Knowing Ourselves as Embodied, Embedded and Relationally Extended

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Position Paper for a Plenary Dialogue on “Knowing Ourselves” for
The 62nd Annual Conference of the Institute on Religion in an Age of Science
“How Can We Know? Co-creating Knowledge in Perilous Times”
June 25 – July 2, 2016, Star Island, New Hampshire, USA

Abstract
This essay explores the nature of the “self” that we seek to know. It outlines a view of ourselves as persons that departs from the dominant Cartesian model – that is, the idea that there is within us a soul, or self, or mind that is our hidden, inner, and real self. The alternate idea that is explored comes from recent moves in the philosophy of mind that are more consistent with modern neuroscience. This view emphasizes the bodily, active, contextual, relational, often simulated, and sometimes extended nature of the selves that we are. Finally, the impact of this alternate view on the theology (particularly theological anthropology) of the author is described.

Dialogue Questions
• If we are not separate minds hidden within our body, how is the value of “mindfulness” to be understood?
• If we are material bodies (and not immaterial minds dwelling within bodies), what is the nature of our self control? Does free will have any meaning?
• As an embodied, embedded, and often extended person, what does it mean to be religious?

Recommended Readings


Nancey Murphy, *Bodies and Souls, or Spirited Bodies?* (Cambridge: Cambridge University, 2006).


**Biosketch**

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I. Introduction

Inscribed on the Temple of Apollo at Delphi in ancient Greece was the maxim, “Know thyself”. Plato uses this maxim, voiced by Socrates in the dialogues of *Phaedrus*, to consider the problem of time wasted in pursuit of mythology and other obscure topics compared to the importance of knowing oneself. Knowing oneself was considered a critical door into the knowledge of others and the social world — that is, a door to wisdom.

But how do we know ourselves? More importantly, what is it that we know when we know ourselves? What are “the self” that we seek to know? Is self-knowledge knowledge of an inner, private “self”, “soul” or “mind”, known only by looking inward (introspection)? Is there a “true self” inside that often escapes expression in our actions? What part does the body play in what we know about ourselves … and what part the environment, or our social contexts?
II. The Cartesian Self – “I think, therefore I am.”

Early modern philosopher René Descartes provided the clearest and perhaps most radical assertion of the inner nature of the self, and the separation of the body from that self (referred to as the “soul” or “mind”). Descartes’ foundational bit of knowledge from which all else could be derived was the subjective experience of his own mind – “I think, therefore I am.” He knew himself to exist as a self because of the unmistakable experience of his own thought. Since he could not imagine that rational thought was something that could be done by “meat” (a body, physiology), thinking had do be substantially different and separate from the functions of his body and its actions in the world. Thinking must be a non-material process distinct from the body (i.e., body-mind or body-soul dualism). Thus, for Descartes, thinking was accomplished by a non-material mind which was hidden inside, private, and available only through introspection. The actions of the body were accomplished in a secondary manner by interaction between the rational non-material mind and the irrational body/brain via the pineal gland. Descartes’ compromise was to say things are mostly mechanical except for reflexive thought (self-consciousness), voluntary actions, and language (Murphy, 2006).

The Cartesian view expands on and solidifies what has been described as the “turn inward” of St. Augustine many centuries earlier. For Augustine, to know oneself was for an inner self to explore (literally move about within) the inner non-material world of the mind. The self to be known was inside, private, and self-sufficiently independent of the body and the environment (at least ideally). For Augustine, to know about oneself was to explore something inside and disembodied (Cary, 2000).

Despite near universal rejection of such mind/body dualism in modern cognitive and neuroscience, the implications of the Augustinian/Cartesian view of human nature persist. Modern neuroscience has been characterized as Cartesian Materialism by philosopher Daniel Dennett (Dennett, 1991). Dennett argues that while most scientists would now agree that thinking is a functional property of neural processes, the brain is nevertheless still understood as a processor of abstract information that is functionally separated from the rest of the body. Thus, the mind-body dualism of the Augustinian/Cartesian view has been replaced by brain-body dualism – that is, Cartesian Materialism. The body and the world interact with the inner brain through sensory inputs and motor outputs that require processes of encoding into, and decoding out of, abstract representations that are presumed to have shed their sensory-motor embodiment. In effect, the brain is viewed as a computer to which a body as been attached. In much the same manner as neuroscience, modern cognitive science can also be characterized as Cartesian Materialism. The Information Processing Model that has been predominant in cognitive psychology for the last 50 years understands the brain to be a computer, while the body merely provides input and output buses for disembodied computational processes within the brain. (e.g., Sternberg, 1977).

Thus, to know one’s self in the Cartesian worldview (whether the earlier Augustinian/ Cartesian world of body-mind dualism, or the more modern world of Cartesian materialism) is to attend to what is going on in the private, inner spaces of the mind (introspection, or experimentally in methods such as functional magnetic resonance imaging). What is thus to be known is a cloud
of abstract mental representations (either an ephemeral ghostly cloud, or a modern computational cloud) that are only distantly connected to the body, one’s own actions in the world, or the outer world one inhabits.

III. The Embodied Self – “I act, therefore I am.”

Neuroscience makes it fairly clear (at least very highly plausible) that mental activity is a functional outcome of the physiological activity in the brain. This is one meaning of the idea of “embodied” – that is, that the self is not a non-material spirit, but is somehow an outcome of the physical process of the brain. However, as we have seen, this form of embodiment can be merely Cartesian materialism, and therefore the self to be known is still hidden inside and only minimally connected to the body and its interactions with the world.

However, the idea of Embodied Cognition goes further in arguing that processes of thinking involve the body (Gibbs, 2005). This view argues that what we refer to as our mind is grounded in interactive brain-body processes. The constituents of thought and mind are rooted in memories of motor activity and sensory feedback. Importantly for the richness and intelligence of human thinking, this bodily experience includes speech interactions with other persons.

A number of philosophers of mind have argued that even abstract concepts that would seem to have no particular embodied representation are metaphorical extensions of the bodily experiences associated with action (or at least begin that way). For example, the abstract concept of ‘time’ is comprehended using metaphors based on movement – time passes, slows down or drags, time rushes by or flies, events are in the past (behind) or in the future (in front), etc. A metaphorical link to movement helps us grasp the abstract idea of time (Lakoff and Johnson, 1999; Johnson, 2007).

The implications of embodied cognition for our views of our selves are interesting. For example, if I have a different body, I would have a different mind, and a differently constituted self. Consider this – if you had the body of an elephant but the same brain you have, you would have a very different mind ... because mind is built from bodily experiences and interactions with the world. You would have built your mind through very different ways of interacting with the world – for example, with a trunk rather than hands.

If mind is embodied, so also is what we imagine to be our self. Embodied cognition suggests that the self to be known is built on the actions of the body in the world. It involves a record our acting in the world, and an understanding of the possibilities for further action. I am the body that has this particular history being an active agent and this particular realm of possibilities for future action.

IV. The Simulated Self – “I simulate, therefore I am.”

If our minds (our selves) are formed around acting in the world, then thinking must be somehow implicated in action. Most theorists who endorse an embodied view of mind consider thinking to a process of sensory –motor simulation (or at least to strongly entail such simulation) (Barsalou, 2008). We think by simulating actions and their sensory consequences within hypothetical contexts. Even when our bodies are quite, perhaps as we sit daydreaming in an easy chair, we are simulating (imagining) embodied actions. Simulated acting accomplishes
thought, but so also does simulated sensory experience – not only recalling the visual or auditory or tactile nature of things experienced in the past, but also experiencing the likely sensory feedback from our imagined actions. Much of the simulating that we label as thought involves the simulation of speech interactions. We simulate conversations with specific others, vague others, or perhaps with ourselves. Freud famously said, "Thought is action in rehearsal."

The phenomenon of mirror neurons makes it clear that we can run sensory-motor programs off-line, and that it is this sort of simulation that constitutes our understanding of the world – particularly the social world. Mirror neurons are neurons (primarily in motor systems) that respond in the same way while viewing the activity of another individual as they do when the observer is doing the same motor activity (Keysers & Gazzola, 2006). Understanding the actions of another person appears to require modeling the activity being observed within one’s own motor control systems. But the modeling or mirroring does not become expressed in the bodily actions of the observer (although imitation of the actions may be facilitated). Thus, knowing something about the world (in this case, the meaning and intentions of the behavior of other persons) is accomplished by motor simulation. Besides action comprehension, neural mirroring of sensory-motor experience (simulating) has been used to account for important high-level cognitive and social capacities, such as speech perception, a theory of mind, and empathy. The ability to experience empathy by mirroring the emotional responses of others is particularly salient for human relationality, and for knowing one self through mirroring others.

Thus, in the world of Cartesian materialism, thinking is computer-like process of manipulating abstract representations of the world – that is, information processing. In the world of embodied cognition, thinking and knowing occur through simulation, including the simulation of speech. To know one self is to know a knower that knows by simulated action.

V. The Situated Self – “I interact, therefore I am.”

The theory of Embodied Cognition also entails what is know as Situated Cognition. (Robbins & Aydede, 2008) This idea asserts that action, and therefore thinking, does not occur outside of a situation. Mental activity is always interactive with some situational context – immediately present or imagined. Thinking is thus contextualized action simulation.

As I am writing this essay, I have a lot of thoughts going on in my head in the nature of possible sentences. If I stop and consider what I am doing, I am simulating in my head saying these sentences to an audience … you, my reader (although you are at the moment a rather vague group). To think about what to write in this essay is to think about (simulate) things I might say to you. And the process of typing the words is accompanied by an almost audible experience of my saying the words that I am typing to some vague audience.

Thus, the self that I am to know is not simply an agent that acts alone within a void, but rather an agent that interacts with specific sorts of contexts. What is more, the situations I can imagine and that contextualize my thoughts are derived from those that I have directly experienced at some prior time. It is not possible to consider myself – to know myself – as an isolated person extracted from particular contexts of my personal history and present context. This leads to an important additional point: the agent that I must come to know interacts somewhat differently within different contexts. I am a somewhat different person in context X.
than I am in context Y. There are certain similarities, of course, but the agent that I am is a contextually nested agent, and there are a variety of forms of my contextual nestings.

Although most people are pretty robustly and recognizably themselves across life contexts, nevertheless we all experience ourselves as acting and feeling differently in one context versus another (work, home, out to dinner with friends, etc.) There parts of us that only emerge within a particular unique context, aspects dormant in these contexts, and parts that are present across most all contexts and situations. Even within my particular academic world, there are parts of me that are elicited within the context of the classroom that are not apparent in faculty meetings, and vice-versa. So, to know myself I must be cognizant of the varieties of me elicited in my interactions with the various contexts of my life.

VI. The Relational Self – “I relate to others, therefore I am.”

It is obvious that the most important contexts in which human persons are situated are social. As the Russian psychologist Lev Vygotsky put it, “we become ourselves through others” (Vygotsky, 1987). My existence as a person has been deeply formed by my history of social interactions. Therefore, to know myself is to know my own history of interactions with, and feedback from, other persons. What I know of myself if what I have experienced about myself in interactions with other persons – including the feedback inherent in how other experience me within the reciprocity of ongoing interpersonal interactions.

Philosopher Charles Taylor proposes the idea that humans are fundamentally dialogic selves – persons set within a “web of interlocution.” The idea of dialogue and interlocution for Taylor is meant to encompass a broad range of human interactions beyond language-based conversations. Thus, our existence as selves is fundamentally relational – that is, dialogic (Taylor, 1989).

Modern relational psychodynamics puts a great deal of focus on early attachment relationships as critical to the development of the self. Early experiences of the qualities of attachment with parents and other caregivers create within each person a basic model for the expected nature of all human relations and, therefore, an important basis for the development our selves. If these early relationships are secure, we are endowed with a self that is set within a relational model suggesting that other persons will be basically trustworthy. If early relationships are chaotic, personhood becomes embedded within a relational model presuming that the responses of other persons are likely to be similarly chaotic and not trustworthy (Karen, 1989).

Thus, the self to be known is inherently relational. It is a self that must be know as it is situated in community relationships, reflection, and feedback, and thus always embedded in some form of dialogic interlocution. A self is a body whose actions are embedded in, and contextualized, by a community.

VII. The Extended Self – “I incorporate, therefore I am.”

The concepts of a situated and relational self might cause us to imagine a discreetly embodied agent that is nevertheless tightly enmeshed in contextual and relational extra-personal situations (Rowlands, 2010; Teske, 2013). In this view, there is still the inherent idea that the self/person is bounded by the skin, although nevertheless a person that is deeply formed by the contexts within which he or she interacts. However, there is speculation within philosophy of
mind that a person, as locus of mental processing and as an agent in the world, may not be entirely encompassed within the skin. Extended Cognition suggests that what qualifies as the mind includes (at different times and in various ways) cognitive coupling with external artifacts or other persons. These outside-the-body couplings become a real part of the current process of thinking or problem-solving.

There is a simple hypothetical example of the extension of cognition that is often used in discussions of this proposal. In this illustration, Otto’s memory is failing significantly due to Alzheimer’s disease. So, Otto uses a notebook to write down things he needs to remember—addresses and directions, shopping lists, appointments, jobs around the house, people’s names, etc.—and uses this to enhance his significantly weakened memory. It is argued by those who advocate for extended cognition that Otto’s notebook comes to operate as a part of his cognitive systems in such a way that its contributions to mental processing cannot be readily distinguished from his brain-based memory. What is more, Otto credits items in the notebook as real records of things-remembered in the same way he credits (when he can) things emerging from his brain-based memory systems. Otto’s weak memory has been extended by incorporating something outside of his body (Clark & Chalmers, 1998).

It is not that all aspects of the current environment are objects of extended mental processes. Rather, at any particular moment, and depending on the current mental problem to be solved, different aspects of the physical or social environment may become enmeshed in ongoing feedback interactions with the brain and body such as together to constitute an extended cognitive processing system. Thus, activity that we would label as “intelligent” does not occur exclusively in the brain/body of the person in question, but includes also the interactive coupling between the person and temporarily incorporated aspects of the external world. Within such a temporarily assembled system, one cannot readily identify the boundaries of the mind at work. The cognitive processes are not solely within the brain and body, but rather “mind” encompasses the external artifacts. Extension of the mind is even more potent when what is engaged outside the body in another person. For example, during a problem-solving interaction involving two persons, both individuals become enmeshed in an ongoing reciprocal interaction such that, as solutions emerge, there is no clear demarcation between the mental processes of the two persons that would allow location of the solution to a process entirely within one brain/mind. The mind at work is extended beyond either participant into the interactive space.

Thus, the self to be known may at times need to include other persons or artifacts in the external world. Not only are we relational and situated, but our minds at times incorporate what is emergent from our interactions with other. These emergent properties of us will be different in interactions with different persons in different contexts. The self to be known is not always encapsulated, but from time-to-time extended beyond the body.

VIII. My Religious Self – “We sing therefore I am.”

What I have been saying so far about the nature of the self-to-be-known comes mostly from philosophy of mind and to some degree for human cognitive and neuroscience. But what is to be said of the religious self. What about religion in and age of such science ... and an age of modern philosophy of mind? (similar issues are discussed in Teske, 2013)
In pursuing this question I will revert to being personal. Thinking about the nature of persons and minds as described above has caused a shift in my understanding of my own religious life and my theological anthropology. A description of the changes in my personal understandings is probably the best way to pursue the question of the relevance of the view of human nature I have presented for a religious understanding of persons. For all of my life I have been an evangelical Christian of the Wesleyan Holiness variety. This is the tradition of my family back several generations and I am still deeply involved with such a church (although most peoples stereotype of “evangelical” would not fit well our highly educated and fairly liberal congregation). The point of this for the purposes of this discussion is that I grew up with and have had throughout most of my life a strongly Cartesian understanding of the nature of Christian faith. By this I mean that the critical issue for faith was the state and future of my soul, explicitly understood as an inner non-material self. It is the soul that is saved or not, and spiritual or not. I presume that this view is fairly ubiquitous in the Christian world. One place to look is in the text of Christian hymns. The consequences of this view of the soul (or self) is that everything that is important about me as a person is, as described above in Section II, private, hidden inside, and thus exclusively individual. Christian faith has been about me and my soul ... about things private, hidden, secret, and only secondarily related to my behavior. What I did or did not do was primarily about what could contaminate or corrupt my soul, not so much about the impact of my actions on the others. Even things like compassion, good works, and the virtues of living were only important insofar as they could affect my inner soul. Thus, although there were ostensibly helpful resources – worship services, teaching, private prayer – I understood myself to be largely on my own with respect to being Christian or spiritual. But for me a lot changed in beginning to understand persons (and myself) as embodied, situated, and extended. If I am a body, and not a soul hidden inside of my body, then a life of introspection regarding the spirituality of my soul is no longer on the agenda. Rather I have to understand and know myself as an actor in the world. What is the nature of my actions – what motivates them and what are their effects in the world. An if I am an actor, I must also consider the contexts in which my actions take place. How do I tend to act in certain contexts? What are the effects of my actions on these contexts? How does feedback from these contexts shapes me (my embodied self) as an agent. Most recently I have begun to think about how spirituality is not the sort of property that can be attributable to me, but is something that extends into the community with which I worship and live out a Christian life. The whole Christian enterprise is no longer inner and individual, but is active, lived, and shared. The best metaphor I can think of for such a life is congregational singing. We all do it together and to the degree the adjectives “spiritual” or “Christian” or “religious” could be attached to the singing would be due to the nature of the shared endeavor. Such properties cannot be attributed to me or to anyone else present. These are emergent properties of the extension and connection of each to the other. These words would describe us, not me.

IX. Conclusions:

This essay has outlined some aspects of the “self” that are likely to be ignored when thinking about and trying to know ourselves. The dominant Cartesian model reinforces the idea that
there is within us a soul, or self, or mind that is our hidden, inner, real self. Alternatively, I have emphasized the bodily, active, contextual, relational, often simulated, and sometimes extended nature of the selves that we are, and that we hope to know.
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