Briefly Noted

Lexical Competence

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Marconi's main question is what it means for a person (or computer system) to be semantically competent, especially with respect to the meaning of open-class words. His claim is that there are two components to lexical competence: referential competence and inferential competence. The different types of knowledge required by each correspond in some ways to T-box and A-box knowledge (terminological and assertional knowledge) in KL-ONE–like knowledge representation systems; but Marconi's distinction is principled, not merely a stipulation bolstered by intuition as it has been in research in knowledge representation. Marconi's theory is not a *semantic* theory, although it is closely related to semantic theories; rather, it is a *cognitive* theory—a theory of what it is that people know when they use words correctly. But this obliges Marconi to take on the philosophers of linguistic semantics—Putnam, Burge, Fodor, Searle, and others—and carefully distinguish his approach from many semantic theories.

Marconi begins with a critical historical review. Most philosophers of language have been concerned more with linguistic structure and composition than with lexicons or content. (Wittgenstein saw no lexical problems other than naming!) To the extent that there was any emphasis in this research on lexical matters, it was on questions such as "meaning as reference," and the distinctions between extension and intension or between sense and reference. This led to approaches that were based on truth rather than content, with meaning postulates as constraints on possible worlds. Marconi complains that meaning postulates are quite inadequate: they don't give a unique interpretation; they are still just uninterpreted symbols; and they say almost nothing about what we really know about a word, such as the associated encyclopedic or world knowledge. Semantic nets and other knowledge representations, decompositional semantics, Lakoff's prototypes, and Putnam's stereotypes fare no better.

Marconi then introduces his basic idea: Lexical competence, with respect to any particular word, is knowledge of true sentences in which the word is used plus knowledge of its application in the world (p. 58). The latter component is the usual kind of competence: referential. We can identify a primrose without needing to know everything about primroses. But conversely, most people know quite a bit about uranium and yet would not be able to recognize it if they saw it; they have only the first component. An expert has both components of competence. And the two components interact: one can be obtained from the other. But, while the two are not rigidly separated, Marconi spends a lot of time showing that they are indeed distinct and independent—and that studies of aphasia show that the distinction is cognitively real. He spends considerable effort defending his approach against objectivist theories of reference.

The problem of determining, through observation of its actions, whether or not an entity has understood some linguistic input brings Marconi to Searle's well-known "Chinese-room" problem. Marconi's answer to Searle is that, yes, the Chinese room is merely doing symbol processing without understanding, but this does *not* preclude there being some linguistic competence. The Chinese room is still not linguistically competent in Marconi's sense, as it has at best only inferential, not referential, competence. This leads Marconi to a discussion of the role of visual perception and recognition in linguistic competence, and the prospects for AI systems with vision and language. Marconi's position, contra Searle, is that for his purposes, such robots would indeed be equivalent to humans. —*Graeme Hirst, University of Toronto*

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