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**Theories of Theories of Mind.** Peter Carruthers and Peter K. Smith. Cambridge, England: University of Cambridge Press, 1996, 390 pages, \$54.95 hard.

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A young child serving as a participant in a "theory of mind" experiment is first told the following scenario: "Sally places a marble in a basket and then leaves to take a walk. While she is away, Ann removes the marble from the basket and places it in a nearby box." Puppet dolls, marble, box, and basket are used to act this all out for the participating child. The child is then asked: "Where did Sally put the marble in the beginning? Where is the marble now? Where will Sally look for the marble when she comes back from her walk?" Empirical research apparently establishes (see p. 2) that not until the fourth year of life do children acquire the ability to grasp a *false belief* — namely, that Sally will look into the basket on her return because this is where she placed the marble before she left. When asked, younger children say that she will look for the marble in the box presumably because that is where it is now located. The question which arises is: How do we explain the development of this false-belief phenomenon?

The volume *Theories of Theories of Mind*, edited by Peter Carruthers and Peter K. Smith, contains twenty chapters drawn from three weekend workshops over two academic school years. The workshops were sponsored by the *Hang Seng Centre for Cognitive Studies* at the University of Sheffield, England. The participants were primarily psychologists and philosophers, meeting to analyze the topic of "theory of mind," a phrase which apparently stems from Premack and Woodruff's classic (1978) paper that asked whether chimpanzees have theories of mind.

We learn over the chapters that there are three primary views advanced to explain false belief, and that they are "the only games in town" (p. 184). There is first the *theory-theory* explanation, which holds that children gradually frame or develop a theory of mind as they mature, not unlike the way in which scientists frame constructs and suggest hypotheses to be validated in ongoing experience. Thus, children's concepts or constructs of the mind are abstract and unobservable theoretical postulates used to explain and predict the behavior of others. There are variations on how children come to learn this theory of mind. Some theory-theory proponents argue that it is framed entirely by the child. Others say that children do not acquire a theory of mind on their own, but rather through participation in cultural activities where they come to share a style of talking about people's behavior (p. 188).

The second explanation of false belief is termed the *simulation* theory (p. 14). The simulationist position is that the child does not actually frame an abstract theory to be used in understanding the actions of people. Rather, the child develops a sort of directly empathic grasp of others by putting him/herself in their position to simulate what is taking place "over there." There are differing views among the contributing authors concerning just how necessary it is for the child to recognize the functioning of a mental state per se before simulation can take place (pp. 19; 119; 132). Must the child theorize that something like a "mind" is at work in order to see others experiencing what he or she can also directly experience? Simulationists answer "no." This would be like suggesting that we must know that taste buds are involved in order to grasp — and then simulate — the pleasure experienced by another who is seen eating our favorite desert. I believe that there is a kind of first-person ("I, Me") versus third-person ("Him, Her") issue wound into the analysis here. Simulationists strike me as wanting to avoid falling into what they consider is the trap of "folk" psychology — namely, that people are active agents rather than manipulated instrumentalities (p. 105). Simulation is thus a kind of shaped mediation rather than an active predication of what is taking place by a self-reflexive intelligence.

Finally, the third game in town is *modularity* theory, in which the ability to theorize and empathize is attributed to an innate capacity that has been genetically determined. A module is defined as "a component of the mind, or brain, a mechanism, a system or some such" (p. 142) that accounts for some competence manifested by the organism. Noam Chomsky is cited as an example of someone who uses modularity to explain language competence by way of innate linguistic rules (p. 143). Indeed, even Sigmund Freud is said to have relied upon an innate "intentional modularity" to account for his patient's behaviors (p. 143). In the more computer-oriented wing of modularity theory we can find the module being referred to as "a computational system" (p. 143) or an input-output "box" (p. 147).

There is some discussion of autism as it relates to the recognition of false belief, as well as to so-called *mind-blindness* (i.e., the inability to understand the mental states of other people). Autistic individuals have difficulty in both of these realms (pp. 247; 257). Evolutionary themes are also introduced in this volume, where it is contended by some that "the theory of mind emerged coincident with the evolution of human language" (p. 293). As in Premack's original research, the suggestion of mind theory need not be thought of as restricted to the human species. And so it is that the reader is treated to some recent studies on chimpanzees, where an "understanding or attention in anthropoid apes" (p. 335) is believed to have been proven in empirical research. But, there is no evidence as yet permitting an inference of explicit mind-reading skills to the great apes (p. 349).

Actually, I think this book is written for an audience that already has had some experience with the field of scholarship and research known as theory of mind. Although I had read a brief description of this field in a paper concerned with developmental psychology, I did not really understand what it was all about. I am still not certain that I have the full picture, and tend to fault the editors for not presenting a more comprehensive introductory chapter with a detailed elaboration of the field, including current implications and future expectations. Apparently, the scholars who exchanged ideas at the workshops were fairly well-known to each other. As an "outsider" I sometimes felt as though this was a rather insular exchange of thoughts by "insiders." The participants allude to each other's views quite regularly, which is natural and to be expected, but at times I needed a guide to

flesh out the more arcane points that were being tossed back and forth. I think a glossary offering standard definitions of terms would have helped, and if a term varied from the standard definition this could have been clarified through contrast.

I must also frankly admit that at points along the way — especially in the early chapters — I wondered if maybe too much wasn't being made of the false-belief phenomenon. I tried it out on two of my grandchildren, one aged four and the other aged seven. They both got it right. The older one seemed a little offended by the thought that his grandfather would put him through such a simple task. When the four year old got it right I was pleased because this apparently met the normal expectation (aged four or above). At about this point I began to see some potential for developmental study of this problem and continue to think about the central issue of when — and then "why?" — this capacity to think in the first-person perspective of an "other" comes about. So, I have obviously been "hooked" by my reading.

At the same time, as I flip back through the analyses presented by the participants, and the arguments that they developed based on the empirical findings of a dozen or so children, I tend to think that mountains are being made out of mole-hills. So, my recommendation is a mixture of (a) this is a fine book for those with some background and interest in theory of mind in the Premack tradition, but (b) it is not to be recommended as a "first reader" for those who lack the background. It could be put to good use in a seminar on the topics covered, where the instructor would have supplemental readings and provide students with a proper historical precedent. I would also expect to see discussions arising concerning just where those who study theory of mind see this field going.

### References

- Premack, D., and Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *The Behavioral and Brain Sciences*, 1, 515–526.