
Book Review

Epistemic Cognition and Development: The Psychology of Justification and Truth

David Moshman
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Although relatively unpopular among Indonesian scholars, the study of epistemic cognition has emerged as a major area of research at the intersection of psychology and education. A number of edited books and special editions in respected journals have been dedicated to various issues related to epistemic cognition. However, David Moshman's "Epistemic Cognition and Development" (henceforth, ECD) is the first textbook which provides a comprehensive introduction to theories and research on epistemic cognition. With this book, Moshman deserves much credit for providing not only valuable insights on a number of key conceptual issues, but also situating those insights within the broader picture of cognitive and developmental theories.

For those new to the field, the concept of epistemic cognition is easier understood when contrasted with two other more familiar concepts: cognition and metacognition. To illustrate, consider the activity of reading a newspaper article on, say, the introduction of a new national school curriculum. Cognition refers to the process of trying to comprehend the content of the article (e.g. understanding how the new curriculum differs from the old). Meta-cognition refers to the monitoring of that comprehension process (e.g. "Have I understood it correctly?" or "Did I miss something important from the paragraphs I've just read?"). Epistemic cognition occurs when the reader attempts to evaluate the validity of information presented in the article (e.g. "Is the new curriculum really better than the old, as the article claimed?"). In Moshman's words (p. 31), epistemic cognition is "an aspect of metacognition that is concerned with truth and justification."

In ECD, Moshman begins by introducing readers to three basic epistemological perspectives through an event in the field of astronomy: the demotion of Pluto from its status as a planet. Since its discovery

in 1930, Pluto is considered to be a planet, just like Earth. In 2006, however, the International Astronomical Union decided to reclassify Pluto as a dwarf-planet, and hence now our solar system is considered to have only eight planets. How can this be? How many planets does our solar system have, in reality? The answer to such questions, Moshman pointed out, depends on whether we adopt an objectivist, subjectivist, or rationalist epistemology.

From an objectivist epistemology, the number of planets in the solar system should be a matter of fact. It is a question which as an absolute, right-or-wrong answer, and should not depend on any person's subjective perspective. From this perspective, the demotion of Pluto must have been caused by the discovery of new and stronger information which contradict previous information. In contrast, from a subjectivist epistemology, Pluto's fate is purely a matter definition. Anyone can come up with their own definitions of a planet and use that definition to conclude that our solar system has eight, nine or hundreds of planets. From this perspective, there is no truth; there are only opinions.

The final epistemology, rationalism, agrees with the subjectivist perspective that people's concepts and definitions influence what is regarded as truth. The rationalist perspective, however, would contend that definitions and concepts are constrained by objective reality. Hence, there are ways to determine the relative quality and utility of definitions and concepts. Pluto's status was changed because astronomers adopted a new definition of planets. But this new definition was motivated by new discoveries about the variety of objects in our solar system. The old definition of a planet included Pluto, but would also include hundreds of asteroids which are sometimes as large as, or larger than, Pluto. A new definition was adopted to distinguish

between what scientists believed to be objectively different objects.

With this rather extended illustration, Moshman probably wanted to give readers a sense of how abstract discussions about knowledge can have concrete implications. However, the discussion may have readers from psychology and other social science fields wondering about the relevance of this book. It is probably not helpful either that Chapter 2 presents an even more abstract discussion about what counts as truth and knowledge from a philosophical perspective. I agree that this discussion is useful and necessary for anyone wanting to develop a deeper understanding about the topic. However, readers who are unacquainted with philosophical epistemology would probably find familiar grounds in later chapters. For example, the chapters in Part II, which discuss epistemic cognition in relations to neo-Piagetian cognitive developmental theories, would be a good place for psychology students to start reading this book. The chapters in Part III, on the other hand, are good starting points for readers with interests in the nature of reasoning in specific domains, namely science (Chapter 7), morality (Chapter 8), and history (Chapter 9). Readers who wish to get a sense of the educational implications of epistemic cognition research might want to explore Chapter 11, while researchers looking for ideas might want to jump straight to the concluding chapter.

For scholars already familiar with the literature on epistemic cognition, Moshman's ECD certainly presents much food for thought. For example, Moshman takes an unmistakably developmental perspective, going as far as claiming that epistemic cognition cannot be properly understood unless from a developmental lens. Such a stance assumes that epistemic cognition taps into coherent, unitary beliefs which operate more or less consistently across contexts (within the same domain). Thus, a person who holds an objectivist epistemology in the domain of science would believe that there are clear, right-wrong answers on issues as varied as the cause of dinosaur extinction, the health benefits of dark chocolate, and the existence of the multiple universes. This assumption of coherence will surely be contested by researchers working from different theoretical perspectives on epistemic cognition.

Overall, Moshman's ECD is an invaluable and authoritative source on the study of epistemic cognition. The book should be read by those who are just beginning to make sense of epistemic cognition, as well as for more advanced readers who would like to gain further insights and grasp the big picture of this burgeoning field of inquiry.

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