a proposition of the form aRb, then she can entertain bRa. One can think the thought *the boy parsed the sentence*, but not *the sentence parsed the boy*. Moreover, it is a matter of some dispute within the cognitive science community whether connectionist cognitive models, which do not posit a language of thought, might be capable of explaining the systematic relations that do hold among thoughts. (See MacDonald and MacDonald, 1995 for the classic papers on this issue, and Matthews, 1997 for further discussion).

See also: Representation in Language and Mind.

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Meringer, Rudolf (1859–1931)

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Rudolf Meringer's lasting contribution to linguistic science is that he first called attention to the linguistic significance of slips of the tongue. In two books, *Versprechen und Verlesen* (1895, co-authored with Carl Mayer) and *Aus dem Leben der Sprache* (1908), he published extensive collections of slips, with analysis and interpretation of their genesis; the books are still useful today.

Meringer was born in Vienna in 1859, studied at the University of Vienna, and taught there until 1899, when he became Professor of Indo-European Linguistics at the University of Graz. He died in 1931. The focus of his life's work was the history of words; with others (e.g., Hans Sperber, Hermann Güntert), he founded the philological school called cultural morphology, dedicated to the proposition that the history of words cannot be understood in isolation from cultural context. The movement reacted against what Meringer and colleagues perceived as the sterile formalism of Neogrammarianism, with resulting controversy (e.g., Schuchardt, 1911). Meringer was from 1909 founding editor of the movement's journal *Wörter und Sachen* and published many articles there; he also published a textbook of Indo-European linguistics (Meringer, 1897) that went into several editions. His *Wörter und Sachen* obituary (Güntert, 1932) did not mention his speech error work.

Meringer's speech error studies and the main body of his philological work were linked by his dedication to accurate observation as a research method. The error collections were compiled at the University of Vienna early in his career. Motivated originally by Hermann Paul's (1880) observations concerning similarities between speech errors and the processes of language change, Meringer's researches led him to reject the possibility that errors might actually precipitate sound change: "Speech errors and certain kinds of sound change are not inter-dependent. but share a higher cause in the nature of the psychological language organ" (Meringer and Mayer, 1895: vii). Four major generalizations may be extracted from his speech error writings: (1) Errors are not random but are rule-governed (Meringer, 1908: 3; Meringer and Mayer, 1895: 9–10); (2) the fundamental unit of speaking is not the speech sound but the word (Meringer and Mayer, 1895: 6–7); (3) words can be divided into structural components that differ in the strength of their internal representations (Meringer and Mayer, 1895: 164); (4) all speakers produce errors in the same way (Meringer and Mayer, 1895: 10; Meringer, 1908: 6, 123). These conclusions would all be accepted by psycholinguists working in this field today. For further detail of Meringer's error interpretations, see Cutler and Fay (1978).

Contrary to some later suggestions that attention to speech errors made Meringer unpopular, it is clear

that his colleagues warmly supported his error research. The greater part of his collection stemmed from lunchtime conversations among a regular group, whose support for the project was expressed in agreement that only one person should speak at once; when an error occurred, all conversation ceased until it had been recorded (Meringer, 1908: 5). However, contemporary reactions to Meringer's error books were mixed (see Cutler, 1979 for details). Sigmund Freud's use of examples from *Versprechen und Verlesen* in *The psychopathology of everyday life* (1901) did not meet with Meringer's approval (Meringer, 1908: 129–130; Meringer, 1923).

See also: Paul, Hermann (1846–1921); Speech Errors as Evidence in Phonology; Speech Errors: Psycholinguistic Approach.

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Meronymy

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Meronymy (sometimes also called partonymy or the HAS-A relation) is the PART-OF relation. For example, *page*, *cover*, and *spine* are meronyms of *book* (in its physical-object sense) in that they are parts of books. The converse relation, that of whole to part, is sometimes called *holonymy*, but *meronymy* is often used to refer generally to the phenomenon of relatedness of expressions for wholes and parts. While meronymy is often mentioned, along with synonymy, antonymy, and hyponymy, in lists of semantic relations among words, lexicology have traditionally paid it less attention than the other relations, as meronymy is not so clearly a linguistic relation. This is to say that the relation is not clearly a lexical relation (relating words), nor a sense relation (relating the meanings of words), but rather is a relation among the referents that the expressions denote. For instance, while a tail is a part of a dog, 'tail' is not necessarily part of the meaning of *dog*, nor 'dog' part of the meaning of *tail*. Recent changes in approaches to meaning have resulted in more attention to meronymy, and the relation is relevant to several applied linguistic endeavors. For instance, the PART-OF relation (like the TYPE-OF relation, hyponymy) is central to the creation of dictionary definitions. Furthermore, different kinds of meronym relations are often represented in lexical knowledge databases created for Natural Language Processing projects (e.g., WordNet – see Miller, 1998). Definitions, properties, and subtypes of meronymy are discussed in turn below, followed by discussion of its treatment in contemporary linguistics. The signs $<$ and $>$ are used here to indicate meronymy, with the holonym on the open side of the symbol and the meronym on the pointed side – e.g., *bird>wing*, *finger<hand*.

Definition of Meronymy

Meronymy is often classed with hyponymy as an inclusion relation. It is typically defined in terms of the potential to put two expressions into a natural language frame like *An X is a part of (a) Y* or *a Y has X(s)/an X* and interpret the sentences as generically true (Cruse, 1986). So, for example, *bird>wing* passes these tests (*A wing is a part of a bird*; *A bird has a wing*) because the test frames express propositions that are considered to be generally true of birds (the existence of a few deformed birds notwithstanding). The particular test frames chosen affect what counts as meronymy to a particular theorist. For