

CHAPTER ONE

Philosophy in the Flesh

The Embodied Mind and Its Challenge to Western Thought

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Basic Books

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Introduction: Who Are We?

How Cognitive Science Reopens Central Philosophical Questions

The mind is inherently embodied.

Thought is mostly unconscious.

Abstract concepts are largely metaphorical.

These are three major findings of cognitive science. More than two millennia of a priori philosophical speculation about these aspects of reason are over. Because of these discoveries, philosophy can never be the same again.

When taken together and considered in detail, these three findings from the science of the mind are inconsistent with central parts of Western philosophy. They require a thorough rethinking of the most popular current approaches, namely, Anglo-American analytic philosophy and postmodernist philosophy.

This book asks: What would happen if we started with these empirical discoveries about the nature of mind and constructed philosophy anew?

The answer is that an empirically responsible philosophy would require our culture to abandon some of its deepest philosophical assumptions. This book is an extensive study of what many of those changes would be in detail.

Our understanding of what the mind is matters deeply. Our most basic philosophical beliefs are tied inextricably to our view of reason. Reason has been taken for over two millennia as the defining characteristic of human beings. Reason includes not only our capacity for logical inference, but also our ability to conduct inquiry, to solve problems, to evaluate, to criticize, to deliberate about how we should act, and to reach an understanding of ourselves, other people, and the world. A radical change in our understanding of reason is therefore a radical change in our understanding of ourselves. It is surprising to discover, on the basis of empirical research, that human rationality is not at all what the Western philosophical tradition has held it to be. But it is shocking to discover that we are very different from what our philosophical tradition has told us we are.

Let us start with the changes in our understanding of reason:

* Reason is not disembodied, as the tradition has largely held, but arises from the nature of our brains, bodies, and bodily experience. This is not just the innocuous and obvious claim that we need a body to reason; rather, it is the striking claim that the very structure of reason itself comes from the details of our embodiment. The same neural and cognitive mechanisms that allow us to perceive and move around also create our conceptual systems and modes of reason. Thus, to understand reason we must understand the details of our visual system, our motor system, and the general mechanisms of neural binding. In summary, reason is not, in any way, a transcendent feature of the universe or of disembodied mind. Instead, it is shaped crucially by the peculiarities of our human bodies, by the remarkable details of the neural structure of our brains, and by the specifics of our everyday functioning in the world.

* Reason is evolutionary, in that abstract reason builds on and makes use of forms of perceptual and motor inference present in "lower" animals. The result is a Darwinism of reason, a rational Darwinism: Reason, even in its most abstract form, makes use of, rather than transcends, our animal nature. The discovery that

reason is evolutionary utterly changes our relation to other animals and changes our conception of human beings as uniquely rational. Reason is thus not an essence that separates us from other animals; rather, it places us on a continuum with them.

* Reason is not "universal" in the transcendent sense; that is, it is not part of the structure of the universe. It is universal, however, in that it is a capacity shared universally by all human beings. What allows it to be shared are the commonalities that exist in the way our minds are embodied.

* Reason is not completely conscious, but mostly unconscious.

* Reason is not purely literal, but largely metaphorical and imaginative.

* Reason is not dispassionate, but emotionally engaged.

This shift in our understanding of reason is of vast proportions, and it entails a corresponding shift in our understanding of what we are as human beings. What we now know about the mind is radically at odds with the major classical philosophical views of what a person is.

For example, there is no Cartesian dualistic person, with a mind separate from and independent of the body, sharing exactly the same disembodied transcendent reason with everyone else, and capable of knowing everything about his or her mind simply by self-reflection. Rather, the mind is inherently embodied, reason is shaped by the body, and since most thought is unconscious, the mind cannot be known simply by self-reflection. Empirical study is necessary.

There exists no Kantian radically autonomous person, with absolute freedom and a transcendent reason that correctly dictates what is and isn't moral. Reason, arising from the body, doesn't transcend the body. What universal aspects of reason there are arise from the commonalities of our bodies and brains and the environments we inhabit. The existence of these universals does not imply that reason transcends the body. Moreover, since conceptual systems vary significantly, reason is not entirely universal.

Since reason is shaped by the body, it is not radically free, because the possible human conceptual systems and the possible forms of reason are limited. In addition, once we have learned a conceptual system, it is neurally instantiated in our brains and we are not free to think just anything. Hence, we have no absolute freedom in Kant's sense, no full

autonomy. There is no a priori, purely philosophical basis for a universal concept of morality and no transcendent, universal pure reason that could give rise to universal moral laws.

The utilitarian person, for whom rationality is economic rationality--the maximization of utility--does not exist. Real human beings are not, for the most part, in conscious control of--or even consciously aware of--their reasoning. Most of their reason, besides, is based on various kinds of prototypes, framings, and metaphors. People seldom engage in a form of economic reason that could maximize utility.

The phenomenological person, who through phenomenological introspection alone can discover everything there is to know about the mind and the nature of experience, is a fiction. Although we can have a theory of a vast, rapidly and automatically operating cognitive unconscious, we have no direct conscious access to its operation and therefore to most of our thought. Phenomenological reflection, though valuable in revealing the structure of experience, must be supplemented by empirical research into the cognitive unconscious.

There is no poststructuralist person--no completely decentered subject for whom all meaning is arbitrary, totally relative, and purely historically contingent, unconstrained by body and brain. The mind is not merely embodied, but embodied in such a way that our conceptual systems draw largely upon the commonalities of our bodies and of the environments we live in. The result is that much of a person's conceptual system is either universal or widespread across languages and cultures. Our conceptual systems are not totally relative and not *merely* a matter of historical contingency, even though a degree of conceptual relativity does exist and even though historical contingency does matter a great deal. The grounding of our conceptual systems in shared embodiment and bodily experience creates a largely centered self, but not a monolithic self.

There exists no Fregean person--as posed by analytic philosophy--for whom thought has been extruded from the body. That is, there is no real person whose embodiment plays no role in meaning, whose meaning is purely objective and defined by the external world, and whose language can fit the external world with no significant role played by mind, brain, or body. Because our conceptual systems grow out of our bodies, meaning is grounded in and through our bodies. Because a vast range of our concepts are metaphorical, meaning is not entirely literal and the classical correspondence theory of truth is false. The correspondence theory holds that statements are true or false objectively, depending on how they map directly onto the world--independent of any human understanding of either

the statement or the world. On the contrary, truth is mediated by embodied understanding and imagination. That does not mean that truth is purely subjective or that there is no stable truth. Rather, our common embodiment allows for common, stable truths.

There is no such thing as a computational person, whose mind is like computer software, able to work on any suitable computer or neural hardware--whose mind somehow derives meaning from taking meaningless symbols as input, manipulating them by rule, and giving meaningless symbols as output. Real people have embodied minds whose conceptual systems arise from, are shaped by, and are given meaning through living human bodies. The neural structures of our brains produce conceptual systems and linguistic structures that cannot be adequately accounted for by formal systems that only manipulate symbols.

Finally, there is no Chomskyan person, for whom language is pure syntax, pure form insulated from and independent of all meaning, context, perception, emotion, memory, attention, action, and the dynamic nature of communication. Moreover, human language is not a totally genetic innovation. Rather, central aspects of language arise evolutionarily from sensory, motor, and other neural systems that are present in "lower" animals.

Classical philosophical conceptions of the person have stirred our imaginations and taught us a great deal. But once we understand the importance of the cognitive unconscious, the embodiment of mind, and metaphorical thought, we can never go back to a priori philosophizing about mind and language or to philosophical ideas of what a person is that are inconsistent with what we are learning about the mind.

Given our new understanding of the mind, the question of what a human being is arises for us anew in the most urgent way.

Asking Philosophical Questions Requires Using Human Reason

If we are going to ask philosophical questions, we have to remember that we are human. As human beings, we have no special access to any form of purely objective or transcendent reason. We must necessarily use common human cognitive and neural mechanisms. Because most of our thought is unconscious, a priori philosophizing provides no privileged direct access to

knowledge of our own mind and how our experience is constituted.

In asking philosophical questions, we use a reason shaped by the body, a cognitive unconscious to which we have no direct access, and metaphorical thought of which we are largely unaware. The fact that abstract thought is mostly metaphorical means that answers to philosophical questions have always been, and always will be, mostly metaphorical. In itself, that is neither good nor bad. It is simply a fact about the capacities of the human mind. But it has major consequences for every aspect of philosophy. Metaphorical thought is the principal tool that makes philosophical insight possible and that constrains the forms that philosophy can take.

Philosophical reflection, uninformed by cognitive science, did not discover, establish, and investigate the details of the fundamental aspects of mind we will be discussing. Some insightful philosophers did notice some of these phenomena, but lacked the empirical methodology to establish the validity of these results and to study them in fine detail. Without empirical confirmation, these facts about the mind did not find their way into the philosophical mainstream.

Jointly, the cognitive unconscious, the embodiment of mind, and metaphorical thought require not only a new way of understanding reason and the nature of a person. They also require a new understanding of one of the most common and natural of human activities--asking philosophical questions.

What Goes into Asking and Answering Philosophical Questions?

If you're going to reopen basic philosophical issues, here's the minimum you have to do. First, you need a method of investigation. Second, you have to use that method to understand basic philosophical concepts. Third, you have to apply that method to previous philosophies to understand what they are about and what makes them hang together. And fourth, you have to use that method to ask the big questions: What it is to be a person? What is morality? How do we understand the causal structure of the universe? And so on.

This book takes a small first step in each of these areas, with the intent of giving an overview of the enterprise of rethinking what philosophy can become. The methods we use come from cognitive science and cognitive

linguistics. We discuss these methods in Part I of the book.

In Part II, we study the cognitive science of basic philosophical ideas. That is, we use these methods to analyze certain basic concepts that any approach to philosophy must address, such as time, events, causation, the mind, the self, and morality.

In Part III, we begin the study of philosophy itself from the perspective of cognitive science. We apply these analytic methods to important moments in the history of philosophy: Greek metaphysics, including the pre-Socratics, Plato, and Aristotle; Descartes's theory of mind and Enlightenment faculty psychology; Kant's moral theory; and analytic philosophy. These methods, we argue, lead to new and deep insights into these great intellectual edifices. They help us understand those philosophies and explain why, despite their fundamental differences, they have each seemed intuitive to many people over the centuries. We also take up issues in contemporary philosophy, linguistics, and the social sciences, in particular, Anglo-American analytic philosophy, Chomskyan linguistics, and the rational-actor model used in economics and foreign policy.

Finally, in Part IV, we summarize what we have learned in the course of this inquiry about what human beings are and about the human condition.

What emerges is a philosophy close to the bone. A philosophical perspective based on our empirical understanding of the embodiment of mind is a philosophy in the flesh, a philosophy that takes account of what we most basically are and can be.

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