Tree structure in a forest of interpretations

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ABSTRACT

This paper first argues that it is logically impossible to account for language acquisition using only language function and frequency of usage. Linguistic form, i.e. syntax, also needs to be taken into account because form is the precondition for function. The paper then discusses a series of Danish neuro- and psycholinguistic experiments that support the foundational thesis of formal linguistics that linguistic form and linguistic function can be separated. The experiments show that in parsing (sentence processing in language comprehension), we sometimes make temporary implausible interpretations, that certain sentence types are consistently misinterpreted, and that we assign meaning to sentences that have no stable interpretation. These results cannot be accounted for with plausibility and frequency. Even though certain semantic and syntactic criteria normally have to be fulfilled, it is in a sense possible to circumvent the linguistic interpretive system and thus disentangle form and function. It is argued that the brain is a prediction machine that constantly constructs and updates mental models of the surrounding world, and that one of these models is the grammar of language. Like any other search or learning algorithm, parsing must necessarily be guided by certain formal principles.