

Anna, thanks for your paper. You enhanced my reading of the Boyd essay in particular, and developed his argument into something much more interesting and "mind twisting." At first I found the language of Boyd, Changeux, and Bourdieu quite difficult, but as I took more time time with it I was able to follow their arguments and I could see quite clearly the main point you're making here: that we act upon the world and the world acts upon us, a much more dynamic interaction than Boyd's notion of culture used as a tool to increase the efficiency of the mind.

Boyd has some good points to make. I particularly like the point he makes about the way that children at play are often learning to distinguish patterns in information that will, soon enough in their lives, help them in the various processes of education. It's easy enough to see a smart kid who you know will excel in school because she is so quick at picking up a game. This is the perfect example to support Boyd's main argument. Your argument is more sophisticated than this. You would say that the world--in my example, the game--also influences the child, perhaps even in that child's "neurally structured disposition." This is to me a much more convincing argument. For example, the student athletes I have worked with have been changed by their sports. They do develop a way of thinking in which it seems their sport has "shaped their neural networks."

It's easy for me to accept Changeux's argument that interactions with the world shape our neural networks. If you think of what happens to an abused child, say, surely some of that experience is wired in to the child's "habitus" (Bourdieu).

Again your reading of Shakepeare's sonnet goes beyond Boyd's. In reading Boyd I had the suspicion that his interpretation of the poem was really quite conventional, though dressed up in the terminology of the day, Terror Management Theory, eg. Your reading tries to see beyond the conventional sense of the "immortality of art," to look at the poem more for what it means to "living, culture-bound, human beings." I wonder how your reading would accommodate the common notion of the "universality" of Shakespeare's art?

ADAMS RESPONSE:

Anna, reading/commenting on your post at the same time that I am Nick's, it occurs to me that one way to frame the interests of many of us in the group--certainly my interests--is to say that we're interested in investigating ecological correlates of consciousness (ECCs). I think this framing provides a productive parallel/counterpoint to the collective fascination (bordering on fetishization) with the neural correlates of consciousness that seemed to occupy much of our group's discussion this semester. I propose this as a way to frame your discussion on artistic/literary production: investigating the extent to which particular forms of artistic/literary production are associated with particular varieties of consciousness/experience.

Your comments about Boyd's work—that "it remains sensitive to the contours of text even as it makes [universalist] claim[s] about imaginative literacy"— reminds me of points that emerged in our group's discussion of Tomasello (1999). Tomasello's book, and earlier work by Marxist/Soviet psychologists like Vygotsky, emphasizes "the sociocultural work that must be done by individuals and groups of individuals, in both historical and ontogenetic time, to create uniquely human cognitive skills and products (p. 11)." Tomasello makes the point (which I repeated in my own blog post) that

> taking these processes seriously enables us to explain not only the universal features of uniquely human cognition—such as the creation and uses of material, symbolic, and institutional artifacts with accumulated histories—but also the particularities of particular cultures, each of which has developed for itself via these same historical and ontogenetic processes a variety of culturally unique cognitive skills and products during the past several millennia of human history. (p. 12)

I think it's noteworthy in the context of your discussion that Tomasello tends to emphasize in his own work the relatively "universal features of uniquely human cognition" rather than the traditions/varieties of cognitive tools/tendencies that emerge in particular communities. It seems to me that you're saying a similar thing about Boyd. Boyd emphasizes that imaginative literacy (literature?) provides the foundation for pan-human cognitive possibilities. One could also note, in the manner of Tomasello's statement (if not the focus of his work), that particular forms of imaginative literature or practices of imaginative literacy typical of particular communities might also lead to divergence in human cognitive tendencies (even skill/abilities) across those communities.

This point about historical evolution of community divergence seems like something intermediate between Boyd's universalism and the point that you note in response to Boyd: an interest in how "developing mind and world act upon one another in the production and reproduction of specific cultural forms and meanings." I would translate to a cultural psychology audience as a reference to the dynamic process of mutual constitution between mind and world. Your interest—or at least your emphasis in the post—is on a smaller (ontogenetic) time scale than most discussions. [Perhaps] because of this, I think it has considerable potential for illuminating the process of mutual constitution on a more historical time scale.

I appreciate the distinction you raised between consciousness and mind, which you define as the totality of mental states, conscious and non-conscious, created by the brain. However, I continue to wonder about the distinction between these two. More specifically, as I note in my own blog post, I continue to wonder about the place of "unconscious" mind in our discussions. Does unconscious refer to knowledge/experience about which we could have awareness (e.g., in other circumstances), but do not now? Alternatively, does unconscious refer to knowledge/experience about which we could never have awareness? How separate is unconscious mind from consciousness? One important insight that arises from social psychology concerns the extent to which our conscious experience of why we do what we do can be quite unrelated to the ecological conditions that caused us to do what we do. That is, I may respond to your question about why I became a psychologist or why I find one car more attractive than another without fully recognizing

the impact of ecological forces (e.g., advertising) in shaping actions or preferences over which I come to claim authorship. More generally, it is impossible to separate "unconscious" associations from our experience of qualia; indeed, many psychologists would propose that qualia are almost fully constituted by associations that are, at most, barely conscious.

This direct shaping of experience via everyday engagement with material realities constituted by objective associations (co-occurences: e.g., of negative or positive valence with different racial categories, or different occupations with different gender categories)—a shaping of consciousness that happens largely outside consciousness—comes close to the notion of habitus. Like you, I think the concept of habitus is a useful one for us to consider alongside consciousness. I am tempted to propose that habitus refers to "ways of being" and consciousness to "ways of experiencing", but then I ask myself, what about "unconscious experience"? Is that merely an ill-considered phrase, or does it refer to something useful? Does artistic or literary production act on habitus, consciousness, or both?

Your references to Bourdieu and habitus (via Changeux) gave me flashbacks to an interdisciplinary reading group on "agency and objects" in which I participated during a recent fellowship leave. The group consisted of an art historian, an archeologist, an anthropologist, sociologists, historians, a medical scientist, and a couple cultural psychologists. We formed the group after we realized that we all had an interest in the extent to which material things might acquire a psychological charge that mediates social influence. The idea is that, rather than mere end-products of behavior (in reductionist, smells-like-science, behaviorist terms), objects are repositories of their producers' understandings, motivations, desires—in short, intentionality. As repositories of intentionality, intentional objects (like tools) carry their producers' understandings, motivations, and desires beyond the context of production—often, beyond the lifetime of the producer—in the form of a psychological "charge" that they deposit into new situations. In these new contexts of application, the psychological charge from intentional objects can exert influence on new actors' behavior, experience, and consciousness, directing it in a way that resonates with the original (re)producer's understandings, beliefs, desires.

To conclude, I will share an example from my undergraduate Culture and Psychology course. The course topic for this week was Cognition and Perception. In the lecture, I described work by Taka Masuda and colleagues (including Richard Nisbett, expert in the field of "culture and cognition", who gave a lecture in the KU Department of Psychology on Friday)..In their more standard psychological research, these researchers have established differences in habitual tendencies or modes of perception, such that attention to background of everyday scenes is greater among research participants in various East Asian settings than participants in various European and North American settings. Conversely, attention to figural objects in everyday scenes is greater among participants in European and North American settings than East Asian settings.[32] However,

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[32] Masuda, T., & Nisbett, R. E. (2001). Attending holistically vs. analytically: Comparing thecontext sensitivity of Japanese and Americans. *Journal of Personality and Social Psychology*, 81, 922–934; Masuda, T., & Nisbett, R. E. (2006). Culture and change blindness. *Cognitive Science*, 30, 381-399.

relevant to the discussion of imaginative literature as cultural technology for the production of particular modes of psychological experience, Masuda and colleagues were interested in the possibility that there are parallel differences in traditions of artistic production in these communities.[33] In support of this possibility, an analysis of paintings displayed in European and East Asian museums indicated that figures in portraits were much larger in Western pictures than they were in East Asian ones (on average the Western faces were three times as large). To date, I don't think that the investigators have illustrated the dynamic/causal relationship between tendencies of perception (emphasis on figure versus ground) and of artistic production (size of figural objects). However, I think this is just one possible example of the phenomenon that you raise regarding a resonance between habits of mind and forms of artistic/cultural production—the idea of artistic production as ECC.

If I read you correctly, I think we share an interest in the possibility that specific forms of artistic/literary production promote particular varieties of imagination/consciousness. Do you have good examples? Is this something that you're interested in investigating/establishing via the investigative/rhetorical tools of empirical science? If so, then I am game to try. For example, I can imagine randomly assigning experimental participants to "engage" with some or another artistic/literary form and then measuring the effect of that engagement on indicators of some manifestation of consciousness. Is that proposal interesting? Beyond interest, would it be a form of scholarship that people in your discipline would recognize/value? What would an optimal interdisciplinary collaboration look like from your perspective?

NEILL CLOSING COMMENTS:

Glenn: Thank you for this fascinating response and for posing the question about collaborative research across our disciplines. Since Brian suggested I address the common assumption about the "universality" of Shakespeare's art, I'm going to use Shakespeare as a reference point , and then try to think about whether or not his sonnet would work in the kind of study you propose.

I appreciate your framing suggestion about our shared focus on the "ecological correlates of consciousness," and figuring out within that framework how habits of mind interact with art objects/forms of art production. This brings up for me Raymond Williams's cultural materialist revision of Marxism . For Williams, art may be grasped as either an object or a practice. As objects, works of art outlast their authors to communicate information about the social landscape in which they were produced (or in another kind of art and literary criticism, to reveal some "permanent category of the mind") (Williams, 1973). He calls for our recognition instead of "the conditions of a practice." These include inherited (and deeply social) artistic/literary conventions and the social relationships that feed into the active composition. Elsewhere, he coins the phrase "structures of

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[33] Masuda, T., Gonzalez, R. Kwan, L., & Nisbett, R. E. (2008). Culture and aesthetic preference: Comparing the attention to context of East Asians and European Americans. *Personality and Social Psychology Bulletin*, 34, 1260-1275.

feeling" (Williams, 1977) to describe the set of perceptions and values shared by a particular community and/or generation that are most powerfully articulated in artistic forms and conventions.

Williams's stress on art as a practice seems to capture something analogous to the relationship between material objects and "psychological charge" that you describe. In both cases, the art object projects its cultural meaning and influence onto later social contexts through the medium of the psyche (which for Williams is collective in a "structure of feeling") . Yet what I most like about your formulation (and this also resonates with Williams) is this is not a reproduction of that original meaning as much as—your term—a "charge" in that new context. In my understanding of Bourdieu's account of habitus, art objects largely reinforce and reproduce (unconscious) habits of mind. Here, instead, the aesthetic experience--which perhaps carries a heightened charge because of the way art stimulates and amplifies or condenses emotional reactions to the environment--reconfigures the social environments in which the object "afterlives." To continue in the historical-materialist vein, this historical afterlife also points to what Walter Benjamin describes as the "seiz[ing] on a memory as it flashes up in a moment of danger" (Benjamin, 1969), or what Jonathan Gil Harris, recently invoking Benjamin, calls "untimely mediation" (Harris, 2007).

In the case of Shakespeare's sonnet, the relationship between speaker and addressee is not fixed in either historical or evolutionary time; it is neither a demonstration of the universal human dispositions to social domination and fear of death, nor exclusively evidence of class-relations and interpersonal conventions of the culture of 16th-century England. Instead, the peculiar conflation of mortality and immortality that it achieves, and the strange assertion of self that it effects via protestations of self-effacement carry an emotional, conceptual, and political charge. This charge, mediated through the body of the (present day) reader, flashes forward not only into Benjamin's "moments of danger" but also the structure and practices of everyday life. As an object that affords (am I using the term correctly?) recognition of the perilous state of selfhood (always in danger of expiring either in mind or body), the sonnet throws us out of habitual ways of grasping the world through the medium of a stable identity. Social power then ceases to be coded in an "I vs. you" structure, but instead moves fluidly in intersubjective space.

Changeux's account of the ontogenetic neurobiology that supports habitus perhaps recognizes how the latter is not entirely norm-driven. In my original post, I dismissed the use of Kantian ethics in his claims about art and the mind. But focusing for a moment on what he says about the power of art to "suddenly revive images," and thus provoke a sense of responsibility to others in an imagined shared future, I wonder whether the neural events it triggers suggest a technology for altering dominant structures of feeling. This might sound less utopian if I add that art remains, at the same time, a tool that constrains the development of synaptic structures, and that organizes emotional responses to the world in ways that allow for the coherence and continuity of cultural forms. (Who can say that high art fundamentally different from popular or commercial culture in this respect?)

So what would this look like in the form of an experiment? Now I'm getting really out of my depth. I'd be fascinated to see how this played out, but I don't have the expertise to know how to dream it up. Could reactions to Shakespeare's sonnet serve as the object of investigation here? Would it be possible to test reactions to that text such that we could identify the feelings and ideas it evoked

and then measure these against reactions to some salient contemporary images that represent class difference, for instance? I'm rather vague about what this would measure though. There have been some empirical studies done on reader response to canonical literature, but I'm not sure they'd work as a model, and we are certainly not trained in how to do it.

I'll close by bringing my last questions to a more general problem of interdisciplinary study. How might a poet, a cultural psychologist, and a literary critic together compose a research project that addresses the questions we've raised above? Can artistic production, empirical, theory-driven, and rhetorical analyses cohere around the "ecological correlates of consciousness"? Would such coherence merely be thematic, or could we actually formulate an investigative strategy that incorporates those diverse forms of inquiry?

Anna Neill Works cited

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Ben Sax

LANGUAGE AND CONSCIOUSNESS

I found the seminar fascinating. It has introduced me to a wide set of approaches to the problem of consciousness that I was not aware of. I had hope to reread all of our common reading before posting this blog; but the day got away from me, and I will not be as specific in my references or address specific arguments raised in these readings as I would like to be.

Let me simply make a number of points related to our reading and to our discussions of these readings. With my own interests, the readings on cultural psychology were the most engaging for me, but I have found the exposure to all the earlier readings showed a dimension of current thinking about consciousness, which I was not aware of.

My approach is what I call "expressionist" by which I mean that our knowledge of "reality" is based not on a copy theory (the representational theory of truth) which can be identified with metaphysics (including its modern scientific modes) but rather understands "reality" (I prefer a notion of "world" which is not the same as "reality") as what human beings create not just in art and technology but in their notions of knowledge and science. Whatever the sources of individual action or even individual and species existence, our knowledge of action and existence is dependent upon the language that any given culture and any given epoch of the culture claim it to be and act, evaluate action, establish institutions, and constitute "reality" accordingly.

One way to conceive of expressionism is to understand culture as its general term and guiding theme. In my own work, I am attempting to interpret culture in terms of language. Although cultural anthropologists and a number of cultural historians have attempted to reconceive of culture as language, I find that there are too many problems with this approach. I have returned to the origins of idea of culture and language in the works of Herder, Hegel, Burckhardt, Nietzsche, and Heidegger with the question of language in mind. The being (or "reality") that can be known is language. There is much that we would like to know (including questions of consciousness) that lie "outside" language but cannot simply be known. The traditional philosophical and scientific question "what is ..." has to be refined so that we must be suspicious of direct answers and answers that do not look at the linguistic (and I would add, cultural) mediations that both condition the answer but also the question. Without, in other words, a direct access to reality, we need (in my humble opinion) need to understand how various terms, concepts, and metaphors come to dominate language and various ways of comprehending reality (and not just in the languages of philosophy and science). Skepticism is the initiating move of expressionism but the appreciation of the diversity of linguistic and cultural expressions is the end. This is especially true of the means and modes of expression that constitutes the modern West, including its attempt to understand other non-modern and non-Western forms of being. Instead of searching for the analytic units, neurobiological causes, or empirical foundations, I would prefer to see the most developed, more fully articulated forms of expression that are irreducible. "Reality" is in these fullest realizations and not in its analytic parts.

My specific problem is concerned with the problem of self and self-conceptions in the history of the West with the hope of bringing forth the linguistic "foundations" of the self (including the notion of consciousness) as it first emerges in the seventeenth century. For me, the problem of the modern self as a form of self-consciousness is at once a historical and linguistic construct and in a fascinating way the very self-conscious foundation for modern science (both natural and human).

This problem raises questions of the foundation of the modern sciences. A wide range of founding linguistic oppositions of subject and object, mind and body, nature and culture, for instance, are assumed to be found in nature and that (as with the tradition of metaphysics) that nature is both knowable by human beings and normative for defining human beings. The emergence or re-emergence of neurobiological theories of consciousness appear to me to be pre-critical understanding of science and at the same time an interesting cultural-historical problem in itself. In fact, the re-emergence of the scientific approach to the problem of consciousness is something I was both unaware of and thus unproblematized by me. "Nature" as I see it is a product of culture and only a projection of a culture. In other words, "nature" cannot be a ground for human being or human knowledge.

There are a few questions I have with this return to a neurobiological theory of consciousness. One, that should be obvious from what I have already said, is that so much of it is reductionist. As par to the analytic move in modern science and philosophy, the attempt to find basic units, foundations, and essences I find to be metaphysical holdovers and thus in need of deconstruction in its narrowest and most precise sense. The assumption that there is a reality identified with consciousness and that it can be studied scientifically is for me very strange. For one thing modern science is based upon a notion of consciousness and thus a separation of subject and object and the further assumption that the subject has a means of knowing or representing an object in a clear and distinct manner. Without fully explicating this position, I see this move to consciousness as a foundation of knowledge (and of a concept of truth) as an impossible project. It is an attempt to find a ground of its own ground. Another way to look at this problem and to understand the strange nature of this project is that consciousness (as a foundation of modern science) wants to find this foundation through scientific means.

As a result, I would like to see a more vigorous engagement with contemporary discussions that are critical of the notion of consciousness and its foundational position within modern forms of knowledge and truth. In particular, to name names, Nietzsche, Heidegger, Foucault, Derrida, Deleuze, among others have directly questioned the notion of consciousness and its foundation role in modern thought and culture.

From my perspective, the notion of consciousness need to be more clearly defined not biologically but historically. When did the term consciousness arise and why? What problems was it meant to resolve? A starting point is with Hegel, who first thematizes consciousness (*Bewusstsein*) as a problem and breaks from the tradition of speaking of reason or of the faculties of the soul. For Hegel consciousness can be traced phenomenologically through various shapes (*Gestalten*) to eventually lead to absolute knowing. Marx and Freud among others challenge this notion of consciousness but each in his own way attempts to establish a science that at once acknowledges the limitation of consciousness and reconstitutes a science that can overcome the limitations of

consciousness. I prefer follow Nietzsche and not reconstitute science but move to an art of interpretation of meaning (a problem of language).

JANDER RESPONSE:

I am desperate and need help. Much of what you want to say I fail to understand, sentence by sentence. From your use of the concept 'consciousness' I infer that a child in the first year of life has no consciousness because it knows nothing about history nor can it use language? Similarly, no animal has consciousness or is ever conscious? To take another example: what limitation of consciousness did Marx and Freud try to overcome with a reconstituted science? Human consciousness, for instance, is limited to encompass no more than nine items at a time. It would be a true miracle if a reconstituted science could change this. Or, for the scientist Charles Darwin and for the philosopher C.Searle (2004: Mind. A Brief Introduction) the problem of consciousness is foremost a biological problem. Is there anything factually or logically wrong with their argument? Or, in what way is the neurobiolocal theory of consciousness 'reductionist'? Is it reductionist when a neurobiologist says 'you need a brain to be conscious'? Are correlation and reduction synonyms? Is there a particular modern scientific book on the neurobiology of consciousness that you studied that supports your opinion about a reductionist theory of consciousness? Could you help us with an example of 'a fully articulated expression ' that is not reducible (has no identifiable simple constituents)? Is it not a simple truth: All culture is a product of nature because without nature there could not be any culture? at all. Do you agree or is there a logical error in this argument? Is there some legitimate reductive reasoning in your opinion? Is yes, can you give an example?

Failing to understand much of what you want to say I feel very incompetent as I hope you understand from reading above comments

TUTTLE RESPONSE:

Thanks, Ben, for such a rich and challenging post; I must start my response with a confession that I am not able to follow many of the threads woven through it, for lack of competence and well as lack of space. Following up on all that you suggest here would require a year-long intensive course in philosophy on my end.

So I'd like to propose a more focused conversation, one that will allow us to interact about some of the common colloquium reading. The author that came to mind for me is Antonio Damasio. In many respects, your project described here and his have similarities. Both of you are interested in understanding how the self emerges. Both of you propose that the self is a product of an historical process. Both of you draw inspiration from theorists of consciousness active in the West since Descartes. Both of you credit language as important for consciousness. To put it that way, I know, is to minimize the chasm that separates your approach from his. It's perhaps perverse, but it may be a place to start.

Let me summarize what I think Damasio is arguing. All my paraphrases are from Self Comes to Mind (2010), and in fact from its first twenty pages.

Damasio begins be defining two levels of consciousness. There is, first, "self-as-object": "a dynamic collection of integrated neural processes, centered on the representation of the living body, that finds expression in a dynamic collection of integrated mental processes." (9) Let me state upfront that I regret the fact that Damasio chose to refer to this as "self-as-object" and to differentiate between "neural" and "mental" processes. These choices, it seems to me, immediately introduce the baggage of the subject/object problem into his conceptualization. I regret this choice, because I don't think anything in his formulation requires it. What he seems to be talking about here is something we might more productively term "perceptions"—the sum of our awareness built out of a stream of sensation and emotion which constitutes the information available to us about the relationship of our body to the world. Damasio, of course, has further, more recognizably scientific assumptions about this self-as-object: it arises from matter that obeys the laws of physics and is evolutionarily prior to the self he actually wants to focus on. To respond to one of Rudolf's queries, this "self-as-object" is the kind of consciousness that both animals and human infants surely have.

The self Damasio actually tries to get a handle on in this book is what he calls the "self-as-subject" or "knower"—that is, a capacity to reflect on the processes generating self-as-object, and know that it belongs to me: like, for instance, it is me who is sitting in this chair, typing, with the window to my right. This level of self also has memory: it recognizes that the being typing now was thinking about this material earlier today, sitting elsewhere. Damasio talks about this self-as-knower in multiple ways. He calls it "stacked" on top of the self-as-object (presumably this means that you can't have subjectivity without perception). He locates it in evolutionary time, as an evolutionarily more advanced level of consciousness, and even in individual life-time: you get more of it as your brain matures. He acknowledges that this self-as-knower consciousness is "modified by all manner of social and cultural interactions" (13), and that its evolutionary appearance "made reason and scientific observation possible" (13).

But this is not a story of scientific triumph, because there's a big problem: this self-as-knower does not have privileged access to the full panoply of things actually going on in our neural networks. It doesn't know how it comes to be and there's much of what is happening to regulate it that is beyond its control or knowledge. Damasio seems, in other words, to be aware at some level of the difficulty you mention of trying to use the kind of consciousness that is necessitated by modern science (a reasoning observer) to study the processes that generate its ability to reason and observe.

In what seems to me the weakest part of his argument, Damasio also credits language with an important although secondary role to play in the story of consciousness. Here's how his account goes:

> countless creatures for millions of years have had active minds happening in their brains, but only after these brains developed a protagonist capable of bearing witness did consciousness begin, in the strict sense, and only after those brains developed language did it become widely known that minds did exist.

I suspect most humanists and many social scientists would guffaw at this account, which seems to suggest a lot of very rich inner-knowing lives of early humans that wanted only the advent of

language so the knowers could chat about all the knowing they had done prior to having a language to express it.   But rather than dwell on this spot where, it seems to me, your point of view and Damasio's veer very far apart, I'd like to know what you think about the place where it is closer together: at the level of the self-as-knower.   Here are the two big questions I'd start by asking:

1)   Damasio aligns himself with William James, in trying to define the self not as "metaphysical knowing agency" but rather as something grounded in biology with a knowing function. Where do you put your view of the self in relation to these?

2)   How far do you want to push the idea of social or linguistic construction? If "nature" is "only a projection of culture", then what about "neurons" and "matter"? Are there scientific facts? I look forward to hearing more.

ROWLAND RESPONSE:

Ann here. With more questions than comments. I am largely sympathetic to your understanding of self and consciousness as historical and linguistic constructs, sharing, as I do, many of the theoretical and disciplinary assumptions that you employ. But the readings of this colloquium have sufficiently challenged some of those assumptions, so I find myself struggling with a number of questions that I would also like to pose to you.

Like Rudolf above, I wonder what you call and how you explain the mental activity of an animal or a child or some other prelinguistic or non-linguistic being? Rousseau sums up a major strain of Enlightenment thinking on this question when he asserts in Emile that the infant has no self or no identity (and therefore the death of an infant is not as serious of a loss as the death of an older child or an adult). Many elements of consciousness were assumed to be dependent on language -- or on the use of signs to mark and connect ideas, as we saw in Locke and Condillac. But, of course, there are so many elements of consciousness that do not seem to depend on language and so many beings who do not have language and yet still have something that we call "consciousness." I cannot figure out your position on non-linguistic mental activity. Are you simply not interested in it? Are you arguing that it comes to be defined as and understood as something other than consciousness in the 17th century when a particular understanding of the self emerges? This level of consciousness -- Damasio's "self-as-object" level, as Leslie reminds us above -- our perceptions that give us information about, to quote Leslie, the "relationship of our body to the world" – is surely worth trying to acknowledge and describe. Or is this what you refer to as what cannot be known, because we only have language with which to describe it?   While I can certainly agree that how we understand, describe, and even experience our perceptual consciousness has changed over the course of history, I think historical approaches to such problems also have to acknowledge that something persists that is unaccounted for in historicist explanations.

Perhaps your focus is more on self-consciousness, that higher order of consciousness according to Damasio, and, I think, according to you an historically constructed type of consciousness, a way of being and experiencing the self that emerged at a particular historical moment. My question here is, what happened in the 17th century that enabled this particular version of self-consciousness to

emerge? Is your project an intellectual or rhetorical history, charting a new way of speaking and describing the self and consciousness that emerged among a group of philosophers in a particular period? Or are you arguing that people began to experience their bodies and minds in a new way over the course of the 17th century that gradually took on the names of "self" and "consciousness"?

SAX CLOSING COMMENTS:

My response to my respondents is not as responsive as in my original, which was lost in cyberspace and is now, I believe, beyond the circuit of the moon.

Perhaps, concision is the thing. I have only a few points to make.

1. I think the way to go in our present thinking is not to fall back into foundationalism and essentialism. How to proceed? I think by taking on the most radical ways of thinking about language and claim that all we know and can know (but not all Being) is language. The problem becomes then, if we do not just want to endorse a notion of the free-play of the signifier (Derrida, for one), then how can we understand something like the real from within language? Any and all attempts to break out of language in our truth claims, only reveal another level of language.

 2. This position puts into question all attempts to find a ground, either in consciousness, or experience, or experiment. I understand the desire but cannot endorse the effort. This attempt at grounding involves claims to break out of language in order to control language (most often in the name of truth). This is a claim to immediacy, which I have difficulty in accepting; for it assumes that facts, events, processes (even if lawful or repeatable) are not mediated by language, and ultimately by culture and a specific epoch of a culture.

Such attempts reinstate a number of dichotomies that I think are questionable: subject vs. object, mind vs. body, self vs. world, consciousness vs. non-consciousness, culture vs. nature. I admit that such bipolar oppositions are constitutive of modernity, but I would also argue that they produce the theoretical and practical (another dichotomy I challenge) problems of modernity. In appealing to any or several or all of these oppositions simply recycles our problems, though often in what appears to be new terminology.

 I am currently interested in the problem how from within language how there is reality. Language is not just by its nature a realm of free play on which no restrictions should be imposed. Language has ontological implications which cannot be avoided. Opposed to the finding of the individual natural and human sciences, there is the larger question of Being which none of these sciences, by their very constitution (as ontic studies), cannot address. That we can make certain facts, events, process repeat themselves is not to say that this is nature (let alone Being) but only a definition of "nature" which we at present project. These repetitions are useful and confirm that we have a type of technological control over a range of events, but this is neither nature nor reality.

A culture or a cultural epoch is limited but in these limits its has its reality as individuals act and institutions are established. In other words, a culture is actual in ways that language alone

(especially the notion of language as a virtual system of signs) does not have. Once language is understand as culture and culture as language, we can begin to approach the problem of actuality. It also introduces the question of history (and time). Because we are linguistic, we are cultural, and because we are cultural, we are historical. Beyond a culture, there is world; but a world is not beyond language. At is basic yet all-pervasive mode, language opens the possibility of having a world. It is in world-constituting, that language reveals how it functions and allows other functions of language to work (as a tool of knowledge, as a means of communication, as a system of signs).

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Brian Daldorph

ON ALZHEIMER'S DISEASE

Alzheimer's

winter
in his face, brain, hands.

winter has come.
and winter close behind.

When I first read about this colloquium, "Consciousness in Interdisciplinary Perspective," I immediately thought of a sequence of poems I've been working on over the last few years, tentatively titled *Ice Age*. In these poems, started because a close friend of mine was declining quickly because of the ravages of Alzheimer's (or an Alzheimer's-like disease), I look at the way in which this disease seems to quickly strip away aspects of the mind which we associate with "self," with "identity." In writing these poems (about sixty so far), I have new insights into consciousness, into identity, into character, etc., by seeing what is lost as this disease, this Ice Age, begins to "freeze" the mind.

Alzheimer's Disease is a degenerative brain disorder in which neurons, the specialized cells of the brain that process information, stop functioning properly. The disease is named after Dr. Alois Alzheimer, a German doctor who first described the disease in 1906. The incidence of Alzheimer's disease rises sharply with age. While only 2 to 5% of persons aged 65 show signs of Alzheimer's, 25 to 50% of persons aged 85 show symptoms of this disease. There are currently about 4.5 million U.S. citizens living with Alzheimer's Disease.

The first signs of Alzheimer's disease are usually problems with memory. These problems become increasingly frequent and severe, eventually interfering with activities of daily living. Next to show up are persistent impairments in attention and short-term memory. As the disease progresses, memory and attention problems get worse, until, for example, the person begins to forget significant life events and no longer remembers familiar people or objects.

Alzheimer's Disease, although the most common, is only one of a spectrum of age-related conditions that can cause dementia. Other conditions include Vascular Dementia, Frontotemporal Dementia, and Lewy Body Dementia. There is no known cure for any of these conditions.

The major metaphor of my collection, Ice Age, as the title suggests, is the "wintering" of the mind caused by Alzheimer's, the freezing of all the aspects of the mind (and to some extent the body too) that have made us "human." I watched as the cold quickly closed in on my friend and as I said in the poem "Alzheimer's," it was like winter--with only winter to come. I think that by the careful observation of this decline, this rapid loss, we do attain a better sense of what was there beforehand. We see how precarious our ideas of character and identity must be as the ice (the neuritic plaques that gather in the brain and seem to interfere with functioning) starts to gather.

I watched my friend quickly decline from being a vivacious, witty, loveable man to being not much more than a shell in a bed, almost stripped of everything that we would term "human," unable to care for himself in even the basic ways, unable to recognize anyone around him apart from, to some extent, his devoted wife. So where in all this was the Tom I'd loved, the Tom who'd been a mentor and dear friend to me, where had he gone? When I asked a nurse who'd had many years of experience working with Alzheimer's patients, she said it's not like my friend had "gone"; it was more like he was trapped inside himself in a box, with the lid firmly fastened. (This image is strikingly similar to the "Locked In Syndrome" Sherrie described in her paper).

My experience with my friend is one that many in our society share in some ways, as Alzheimer's and Alzheimer's like diseases afflict most families in some way. My involvement with this issue certainly made me step outside my literary world to find what answers I could from other sources. I wondered if Alzheimer's was actually a disease--couldn't it just be "slowing down," or simply "getting old"? My friend the nurse insisted that Alzheimer's is a disease. She said the human brain should preserve its basic functions right up until death.

So who are we then, if a disease like this can strip us of all that we think we are?

This issue became even more significant to me as my father, in his mid-80s, started showing disturbing signs of memory loss and mental dysfunction. My father had always been a very accomplished driver, driving many miles throughout his long working career, memorizing many of the routes around England. We all knew that something was changing when he began to miss turns and sometimes go miles out of his way, much to the consternation of my mother and whoever else was in the car.

In January 2011, I sat with my father while a doctor quizzed him for well over an hour, using standard tests to establish his mental condition. My father, a logical, self-confident man, was often troubled during this interrogation, and struggled with the questions from start to finish, at one point marking the months of the year on a clock face instead of the numbers as the doctor had instructed him to do.

In this short paper and poems I approach the topic of consciousness by looking at what's lost when the ice of Alzheimer's starts to advance. When reading through my original Ice Age file it seemed appropriate that the last page was blank, because I'm describing in the poems a sort of wintering until, ultimately, the snow field of the mind can best be represented by the blank page. In response to the comments of other members of the colloquium, I have included the blank page in this final draft of my paper.

Week after week I have read with great interest the seminar materials. Though I've been challenged by some of the more scientific and philosophical articles, I've managed to keep track of the main ideas. In the seminars, I've learnt a lot from colleagues much more grounded in the fields we've been discussing.

Overall I've been struck by the immense task all the writers have set themselves. I've seen how at best they've been able to provide only one piece of the huge jigsaw of understanding consciousness. For example, it's easy enough for me to grasp the idea of a neuron "firing," and to understand that

this is connected to consciousness, but it's still a long, long way from explaining the world inside my head, inside everyone's head, the "Cartesian Theatre" as Dennett calls it ("Explaining Consciousness," 39), that magical place where, as Dennett says, it all comes together and consciousness "happens." I've gathered a few more pieces of the puzzle, but I still tend to agree with Abrantes, who says that as far as consciousness is concerned, "we still haven't a clue" ("Consciousness and Self in Language," 8). I'd say we have a few clues.

I've been particularly interested in writers who have looked at "exceptions" to our general sense of consciousness. In "What Is It Like to Be a Bat?", Nagel writes about the difficulty of finding terms to explain what he sees as the basic issue of consciousness, the mind/body divide. He shows our limitations too in relating to the subjective experience of others. Of course his prize example is the bat, that marvelous creature using sonar to navigate, sending out shrieks and interpreting the echoes. He argues that we can never understand this because it is alien to us. There are facts we cannot understand because of the structure of our minds. He calls for a new language to express subjective experience. I think that poetry might have a role here.

I was also interested by Tomasello who included the exceptions to "cultural learning" of an autistic child and a "wild child." (Though he greatly simplifies autism to make his point). Ramachandran and Hirstein discuss people with various mental illnesses—including Charles Bonnet Syndrome, Schizophrenia and other delusional states—in order to contrast their states of consciousness with what we might consider, in broad terms, "the norm."

I hope that my poems about my father's Alzheimer's can help to explain what we have in consciousness by showing what we might lose in this or other related conditions. For example, most of us have a pretty clear sense of who we are, our "personalities," if you like, especially as we get older, but who are we when an illness such as Alzheimer's starts stripping personality traits away? We're all familiar with the look of an Alzheimer's patient who seems to have had his personality--you might say his soul--stripped away. He sits there staring at nothing, and we can ask, Is that my father sitting there?

If we imagine consciousness as a symphony, then it seems to me that each of the writers we read and discussed in the colloquium was writing for one instrument. I think there's every need for all disciplines to address these fundamental human issues, but of course all the disciplines will work within their fields. I think poetry has something to offer here in bringing together the different fields of study. Poetry can quite happily borrow from science the image of a neuron firing, or it can borrow from religion the concept of soul, or from philosophy the notion of the self in relation to others, etc., etc. In many ways it might bring together these separate instruments.

I'm also hoping that my poems will add to our discussion the "human element" of lived experience. I have found quite a lot of the writing "dry" and abstract, and I longed for writers to relate their discussions to lives as they are lived.

Perhaps I can add a piece or two to the huge puzzle of consciousness, and in doing so understand a little better my father's struggle against winter's cold.

Alzheimer's

winter
in his face, brain, hands.

winter has come
and winter close behind.

triolet

I just can't explain to my father
why he can't go to his mother's house.
I just can't explain to my father
that he lives in this house
where he's lived for fifty years.
"It's time to go to mother's house
because I live there, of course."
I just can't explain to my father.

Memory

My father's mind has sprung a leak,
that storage tank draining out—
what can be done to plug it?
My father's mind has sprung a leak,
a crack and then another crack,
all his memories leaking out—
my father's mind has sprung a leak,
all his memories leaking out.

losing it

All morning he looks for it,

in closets, under his bed,

in the dresser, on shelves.

He takes down each book,

shakes it, because what he's lost

might come fluttering out.

He asks the woman who seems to know things,

but she doesn't understand what he's looking for,

What? What? What? is all she says.

He needs to check everything again

and again, keep checking,

because how will he know what he's lost

until he finds it

and brings it to the woman who will smile as he says,

Here it is! Here!

The Strong Man

What is a strong man

who has lost his strength?

Is he even a man?

Tie him to the ice raft,

push him out to sea.

The Help

My father's not quite sure who this young girl is

who's with him now that his wife's gone—

and where has she gone?

This girl makes tea for him every morning

when he wakes up, sits with him at breakfast.

They walk to the Post Office to buy a newspaper,

then back at the house he goes back to bed.

He's always so tired these days.

After lunch together

she asks if he'd like to walk to the town

and he says, "Of course, let me get my hat and coat."

He asks again about his wife, when she's coming home.

Hand in hand they walk downtown,

but who is she, who is she?

Winter room

Always cold in my father's room,

however much we turn up the heat.

My stony father sits in his chair,

won't talk to us when we visit him--

he thinks we all betrayed him.

Newspapers untouched from my last visit,

books in the same place,

his clothes neatly folded in drawers.

I start telling him how cold it is outside,

"You're in the right place, Dad!"

I don't know if my words make sense to him

but I hope they bring him a little warmth

in his winter room.

Mid-October

They're working in their garden,

deadheading flowers,

digging up roots.

Soon the first snowflake,

then nothing, nothing

but the cold weight

of snow.

Alzheimer's

Poor Tom's a-cold,

staring out the window

where all that snow is pressing,

pressing pressing

to get in.

The Grey Sea

My father last swam in the sea

when he was eighty-seven:

"Sometimes it was warm, sometimes cold," he says.

My father always loved the sea.

Almost time for his last swim.

One winter night he'll hobble down the beach,

undressing as he goes.

He'll wade out then swim

until his strength fails at last

and he'll curl up to sleep

in the cold grey sea.

Clockmaker

You'd wake at seven, work

all day in your workshop,

taking clocks apart, cleaning them,

fitting them back together,

returning them, ticking healthily,

to their grateful owners.

You loved the clockmaker's life.

But now your hands don't know

what to do,

and you can't quite remember

which bit goes where.

You sit in your chair, staring, staring,

while the family clock

ticks ticks ticks.

Missing

Too often now he cannot find

the word he's looking for.

He searches all around his mind,

can't find that word anywhere.

My father sitting in his chair

searching, searching all around

trying so very hard to find

that word gone missing from his mind.

The Old Gardener

sits in a chair by the window

and looks out on his garden.

Soon enough he'll be nothing

but roots, stems, leaves and flowers.

Old Father Time

How'd you get to be so old, Dad?

I don't think he knows who I am,

but he smiles for me anyway,

calls me by my nephew's name.

That's close enough, I'm not fussy.

I never said this was going to be easy.

How'd you get to be so old, Dad?

How did we all get to be so old?

JANDER RESPONSE:

An important lesson from this and other mental diseases should never be ignored: Consciousness is a complex composite neuronal process, constituents of which can be selectively dysfunctional as defined parts of the brain degenerate.

It will be a challenging job to reconcile this insight with what B.Sax says above about consciousness

DALDORPH RESPONSE TO JANDER:

Thanks, Rudolf. Consciousness as "complex composite neuronal process": I agree. Because this process tends to work well for us, most of the time, we don't often think about its complexity or the wonder of it. If a jet plane has six million parts, how many parts does consciousness have? Perhaps we only think of the complexity of consciousness when it starts to "go wrong," or, as I say, begins to freeze.

NEILL RESPONSE:

I like the poem cycle very much, and your essay raised a lot of questions for me. I'll go ahead and respond by asking those questions.

Towards the end of your essay, you say that poetry might represent a form of the " new language to express subjective experience" that Nagel calls for, and that it helps us relate to the subjective experience of others. I'd like to hear more about how this is specifically so, perhaps in your work especially. You refer often to friendship in the essay (the friend who suffers from Alzheimer's; your "friend, the nurse"), and I wonder whether you are thinking of the "wintering of the mind" or the experience of being "trapped inside a box" principally as a withdrawal from relationships, or a withdrawal of sympathy?

Along those lines, I was fascinated by your comment about the closing blank page that represents the "snow of the mind" at the end of this group of poems. I immediately thought about another 18th-century text that resonates with Ann's discussion of Adam Smith and sympathy: Lawrence Sterne's The Life and Opinions of Tristram Shandy, which is full of typographic eccentricities that include both a blank and a black page. The blank page provides a space on which the reader is invited to draw one of the characters, and the black page (albeit rather tongue in cheek) offers a space for the reader to mourn the death of another. These are places where language breaks down, although not in this case into silence and "winter," but instead into such a pure event of sympathetic feeling that there is no need for words. The narrator says that he hopes to "convey impressions to every other brain which the occurrences themselves excite in my own."

I wonder whether the shifts in voice throughout the poem cycle represent (in contrast, here, to the white page) an attempt to restore sympathetic connection? You move from first, to third, to second person point of view, but these seem less like separate than blended voices. So observing the broken paths of memory and desperate attempts to recover connections and associations seems to

become the experience of the one who witnesses the disease as well as the one who suffers it. Was that idea, or something like it, in your thinking as you wrote?

Another question: you refer at the end of the essay to poetry's "borrowing, not stealing" from science. Could you say more about what you mean by this? Doesn't Eliot say that mature poets steal? But he wasn't talking about science there, was he? What would it mean to steal from science, I wonder?

Finally, I wondered about the "ice age" figure. You seem to bring together the geological, the meteorological and the neurological in this metaphor. Does it link the disintegration of self/identity in the individual brain with the fortunes of humans in deeper time?

DALDORPH RESPONSE TO NEILL:

Thanks, Anna. You have made so many great points.

In answer to your point about poetry and subjective experience, I'd say that what I'm doing in these poems is really an extension of what I try to do in all my poems—to bring the reader into the experience of the poem. In this way I can show, to the best of my ability, the experience of my father, as I can understand it and represent it, and my experience in relation to him. You're right, I do see one significant aspect of "wintering" as withdrawal from relationships. One aspect of the poems is to keep connections between my father and I. What a marvelous description by Sterne of a poet's work: to "convey impressions to every other brain which the occurrences themselves excite in my own."

It's interesting that you mention Tristram Shandy, one of my favorite books--though I hated it at first! Sterne's use of "typographic eccentricities," perfectly in keeping with the playful subversion of the novel, does tie in with the blank page (accidental at first) of my poetry file. I have reinstated the blank page with thanks to you and Nick.

As a side note, a long time ago I wrote a poem about my father based on the characters of Shandy, because I thought the marvelous eccentricities of Sterne's characters resembled my father's own.

Thanks for your insight on shifting voices too. These poems are still in early stages, and if I do bring them together as a complete manuscript I'll have to see whether I think they work with these shifting voices. As I read through them again I hardly noticed these shifts, probably because as you suggest, they blend.

I used the central metaphor of the poems, Ice Age, as referring primarily to the "wintering" of the brain due to Alzheimer's. Of course it has other meanings, some of which might be significant here. In re-reading the poems I thought more about the poem "Strong Man," ending in the image mentioned by Iris--pushing the old man out to sea on an ice raft. Your suggestions about additional layers of meaning are really interesting, and though for the most part they were unintentional, as I think about them now I can see how they might add other dimensions.

SIMMONS RESPONSE:

I also find the use of the blank page interesting and illustrative. I'm inclined to say that consciousness is sensation. If this is right, and I am right about the metaphor, we might think of the blank page as the conscious mind, with words being something like personality traits. Even though the words are gone, there is still a mind. Analogously, even though many or all of a person's traits are gone, there is still a mind and, thus, a person.

DALDORPH RESPONSE TO SIMMONS:

Thanks, Nick. As noted, I have reintroduced the blank page here. And your response highlights some of the key human questions which we discussed all semester: What is it to be human? What are we without words? These are essential human questions which seem to take on a particular urgency in the condition of Alzheimer's.

FISCHER RESPONSE:

I've enjoyed these poems, Brian, and their insights into the difficult experience of Alzheimer's, both from the perspective of the individual and his or her friends and family. I'm particularly struck by the evocation of earlier periods in human history, the way your muscular, blunt lines in "The Strong Man" take the reader back to the time of Northern European seafarers: "Tie him to the ice raft / push him out to sea." I wonder if this is both an abandonment of the strong man as well as a way of honoring him and saying goodbye. "Tie him" seems a command, as does "push him." You invoke the speaker's community here--feeling distressed, even helpless, or maybe fearful of this community member? I wonder if your poem highlights a shared, ritualized consciousness of witnessing the process of disintegration. The image of tying the strong man to the slowly melting ice raft that then drifts into the distance leads me to wonder:in such circumstances is the community still tempted to save itself by isolating the strong man, seeing him off to his death (elsewhere), or with these acts of tying and pushing do we injure the fabric of the community? How does the disintegration of an individual mind relate to the (dis)integration of the community's identity?

Thanks, Brian!

DALDORPH RESPONSE TO FISCHER:

Thanks, Iris. Rereading your comments made me think again about my poem, "Strong Man," and to consider the questions it raises, for which I have no easy answers. Would it be considered a sign of strength in the culture to "honor" the old ones by pushing them out to sea? Of course we have a humane response against this sort of "sacrifice," though we might view the old man's participation in this ritual as the last sign of his strength? (His sacrifice for the good of the community, in that he

had become a burden). Of course I'm not advocating this, but it was one thing that came to mind in writing these poems, tied in, of course, with the cold imagery of the poems and the contemplation of end of life issues.

In rereading the poems I noticed too that there's a similar image at the end of "The Grey Sea," with my father swimming out to sea. Of course the image of the soul of the dead going out to sea is a common one across cultures. I think of the ceremony I witnessed in Hiroshima of paper boats with candles representing the souls of the dead floating out to sea.

TUCKER RESPONSE:

Brian, I loved these poems. After I took them in, and breathed a bit, I remembered an event I attended at the NYPL ADA celebration a couple of summers ago. One of the speakers was Gary Glazner, who founded the Alzheimer's Poetry Project. When I was trying to find his name on the internet, I actually found the event I attended. Gary Glazner is the first speaker. His sound is bad for a few seconds, then it pops out fine, and he shares his technique for teaching poetry among Alzheimer's patients. I paste link here. http://www.nypl.org/audiovideo/ada-celebrating-arts-film-poetry-dance-discussion I wondered if there is anything that Gary says about poetry and Alzheimer's that might be interesting to you?

DALDORPH RESPONSE TO TUCKER:

Sherrie, thanks, I followed the link you sent me, to Gary Glazner, director of the Alzheimer's Poetry Project, editor of an anthology of poems from that project: Sparking Memories. I watched the presentation by Glazner at the New York Public Library where he spoke about his work with Alzheimer's patients, and demonstrated some of his techniques, including call-and-response, in which he called out a line of poetry and asked the audience to repeat it. He cited research to suggest that techniques like this can lead to a reduction in stress for patients with dementia. He also gave a demonstration of one of his classroom techniques with patients. He asked them to remember their first kiss, and wrote a poem from their responses.

Of course I found this very interesting, another attempt to make a connection between Alzheimer's and poetry. I'm sure it would be beneficial to patients, in varying degrees. Actually it made me think of something a little different, the research showing that mental stimulation is a good way of reducing the onset of Alzheimer's: Use it or lose it. My mother, aged 90, still works on difficult cryptic crosswords every day, and loves game shows on TV. Her mind's still sharp though her short-term memory is quite poor.

It also made me think of simple interaction with an Alzheimer's patient. I know that my father fears isolation, abandonment--a common fear of the elderly. He beams with pleasure when he participates in conversation and people understand him. So I sit with him and listen to him, fill in

the blanks of his stories, laugh with him, and I suspect that this might be more therapeutic for him than a month's supply of prescription pills.

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*The following symbols are used throughout the text and notes:

Numbers outside the brackets refer to the specific, conventionally numbered notebooks and the number inside the brackets refers to the section number within the notebook.

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