in cognitive science and creating an exciting climate of impending scientific revolution.

Gardner asserts that there are three conditions that had to be met before cognitive science could emerge as a new science. "First of all, it was necessary to demonstrate the inadequacies of the behaviourist approach. Second, the particular limitations of each social science had to be acknowledged. Finally, the advent of the computer was needed to provide the final impetus for a new cognitive science." Part II of *The Mind's New Science* focuses on the roots of cognitive science from within the disciplines of philosophy, psychology, artificial intelligence, linguistics, anthropology, and neuroscience.

Gardner's purpose in this part of the book is to show how in each of these disciplines his three conditions have been met. He is only partially successful. Artificial intelligence as a discipline did not exist prior to the computer and it can hardly be said that the investigators of a silicon-based mind were ever enthralled by the canons of behaviorism. Neuro-scientists have retreated steadily from the cognitive and holistic view of Karl Lashley. In philosophy, psychology, linguistics, and anthropology (after a fashion) Gardner builds a more persuasive argument. However, it is not readily apparent why the new scholars of the mind cannot find homes in the very disciplines which were founded to investigate mental life.

But this is nitpicking from a psychologist who has always been enthralled by the cognitive behaviorism of Tolman and secretly believed that I.Q. was a mental representation. Part II of *The Mind's New Science* was fascinating reading. Any reader is likely to be very knowledgeable about the history of one or more of the disciplines covered. Unfortunately, the nature of our education is likely to have obscured the fact that all of the social and behavioral sciences are hounded by the same epistemological issues addressed in philosophy. Gardner's relentless comparisons of one discipline's models with another and frequent examples of interdisciplinary efforts do more to illustrate the promise of cognitive science than any of the cognitivist rhetoric that characterizes the early part of the book.

In chapters 10-13, Gardner presents state-of-the-art synopses of four research topics: perception, visual imagery, classification, and human rationality. Each of these topics has been at the crux of any debate about the nature of mental life. Gardner offers this survey as examples of the best work within cognitive science.

In the final chapter, Gardner offers his vision for a new science of cognition:

*whose crucial divisions ... are not the traditional disciplinary perspectives but rather the specific cognitive contents. Therefore, scientists should be characterized by the central cognitive domain on which they work: broad domains like language, music, social knowledge, logical thought; and more focused subdomains like syntactic processing, the early phases of visual processing or the perception of rhythm. Scientific training and research enterprises should come increasingly to be organized around these problems. When working on these problems, scientists should*
fuse their necessarily different perspectives in order to arrive at a full account of the particular cognitive domain at issue. And so the ultimate cognitive-scientific picture of syntactic processing, or of language as a whole, should be a coordinated representational account which covers the full gamut of the traditional disciplines without any need to even mention them. (p. 39)

Gardner also recognizes the long-term limits of cognitive science if it ultimately fails to address affective and cultural influences on cognition or incorporate neurobiological principles.

The Mind's New Science is a well-researched and well-written account of an exciting period of scientific history. It is an important book that does a superb job of tracing the events in several disciplines that has led to the reemergence of thought as a legitimate scientific topic.

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