

Psycholinguistics

Synonyms

Psychology of language

Definition

Language is a symbolic system of communication. Although animals also have systematic ways of communicating (e.g., the call of the vervet monkey, which alerts other monkeys to the presence of eagle or snake predators; the honeybee's waggle dance, which communicates the location of pollen; or the ultrasonic vocalization of rodent pups, which alerts the caregiver that they have fallen from the nest), these animal systems of communication do not have the unique and communicatively powerful features of human language. Linguists note that the 5,000-plus languages of the world all share two features that are central to the ability to create unique novel sentences: they are hierarchical and rule-governed. The hierarchical (generative) nature of language refers to the fact that language consists of small components that can be combined to into larger units. Thus, noun phrases (which can contain relative clauses) can themselves be embedded within clauses. This enables us to produce messages of theoretically infinite length, as in this sentence: "John said that Sally said that the boy with the dog that bit her brother is actually quite nice." Certainly, limitations on cognitive resources constrain the number and type of embeddings we can readily understand. Secondly, the rule-based nature of language allows us to express novel concepts using familiar structures. Thus, we can produce sentences consisting of entirely unique combinations of words and sounds (as in Chomsky's famous sentence, "colorless green ideas sleep furiously," which, though semantically nonsensical, nonetheless is a grammatical English sentence).

Psychology of language is commonly referred to as "psycholinguistics" (Spivey, Joanisse & McRae, 2012). The field of psycholinguistics has four primary concerns: (1) language comprehension, (2) language production, (3) language acquisition, and (4) neurobiological bases of language. Comprehension involves a range of processes, including the perception of language-specific sounds (speech perception) or orthographic patterns, the mapping of those patterns onto words in memory (word recognition), the mapping of combinations of words into structured phrases (i.e., syntax), and the integration of linguistic forms with general and pragmatic knowledge. This latter component is known as discourse and refers to how two or more people understand each other during conversation; it involves the understanding of utterances that may go beyond literal meanings (e.g., implicature, metaphor, irony). 'Sentence processing' is the subfield of psycholinguistics concerned with mechanisms supporting processing of syntax and discourse. Language production has to do with the actual motor acts involved in speech (or, in the case of sign languages, in signing) or writing, as well as the cognitive processes involved in creating an utterance. Language acquisition focuses on the processes involved in child language learning, as well as the phenomena of bilingualism and adult language development. Interesting recent work, for example, has examined the apparent enhancement in executive function skills that characterizes children who are fluent in, and can switch between, multiple languages (see, e.g., Bialystok & Viswanathan, 2009). In recent years, techniques from cognitive neuroscience have led to new understanding of the neurobiological bases of language comprehension, production, and acquisition. These techniques have included research using functional magnetic resonance imaging (fMRI), electroencephalography (EEG) and the related tool of event-related potentials (ERP), transcranial magnetic stimulation (TMS), and magnetoencephalography (MEG).

See Also

Aphasia
Communicative Functions
Cortical Language Areas
Deictic Terms
Dichotic Listening
Expressive Language
Grammar

Language Acquisition
Syntax
Theories of Language Development

References and Readings

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Ph.D.
Inge-Marie Eigsti Department of Psychology, University of Connecticut, Storrs, USA

Dr. James S. Magnuson Department of Psychology, University of Connecticut Haskins Laboratories,
New Haven, CT, Storrs, USA

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