

Speech (Building Blocks)

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The building blocks of language begin with the smallest distinguishable unit, the *phoneme*, and grow in complexity to convey meaning within a specific social context. The study of meaning is known as semantics. According to Kellogg (2003), the goal of semantic theories is to explain how individuals form mental representations of words and thus derive meaning from them. The smallest distinguishable unit of speech is the phoneme. A phoneme is essentially a unique speech sound, or phonological segment, that can alter the meaning of a word. For instance, if you examine the words “pat” and “cat” you will notice that the difference in meaning for each word is determined by the initial phoneme. The brain must be able to process these subtle differences in spoken language very quickly, as the typical rate of speech production involves approximately 12 phonological segments per second (Fodor, 1983).

In terms of language acquisition, infants appear to go through several stages of phonetic development. From 0-2 months of age (phonation stage), infants begin to babble with appear to be the precursors for vowel production. From 2-3 months (“gooing” stage), they begin to form phonetic sequences similar to consonants. From 4-6 months (expansion stage), they begin to experiment with a variety of new sound types, including vowel-like sounds. Finally, infants begin to babble using recognizable and well-formed syllables during the “canonical stage,” which occurs from ages 7-10 months. These include such sequences as “dadada,” “mamama,” and “bababa” (Oller & Eilers, 1988). Infants start with a very wide variety of phonemic distinctions and begin to differentiate between them in a stepwise fashion. The timescale of acquiring the standard phonological system of the language spoken by the parents, however,

differs greatly. Some children master the phonological system of their primary language by 18 months, whereas certain phonemes may elude other children until age 6 or older (Velten, 1943).

While phonemes are the smallest distinguishable unit in a language, they are not necessarily meaningful in themselves. However, they are building blocks from which meaningful linguistic units are derived. The smallest meaningful units of a language are called *morphemes*, consisting of words, as well as prefixes and suffixes. For instance, the suffix “-ed” signals that the verb preceding it occurred in the past. In psycholinguistics, the totality of morphemes in a given language comprise what is referred to as a *mental lexicon*. Every morpheme functions as a lexical entry in the mental lexicon and contributes to the ability to decode the unique meaning of a specific sentence. The next level of complexity in the building blocks of speech is the structure of a given language. In order for a sentence to be meaningful, it must follow a certain set of grammatical rules which dictate the arrangement of morphemes within the sentence. This structure is known as *syntax*.

The final important building block of language involves its use or function within a social context. This is important to note, as the meaning intended or derived from a sentence does not depend on syntax alone, but rather is interpreted within a specific context. The manner in which an individual alters the delivery of their message to communicate their intended meaning within this social context is known as pragmatics. Pragmatics involves various types of *speech acts* which perform a specific function. Speech acts can be direct, such when we thank someone (and intend to communicate gratitude) or indirect, such as when we thank someone in a sarcastic tone (and intend to communicate ungratefulness). Another aspect of pragmatics outlined by Grice (1975) involves the use of conversational implicatures. Conversational implicatures refer to the inferences made by the listener which go beyond the plain meaning of the words in conversation.

For example: Betty mentions that she is hungry and Jim points out that he has potato chips in the kitchen. While a superficial interpretation would note that Jim only communicated the location of the potato chips, Betty can infer that potato chips are indeed available and that Jim has invited her to have some.

Further Reading

Fodor, J. A. (1983). *The Modularity of Mind*. Cambridge, MA: MIT Press.

Grice, H. P. (1975). Logic and Conversation. In P. Cole & J. L. Morgan (Eds.). *Syntax and semantics*, Vol. 3: Speech acts (pp. 41-48). New York: Seminar Press.

Kellogg, R. T. (2003). *Cognitive Psychology* (2nd Ed). Thousand Oaks, CA: Sage Publications.

Oller, D. K. and Eilers, R. E. (1988). The role of audition in infant babbling. *Child Development*, 59(2), 441-449.

Velten, H. V. (1943). The growth of phonemic and lexical patterns in infant language. *Language*, 19(4), 281-292.