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Book Review

The Mechanical Mind: A Philosophical Introduction to Minds, Machines, and Mental Representation, 2nd edition, by Tim Crane. New York: Routledge, 2003. xi + 259 pages including preface, glossary, chronology, notes, and index. ISBN 0415290317 ($22.95).

Tim Crane's *The Mechanical Mind* is an introduction to contemporary philosophy of mind. What makes this book interesting is that Crane did not simply outline recent theories in philosophy of mind. Instead, Crane chose to explain the problem of mental representation, and in the process "examine the questions about the mind which arise when attempting to solve this problem in light of dominant philosophical assumptions" (p. 1). The assumption that gets the most ink is the view Crane calls "the mechanical view." Most contemporary philosophers of mind hold a mechanical view of the mind. The mechanical view says that the mind is a causal mechanism that behaves in predictable ways. There are, however, at least two questions that arise with regard to the mechanical view. First, if a mind is simply a mechanism, how can it have thoughts and mental representations? Second, if a mind is simply a mechanism, how can it be conscious? Crane devotes the first five chapters to the first question. In chapter six, he discusses the second.

In the first chapter, Crane introduces the philosophical problem of representation. This problem is easily described. How can something represent something else? Crane discusses both pictorial representation and linguistic representation. He argues that these kinds of representation require interpretation and that interpretation derives from mental representation. He writes, "My own view is that mental representation – the representation of the world by states of mind – is the most fundamental form of representation" (p. 13).

Chapter 2 deals with questions surrounding thinkers and their thoughts. Crane considers two important questions: (1) *how* do we know about the mind? and (2) *what* do we know about the mind? Crane suggests that the answer to the first question lies in what he calls "common-sense psychology." Common-sense psychology—more commonly called "folk psychology"—is the "idea that when we understand the minds of others, we employ (in some sense) a sort of 'theory' which characterizes or describes mental states" (p. 62). So, we know about other people's mind by using common-sense psychology to explain their behavior. Crane then argues that we can answer the second question by determining what common-sense psychology says about the mind. On this Crane writes, "As I interpret common-sense psychology, it says (at least) that thoughts are states of mind which represent the world and which have effects in the world" (p. 80).

The third chapter is concerned primarily with the following question: "Can a computer think? Or,

more precisely, can something think simply by being a computer?" (p. 84). In order to answer this question Crane begins by explaining what a computer is. He suggests that a computer is a thing that processes representations in a systematic way. He then considers whether Artificial Intelligence (a thinking computer) is possible. Crane considers Hubert Dreyfus' critique of AI and John Searle's 'Chinese room' argument. Crane concludes that AI is impossible. He writes, "Nothing can think simply by being a computer" (p. 128).

Chapter 4 attempts to answer the question, "Is the human mind a computer? Or, more precisely, are any actual mental states and processes computational?" (p. 84). Although related to the question of Chapter 3, the question of chapter four is a distinct question. As Crane points out, although something cannot think simply by being a computer, it is still possible that some of our thought is computational. In order to show how our thoughts could be computational, Crane discusses the debate between the Mentalese hypothesis (also called language of thought hypothesis) and connectionism.

The fifth chapter is most dense chapter of the book. It returns to the problem of mental representation. Crane discusses the possibility of a reductive definition of mental representation. A reductive definition would be of the form:

X represents Y if and only if _____

Any definition of this form is a reductive definition. It attempts to reduce the concept of representation to other terms. Crane argues that there have not, as yet, been any successful reductive theories of mental representation because all attempts thus far have had not adequately dealt with the problems of error. An additional problem for reductive theories deals with their inability to account for certain kinds of mental content. Crane writes, "Reductive theories of representation have to be able to account for all kinds of mental content, not just the simple kinds connected with (say) food and reproduction. But they have as yet provided no account of how to do this" (p. 208).

To avoid the kinds of problems mentioned in the preceding paragraph, Crane offers a non-reductive theory. He writes, "The non-reductive answer to the question, 'What is a mental representation?' would be given be given by listing the ways in which the concept of representation figures in the theory" (p. 207). So for Crane, mental representation is a theoretical notion. A theoretical notion is "a notion whose nature is explained by the theories in which it belongs" (p. 170).

The final chapter deals with the problem of consciousness. That is, how can a mechanical view of the mind account for consciousness? In this chapter, Crane discusses the problem of qualia and some objections to physicalism. Crane suggests that the problem of consciousness give further credence to the claim that reductive theories do not work. He writes:

> Perhaps the proper lesson should be that we should try and be content with and understanding of mental concepts – representation, intentionality, thought and consciousness – which deals with them in there own terms, and does nor try to give reductive accounts of them in terms of other sciences (p. 231).

The main strength of *The Mechanical Mind* is its accessibility. Crane does an excellent job of clearly explaining difficult concepts; one need not have any prior knowledge of philosophy or

psychology to make sense of this book. Additionally, the book serves as a good introduction to the philosophy of mind. In the course of his discussion, Crane introduces a number of important ideas in philosophy of mind like the mind/body problem and qualia. Both students and general readers will benefit from this book. I recommend *The Mechanical Mind* to anyone looking for an introduction to the problem of mental representation, and even to those making a first foray into the field of philosophy of mind.

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