

Language Acquisition

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Language is a cognition that truly makes us human. Whereas other species do communicate with an innate ability to produce a limited number of meaningful vocalizations (e.g. bonobos), or even with partially learned systems (e.g. bird songs), there is no other species known to date that can express infinite ideas (sentences) with a limited set of symbols (speech sounds and words).

This ability is remarkable in itself. What makes it even more remarkable is that researchers are finding evidence for mastery of this complex skill in increasingly younger children. Infants as young as 12 months are reported to have sensitivity to the grammar needed to understand causative sentences (who did what to whom; e.g. the bunny pushed the frog (Rowland & Noble, 2010)).

After more than 60 years of research into child language development, the mechanism that enables children to segment syllables and words out of the strings of sounds they hear, and to acquire grammar to understand and produce language is still quite an enigma.

Early Theories

One of the earliest scientific explanations of language acquisition was provided by [Skinner](#) (1957). As one of the pioneers of [behaviorism](#), he accounted for language development by means of environmental influence.

Skinner argued that children learn language based on behaviorist reinforcement principles by associating words with meanings. Correct utterances are positively reinforced when the child realizes the communicative value of words and phrases.

For example, when the child says 'milk' and the mother will smile and give her some as a result, the child will find this outcome rewarding, enhancing the child's language development (Ambridge & Lieven, 2011).

Universal Grammar

However, Skinner's account was soon heavily criticized by Noam Chomsky, the world's most famous linguist to date. In the spirit of cognitive revolution in the 1950's, Chomsky argued that children will never acquire the tools needed for processing an infinite number of sentences if the language acquisition mechanism was dependent on language input alone.

Consequently, he proposed the theory of Universal Grammar: an idea of innate, biological grammatical categories, such as a noun category and a verb category that facilitate the entire language development in children and overall language processing in adults.

Universal Grammar is considered to contain all the grammatical information needed to combine these categories, e.g. noun and verb, into phrases. The child's task is just to learn the words of her language (Ambridge & Lieven). For example, according to the Universal Grammar account, children instinctively know how to combine a noun (e.g. a boy) and a verb (to eat) into a meaningful, correct phrase (A boy eats).

This Chomskian (1965) approach to language acquisition has inspired hundreds of scholars to investigate the nature of these assumed grammatical categories and the research is still ongoing.

Contemporary Research

A decade or two later some psycholinguists began to question the existence of Universal Grammar. They argued that categories like noun and verb are biologically, evolutionarily and psychologically implausible and that the field called for an account that can explain for the acquisition process without innate categories.

Researchers started to suggest that instead of having a language-specific mechanism for language processing, children might utilise general cognitive and learning principles.

Whereas researchers approaching the language acquisition problem from the perspective of Universal Grammar argue for early full productivity, i.e. early adult-like knowledge of language, the opposing constructivist investigators argue for a more gradual developmental process. It is suggested that children are sensitive to patterns in language which enables the acquisition process.

An example of this gradual pattern learning is morphology acquisition. Morphemes are the smallest grammatical markers, or units, in language that alter words. In English, regular plurals are marked with an –s morpheme (e.g. dog+s). Similarly, English third singular verb forms (she eat+s, a boy kick+s) are marked with the –s morpheme. Children are considered to acquire their first instances of third singular forms as entire phrasal chunks (Daddy kicks, a girl eats, a dog barks) without the ability of teasing the finest grammatical components apart.

When the child hears a sufficient number of instances of a linguistic construction (i.e. the third singular verb form), she will detect patterns across the utterances she has heard. In this case, the repeated pattern is the –s marker in this particular verb form.

As a result of many repetitions and examples of the –s marker in different verbs, the child will acquire sophisticated knowledge that, in English, verbs must be marked with an –s morpheme in the third singular form (Ambridge & Lieven, 2011; Pine, Conti-Ramsden, Joseph, Lieven & Serratrice, 2008; Theakson & Lieven, 2005). Approaching language

acquisition from the perspective of general cognitive processing is an economical account of how children can learn their first language without an excessive biolinguistic mechanism.

Conclusion

However, finding a solid answer to the problem of language acquisition is far from being over. Our current understanding of the developmental process is still immature. Investigators of Universal Grammar are still trying to convince that language is a task too demanding to acquire without specific innate equipment, whereas the constructivist researchers are fiercely arguing for the importance of linguistic input.

The biggest questions, however, are yet unanswered. What is the exact process that transforms the child's utterances into grammatically correct, adult-like speech? How much does the child need to be exposed to language to achieve the adult-like state?

What account can explain variation between languages and the language acquisition process in children acquiring very different languages to English? The mystery of language acquisition is granted to keep psychologists and linguists alike astonished a decade after decade.

References

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Pine, J.M., Conti-Ramsden, G., Joseph, K.L., Lieven, E.V.M., & Serratrice, L. (2008). Tense over time: testing the Agreement/Tense Omission Model as an account of the pattern of tense-marking provision in early child English. *Journal of Child Language*, 35(1): 55-75.

Rowland, C. F.; & Noble, C. L. (2010). The role of syntactic structure in children's sentence comprehension: Evidence from the dative. *Language Learning and Development*, 7(1): 55-75.

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Theakston, A.L., & Lieven, E.V.M. (2005). The acquisition of auxiliaries BE and HAVE: an elicitation study. *Journal of Child Language*, 32(2): 587-616.

Recommended Reading

An excellent article by Steven Pinker on [Language Acquisition](#)

Pinker, S. (1995). *The New Science of Language and Mind*. Penguin.

Tomasello, M. (2005). *Constructing A Language: A Usage-Based Theory of Language Acquisition*. Harvard University Press.

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