

Lay and Scientific Grounds for a Psychology of the Heart

by Eric L. Johnson

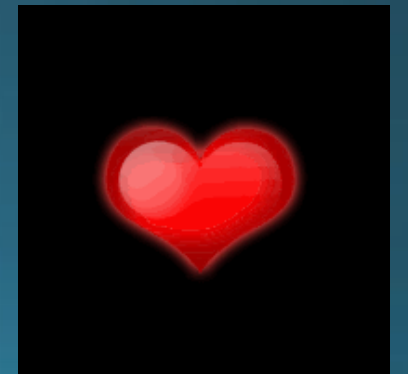
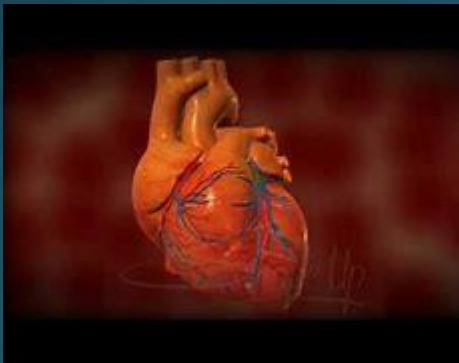
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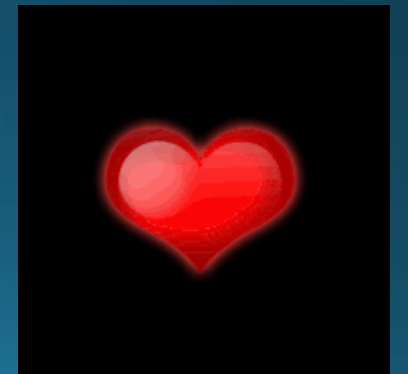
As we recall, the term “heart” is used in three main ways in English

- To refer to a physical organ that is continuously keeping humans (and most animals) alive by pumping blood through our circulatory system
- The *psychological* heart, a metonymy, is also located in the chest, that refers to an evaluative “organ” that interprets, guides, and unifies human life
- As a metaphor, pertaining to centrality or depth, as in, “the *heart* of the argument”
 - The second use is an example of common sense or lay psychology, since it refers to a psychological construct, similar to, but distinct from the “mind”



Why has the second use of “heart,” as a term of lay psychology, not been a focus of *modern* psychology, whereas the “mind” has been thoroughly investigated?

- To begin with, the available neurological evidence has not drawn much attention to the region of the physical heart
- Modern psychology’s discoveries of brain function have consistently demonstrated that the mind’s activities are located “within the skull,” and most of what we have learned about the psychological functions of the heart, like the emotions, point in the same direction, *to the brain*, particularly the limbic system (the amygdala, thalamus, and hypothalamus), and more recently, to emotional processing that occurs in the prefrontal and cingulate cortices, but nowhere near the physical heart
- As a result, the psych-heart is considered merely metaphorical—a pervasive literary and cultural symbol—but nothing worthy of scientific attention

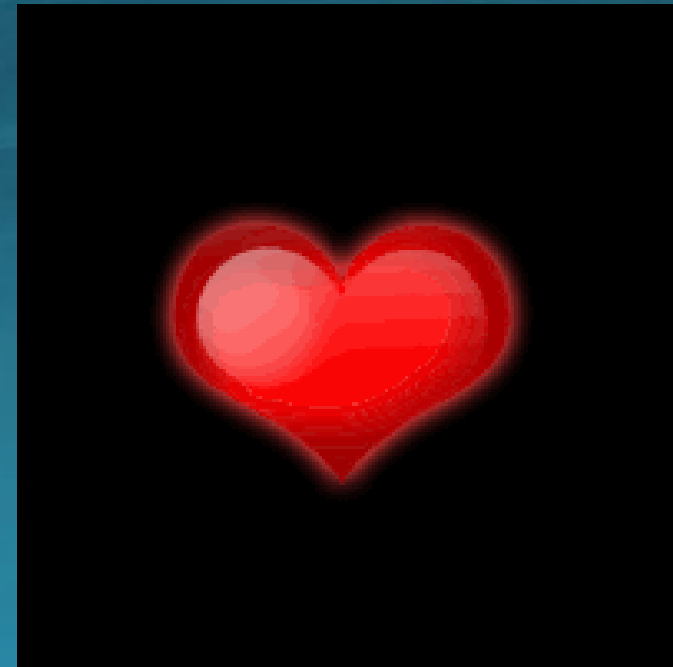


Complicating matters further, the West has long had a bias towards the mind, at least as far as back as the ancient Greeks, and this bias increased during the Middle Ages and then exploded in the Modern era

- Inspired by the successes of the natural sciences, modern philosophy sought to put all human knowledge on a sure foundation, and it looked to the mind, consciousness, and certain knowledge to do so (e.g., Descartes, Locke, Kant, Mill)
- Aspects of human subjectivity commonly associated with the heart, for example, the emotions and desires, were generally considered to be *obstacles* to knowledge and truth—indeed, they have often been considered *irrational* in the West—so their value to epistemology and the goals of science was far from clear



- Consequently, the role of the brain in psychological functioning and the modern Western focus on the mind has made the everyday use of the term “heart” for many psychological dynamics seem quaint and scientifically naive, fundamentally mistaken and untrustworthy.
- So, it is no surprise that modern psychology has shown little interest in investigating the psychological heart.



Shaped by modern philosophy and similarly impressed with the natural sciences, modern psychology likewise strongly favored the mind:

The goal of psychology is to discover “the facts of consciousness [and] its combinations and relations....” Wilhelm Wundt (1912). *An Introduction to Psychology*.

“Psychology is the science of mental life.” William James (1890). *The Principles of Psychology*, p. 1

“...the science of mental facts or of mind.” E. L. Thorndike (1905). *Elements of Psychology*

- Behaviorism, of course, altered the course of modern psychology for a few decades, but then the “Cognitive Revolution” re-legitimized a mental agenda in the 1950’s and 1960’s. While modern psychology has shown a growing interest in the emotions since then, there’s been no comparable “*Carditive* Revolution” in modern psychology
- David Myers & C. Nathan DeWall (2020), in their popular intro text define modern psychology as “the science of behavior and mental processes.” *Psychology* (13th ed.)



Nevertheless, I would like to offer a number of reasons why Western culture should reconsider the importance of the psych-heart to human life

Cross-cultural Reasons

- Reference to the psych-heart goes back to ancient cultures around the world, and is still used in widely different cultures today, *even in the West with its strong cognitive bias*
- The heart is one of the four most important organs in Chinese medicine, leading to many psychological influences.
- As a result, the Mandarin word for the physical heart shows up in many ideographs in written Mandarin that strongly suggest the importance of the psychological heart in Chinese lay psychology.

Physiological Reasons for the Heart

- Study of the human nervous system has understandably focused on the brain. But the peripheral nervous system, particularly the nerves located in the torso (including 40,000 neurons around the heart), play a big role in human experience, including human emotions, stress, and trauma
 - Neurocardiology has documented the close relation between stress and heart attacks. Researchers have found that human wellbeing is correlated to heart function. There is, in fact, a significant relation between the physical and psychological heart
 - Pain in the heart
 - Heartache syndrome

Cognitive Linguistics

- Over the past 40 years, cognitive linguists (e.g., Lakoff & Johnson, 1980) have documented the role that embodied metaphors, learned in childhood, play in human life and communication.
 - Jean Piaget, one of the greatest developmental psychologists of the 20th century recognized that children in the first two years of life learned about the world through their senses and movement, so he labeled the first stage of cognitive development the “sensorimotor period.”
 - As children grow older, they enter into a language system that has been working with embodied experience for millennia, where single words and other language forms have been used to label and come to constitute human life
 - As mentioned above, the psych-heart is a metonymy. This is a figure of speech in which a part of a semantic system is used to refer to the whole. For example, in the sentence, “The White House released a document today...” White House refers to the executive branch of the United States government.
 - Body parts are often used as metonymies, as we see with “heart.”
 - Feelings occur around the heart and throughout the chest in times of intense emotion that are picked up by the bodily sense called “interoception.”
 - We see here the interplay between embodied experience and language

Idioms are fixed expressions in a language that convey specific meaning in picturesque ways, often relying on figurative language. Many idioms have emerged in English that refer to the psych-heart:

“I say this *from the bottom of my heart*,”

“*Take heart*, my friend!”

“You should *follow your heart*”

“I had a *change of heart*”

“She has a *heart of gold*”

“He *lost heart* and gave up his quest to circle the globe”

“He *wears his heart on his sleeve*”

“She has her *heart set* on going to college”

“We needed to have a *heart-to-heart* talk”

“He’s just *heartbroken*”

We have already noted that the psychological heart is an embodied metaphor.

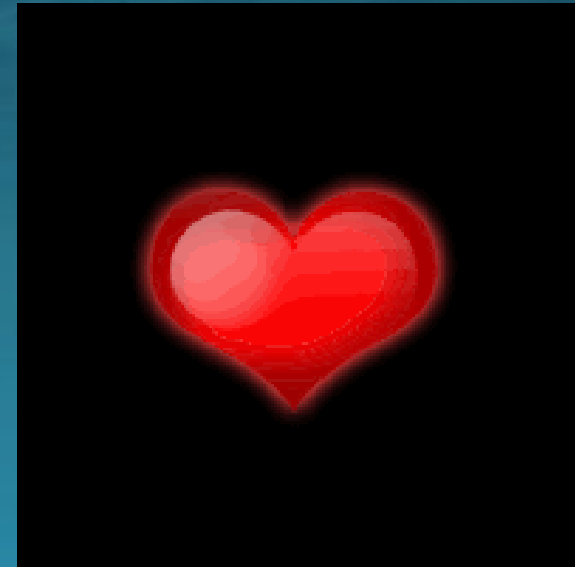
- On the one hand, the psych heart takes the physical heart, and a number of relevant associations, as its source domain. On the other hand, however, the psych heart itself communicates depth, so it serves as a source domain for communication meaning in countless other target domains, as suggested by the English idioms we have looked at
- From whence did this metaphoric usage derive? Research is needed, but we can at least speculate for now that children from birth are experiencing feelings and emotions in their bodies in the course of their relationships and activities, and they are developing a body awareness that can distinguish between what happens in their extremities and what goes on in their torso or the center of their bodies. It seems possible that such experiences could provide the embodied basis for the distinction between superficial and deep, which in turn, could signify significance and meaningfulness.
- Neuropsychology and neurocardiology have already begun to contribute to our understanding of the neural basis of these felt experiences throughout the body, especially in the chest, for example, studies in heart-rate variability and the role of the vagal nerve in emotional responses to stress and meditation

Lay Psychology

- Lay psychology is an approach to psychology that goes back at least to the founder of modern psychology, Wilhelm Wundt, and his later investigations of “higher mental processes” evident in the artifacts and texts of various cultures which contain and express them. He gave this kind of research the name, *Fölkerpsychologie* (translated cultural or folk psychology).
- Decades later, in one of the first classics of American social psychology, Fritz Heider (1958)—himself trained in Germany, the land of Wundt—wrote of a common sense psychology, the psychology of everyday human life and experience, and he argued that the science of psychology ought to devote at least some of its energy to investigating humanity from this standpoint. Heider believed that basing scientific psychology on common sense psychology guaranteed its validity.
- Since then, many scientific studies have been conducted on the psychology of everyday people, looking at such phenomena as the development of a theory of mind in early childhood, attributions, self-representations, and many others.

The psychological construct of the heart is an excellent example of a “common sense” or “lay” psychology

- The linguistic equivalent of “heart” can be found in cultures all over the world and throughout human history.
- As we have seen, English-speaking people continue to use the term “heart” to refer to a wide variety of psychological activities, suggesting it could be a fairly complex concept.



Direct Reference Theory

Before this theory was developed by Saul Kripke and Hilary Putman in the 60's, the descriptive theory of meaning was assumed by most 20th century philosophers. The descriptive theory was influenced by modern science, and it suggested that we know the meaning of something if we can describe it according to its primary features as understood by science. One of the problems of the descriptive theory, though, is that it locates meaning within one's mind (another example of the Western bias to mentalism!). But surely the meaning of something is better understood to be located within the thing itself.

However, Kripke and Putman noted that people can know many "natural kinds" of things without being able to give a complete scientific description. For example, people have known what water is, long before scientists determined it was H₂O. Their theory of direct reference suggests that we can know what water is by referring to it directly, with an indexical, "Water is *that*" (while pointing to some water).

- Linda Zagzebski has suggested this theory of meaning was nothing short of revolutionary because it located meaning in the thing itself, while construing language, at least in part, as the way humans identify things. Putnam refers to this theory as “semantic externalism,” indicating that meaning resides in things, and not in the mind. Mashing together Putnam and Kripke’s similar models, they both believed that the designation of a natural kind (like water) is established by a language community’s causal chain of communication going back to its first use.
- In her explanation of the theory, Zagzebski distinguishes between the “superficial features” of a natural kind, the features by which lay people accurately identify it (e.g., water is a clear, colorless liquid that quenches our thirst) and its “deep features” that are the result of natural science research (e.g., we *now* know that water is composed of H₂O). Such a distinction recognizes the significant differences there are between lay and scientific understandings of a natural kind, while respecting the validity of the lay understanding the ontological basis of their identical referent.

Direct Reference and Human Kinds

We are interested, however, in the psych-heart; and it refers to a “human kind,” rather than a natural kind. According to Hacking (1995), human kinds of things include persons, actions, beliefs, and cultural artifacts.

Furthermore, they are distinct from natural kinds, in a number of ways. First, they are dependent on what Searle calls “collective intentionality.” That is, they exist because humans realize and call them into existence through language. Second, human understanding and language use exerts effects on human kinds, further modifying them, and in turn are themselves affected by them, in contrast to natural kinds which are “indifferent” to how humans understand and refer to them (except indirectly). Martin, Sugarman, & Thompson (2003) refer to human kinds as *psychological* kinds.

- The psych-heart, then, is the particular psychological kind identified when humans use the word “heart” to refer to *that* psychological entity where emotions, desires, aspirations, and virtues are experienced. Its properties include being a “place” within the body where certain psychological activities and processes occur, specifically those that are “deep,” “central,” “meaningful,” and for some people, “of ultimate significance.”
- However, human or psychological kinds differ from natural kinds in that in the case of the latter, the lay referent and the scientific referent are identical, whereas in the case of the former, that is not necessarily the case.
- In the present case, the psychological kind, “heart,” is not identical to the physical heart, but as has already been suggested, it is quasi-metaphorical.
- However, complicating the continuity-relation between the lay psychological referent and the scientific referent is that the latter pertains to activity in the head, within the brain, rather than in the chest.

- As we noted, cognitive linguistics has convincingly demonstrated that metaphor is basic to human psychology and experience. So, if scientific psychology aims at being a comprehensively accurate description, then it cannot exclude reference to the dynamics of the lay psychology referent, or it will risk being deficient in its explanatory power and at the same time actually distorting the psychological experience. Therefore, the task of a scientific psychology of the heart is to explain its true anatomical and physiological properties that have led to the lay psychology referent “heart,” *without either explaining it away or undermining the psychological heart’s own intrinsic meaning.*

A Phenomenology of the Heart

(This section will be more developed by the time of our preconference workshop.)

- Merleau-Ponty thought that the body was foundational for human life
- Michel Henry, a leading phenomenologist in the last half of the 20th century, argued that humans experience affectivity long before they can think rationally.
- Paul Ricoeur suggested the heart is essential to human life
- Stephen Strasser, a German philosopher, developed a model for understanding the maturation of human emotion

The Importance of Emotions

(This section will be more developed by the time of our preconference workshop)

- Emotions as signs
 - Signs are meaningful; they point to something else
 - They are bivalent: positive emotions point to perceived good and negative emotions point to perceived bad
- Emotions as bearers of differential value
 - In infancy emotions correspond to values of pleasure and pain (hedonistic)
 - In childhood emotions come to correspond to the useful and useless (the instrumental)
 - In adolescence emotions comes to correspond to moral good and evil (the ethical)
 - In adulthood emotions may also come to correspond to the sacred and the sacrilegious (the spiritual)
- Emotions as the basis of morality
- Emotions as the source of the virtues and moral character
- Religious affections

Wisdom, Intuition, and Tacit Knowing

(This section will be more developed by the time of our preconference workshop)

- “The heart has reasons that reason doesn’t know.” Pascal, *Pensees*
- Wisdom
- Intuition
- Tacit Knowing

To what does the “heart” refer, in contrast to the mind?

- In general, it refers to *subjective knowledge and understanding*, in contrast to our objective knowledge and understanding (and *both* are ontologically real)
- *Emotions* and episodic memories charged with emotion
- **Core beliefs**, including our worldview beliefs and our beliefs about ourself
- Makes us aware of our *values*, including our highest values—what do we care about most?, what makes a life worthwhile?—and their importance in life
- Connects us with others and the quality of our relationship with them; reminds us of our *loves*, including when they are disordered
- It is sometimes used to refer to the *unconscious*

To what does the “heart” refer, in contrast to the mind?

- Another valuable use is the *wisdom* expressed in *skilled intuition*
- Provides a *holistic orientation towards life* and activates an awareness of “the big picture” of the universe from one’s perspective
- The place where are *virtues* are formed and felt;
- Activates our teleological orientation: the *goal towards which we are becoming*
- Reminds us what is *ultimate* in our lives, that which is our *God*
- It is therefore the site of the *imago Dei*.
- It is where we *worship God*
- And it is where the *Holy Spirit indwells believers* (Ro 5:8?)

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So, we need to ask, is it possible that modernity's bias towards the mind and a focus on the brain has caused modern psychology to miss something very important here

- Over the last 100 years, criticism of a psychology based largely on natural science methods has emerged from many different quarters, concerned that they may lead to a truncated and reductionist view of human beings.
- Such critics have argued that we cannot assume that methods that work well for the natural world are entirely adequate for the human sciences, and that we need to be open to investigating aspects of human beings that distinguish them from animals using other methods
- The philosopher Charles Taylor (1989) believes that the study of human beings needs to aim at the *Best Account Available*, that which most nearly conforms to human life as actually lived
- This is doubly important because human beings are uniquely constituted by their beliefs about themselves, so a systematically distorted psychology could unwittingly lead to the impoverishment of human life and the malformation of human beings in the name of science