

The roots of language: cognitive processing in child language acquisition

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Except for autistic children, who may have highly abnormal communication patterns, every child appears to be born with the ability to communicate in some manner. The aim of this study was to use Shannon's source-channel-receiver information processing paradigm to see what could be determined by doing an intensive analysis of the earliest language learning in one child. The question to be answered was, "If natural language is a code, how is the coding done and can we decode down to the very bottom?"

The system appears to consist of several components. The first is a Phoneme Perceiver-Generator, or P.P.G., a postulated 7-bit computer which creates the initial phonemic templates and stores them in long-term memory. Next comes the syllable generator. The syllable generator is postulated to be a self-programming mapping tool whose job is to place specific phonemic patterns into position within short-term memory. Its limit is about 7 phonemes. The syllable generator is connected to the morpheme generator. This device uses emotional energy to unite the various sensory memory types into a unity. To "mean" is to "map into with feeling". The many-to-one mapping, done with the aid of the morpheme generator, connects the simple sounds produced by the syllable generator to a feeling and emotion-laden sight-sound-smell-taste-touch-kinetic-kinesthetic memory system. (Kinetic memory allows the child to remember felt body movements, like "up" or "down", while kinesthetic memory allows the child to remember what it feels like to be hungry or to be full.)

The "marshalling yard", where chosen morphemes go to form words and phrases has two tracks: one for instruction words, the prepositions and articles, and one for data words, the nouns, verbs, adjectives and adverbs. The last piece of the puzzle appears to

be the basic unit of conversation. We believe it is Whitehead's "event". It appears that every human being has a built-in "event perceiver", something that perceives change.

The generic event is the "who, what, where, when, why, how" of journalistic fame. If every slot is filled, then we have effectively and efficiently differentiated out "which" event is being referred to from all the conceivable events in the history of the universe. In learning to talk, the child gives local language form to the event perceiver.