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The miracle of language often occurs to us only when language does not function anymore, such as after brain damage, or when language acquisition becomes really tedious, such as when learning a second language. In everyday language, however, we never think about the efficiency of the language system that allows us to produce and understand complex sentences in milliseconds. We just use it. Within a very short time frame we process the sound of language, the meaning of words, and the syntactic structure of an utterance.

Psycholinguistic models assume that these processes, which are concerned with different information types, take place in different subsystems that work together in time in a partly cascadic and partly parallel manner. During language comprehension this means that once the acoustic information is perceived, the different subprocesses dealing with phonological, syntactic, and semantic information have to be performed. These processes constitute what is called the “core language system” (Berwick, Friederici, Chomsky, and Bolhuis, 2013; see also Fedorenko and Thompson-Schill, 2014). Comprehension during interpersonal communication, however, may also involve situational and emotional aspects that are not considered part of the core language system since these, as we will see, can act independently of language.

Chapter 1 focuses on the cognitive structure of these different processes during language comprehension and their respective neural basis. An excursion (chapter 2) has two purposes. It will discuss a common knowledge base of syntactic rules and words for language comprehension and language production. Moreover, it will briefly touch upon aspects of communication that go beyond the core language system.

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Language in Our Brain

The Origins of a Uniquely Human Capacity

By: Angela D. Friederici

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Language in Our Brain: The Origins of a Uniquely Human Capacity

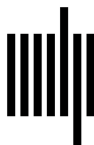
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