

Genie, the Feral Child: What can her Story Tell us about Human Language and the Brain and Second Language Acquisition?



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I was first introduced to Genie's language development case many years ago in one of my favorite Ph.D. courses, Psycholinguistics, at Indiana University of Pennsylvania (IUP), where our discussion was evolving around the topic of "nature versus nurture." More specifically, the heated debate focused mainly on whether genetics or environment would play a more crucial role in developing language. It was also around that time when Genie's story came to light again on TLC, an American pay TV channel, which captured my attention. Her case was so touching that it kept encouraging me to find out more about lifelong child abuse and other feral children from around the world, whose stories could be linked, one way or another, to human language development. On the list of these cases come, for example, Genie Wiley from USA, Oxana Malaya from Ukraine, and Vanya Yudin from Russia.

Feral children, as one may recognize, refer to children kept isolated from human contact, mostly by their parents, from a very young age. Unfortunately, these children have no or little experience of human care, love, and, crucially, human language. In almost



cases, they were abandoned inside their own homes or left with animals, such as dogs and birds. As a result, when discovered, these children were unable to speak, lacked basic social skills, or had mental disability. Among these cases, Genie's story seemed to draw media and scholars' attention most when she was found in 1970 at around the age of 13. For twelve and a half years, Genie was mostly

Figure 1. Feral Children: The Story of Genie, a Child Kept in Extreme Isolation

tied to a potty chair, sitting alone days and nights in a dark room at the back of her house in California. Sadly enough, she had to spend her childhood in total isolation.

Why does Genie's story deeply fascinate a number of people from the seventies up until now? The main reason is because her circumstances offer a unique opportunity to test if a nurturing environment after the age of 12 could somehow make up for a total lack of language before that period. That is, it is this opportunity in which linguists and psychologists can test the *language acquisition device (LAD) theory and critical period hypothesis*. On the one hand, it is believed that humans' capability for language is innate. We were born with a language acquisition device (LAD), an innate ability to understand the principles of language. On the other hand, just like other human behaviors, our ability to acquire language depends largely on a critical period. This period or window of opportunity for language acquisition lasts until the age of 12. After that, the organization of the brain becomes set and can no longer learn and use language in a fully functional manner.

First proposed by Noam Chomsky, a professor of linguistics at Massachusetts Institute of Technology (MIT), a language acquisition device (LAD) helps explain how children, when exposed to any human language, are capable of learning it only a few years after birth. Chomsky argued that every child was born with an LAD that carries fundamental rules for language. In other words, children are born with an understanding of the rules of language; they simply have to acquire its vocabulary (O'Grady, 2012). To support his theory, Chomsky provided different

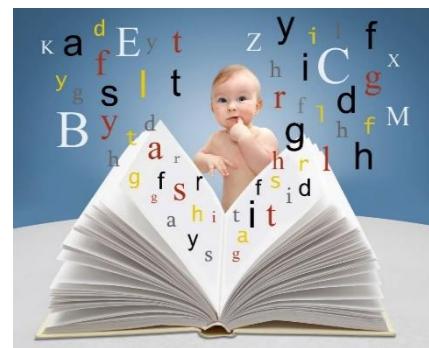


Figure 2. Southwestern Child Development Commission

pieces of evidence, one of which suggested that language is basically similar across all of humanity. For example, every language has a noun and a verb, and every language has the ability to express ideas in either positive or negative ways. Chomsky also discovered from his experiments that children seemed to understand that all sentences should have the structure 'subject-verb-object' even before they could speak in full sentences.

Another well-known hypothesis is called the critical period hypothesis, which was popularized by Eric Lenneberg, a German linguist and neurologist, in his book *Biological Foundations of Language*. This hypothesis acknowledges that the ability to learn a language is determined by a learner's biological age. In particular, it claims that there is an ideal

period of time for an individual to acquire a language in a linguistically rich environment, and this period ends at puberty (Abello-Contesse, 2009). After that, further language acquisition becomes much more challenging and requires more labored effort. This is to say that if an individual misses the critical period, it will no longer be possible to achieve a full command of language, especially grammatical systems. In other words, those who learn languages before puberty will be more likely to acquire normal or native-like skills than those who learn after this time period.

Can anyone thus imagine the condition of Genie's language once she was discovered after puberty? Being put into a hospital in November of 1970 at the age of 13, Genie became a major source of research data in a longitudinal study by both linguists and psychologists (Azieb, 2021). Over 7 years, Genie's linguistic development was investigated mainly by a graduate student named Susan Curtiss, now a professor of linguistics at the University of California at Los Angeles (UCLA). Curtiss's abundant data revealed that Genie was continuing to make significant progress in language acquisition over the years. However, her speech was far from normal and characterized as being "syntactically primitive and underdeveloped," with the syntax of her negative sentences at the most primitive level (e.g., 'no book,' instead of 'I don't have a book.'). Curtiss particularly pointed out that Genie's utterances were "grammatically uninflected and telegraphic."

During her first few years of exposure to language input, Genie had shown great progress in her language development, ranging from producing two-word utterances without a verb (e.g., Mama bus), two-word utterances with a verb (e.g., teacher said), to using negation with a noun (e.g., no school). Nonetheless, a transcript of her conversations with Susan Curtiss suggested that Genie's speech continued to exhibit the grammatically

uninflected and telegraphic aspects of language. At a telegraphic stage, children at around the age of 2 basically begin to produce three- and four-word utterances. While some will be grammatically complete (e.g., 'Daddy loves milk.'), others will have essential grammatical elements missing (e.g., 'Bobby eating apple.'). Concerning the missing elements in 'Bobby eating apple,' one could say that the article (i.e., an) and

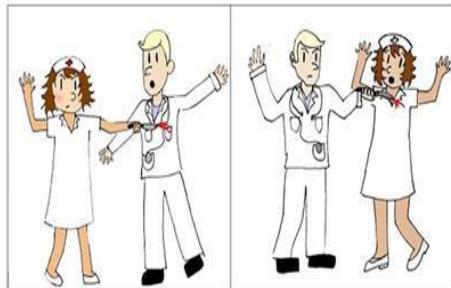


Figure 3. Gifted Children and Language Development

auxiliary verb (i.e., is) were left out. During this telegraphic stage, other missing elements may also include prepositions (e.g., in or at) and conjunctions (e.g., but or and).

The critical period hypothesis has also been extended to second language (L2) acquisition, claiming that speakers who acquire an L2 after puberty would display a substantial deficit in production and comprehension accuracy when compared to L2 speakers who acquire the language before the end of the proposed period. One famous study, which has been cited as proof of the influence of age on second language acquisition,

The doctor was stabbed by the nurse.



was conducted by Johnson and Newport in 1989 (Seol, 2005). This study tries to seek evidence to test the critical period hypothesis in second language acquisition by assessing the differences in adult learners' syntactic performance. Particularly, the study examined the acquisition of L2 syntax by non-native speakers who began their acquisition of English at different ages

Figure 4. Is Adult Second Language Acquisition Defective?

(between 3 and 39) on their arrival in America. The findings interestingly showed that there was a steady decline from the age of 7 in judging grammatical and ungrammatical items.

Additionally, in line with Johnson and Newport's work, a general agreement was reached among researchers that older individuals were less likely to achieve a native-like accent. In fact, many pieces of evidence appear to support this view. One of the most cited works which focuses on L2 phonetics acquisition was carried out by Tahta, Wood, and Lowenthal in 1981. This study explored the predictors of transfer of accent from the first language (L1) to a second language in a group of people whose acquisition of English as a second language had begun at different ages (from 6 to 15). The results revealed that there was a strong effect of biological maturation on the ability to speak a second language without transfer of accent and intonation from L1. As evidence, if L2 acquisition had begun by 6, there was no transfer of accent. However, if L2 acquisition began after 12 to 13, there was invariably accent transfer, usually in a strong manner.

As an applied linguist and a language teacher myself, I believe that language is in our genes. There must be a section of the brain that is home to our innate ability to acquire and recognize our first language. And inside this section of the brain, there must be a place where universal grammar, which is shared by all humans, exists. An observed incidence that

convinces me is linked to the reality that every child born with different mother tongues normally goes through the same stages of language development: one-word/holophrastic, two-word, and three- and four-word/telegraphic stages. For instance, during the one-word stage, roughly between 12 to 18 months, every child will begin to speak in one-word utterances (e.g., ‘mommy’). As the child reaches the age of around 18 months old, s/he will produce two words in a grammatically correct order (e.g., Dan sleep = Dan is sleeping) (Janda & Hamel, 1982, cited in Salim & Mehawesh, 2014).

Inevitably, I am also for the idea of the critical period hypothesis playing its role in both first and second language acquisition, and this age-related factor must not be overlooked. However, one should keep in mind that there are still other factors contributing to success or failure of second language acquisition, including motivation, attitude, and cognitive style (Richards, 1985, cited in Khasinah, 2014). For example, it is evident that intrinsic motivation (e.g., behavior driven by internal rewards, such as the feelings of competence) leads to greater success in learning a second/foreign language. Moreover, a linguistic input perceived as interesting and comprehensible by learners can speed up the mechanism of second language acquisition. From the lens of an applied linguist like myself, I believe that humans not only have an innate ability to acquire the rules of language (nature), but they also develop language skills through interactions with others and through massive continuous exposure to comprehensible language input (nurture).

Thanks to Genie and other feral children whose stories continue to inspire language acquisition and learning.

Acquisition is an unconscious study of a language in a natural way.

Learning is a conscious study through formal instruction.

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