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What happens if you are raised without language?

Susan Curtiss

Are there really such beings as 'wolf children,' raised without human contact? Can a person raised without language catch up? When is it too late? Is it worse to grow up without hearing or without language?

It is almost impossible for most of us to imagine growing up without language—which develops in our minds so effortlessly in early childhood and plays such a central role in defining us as human and allowing us to participate in our culture. Nevertheless, being deprived of language occasionally happens. In recent centuries children have been found living in the wild, said to have been raised by wolves or other animals and deprived of human contact. It is hard to know the real stories behind these cases, but they are all strikingly similar with respect to language. The pattern is that only those rescued early in childhood developed an ability to

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99 speak. Those found after they were about nine years old learned only a few words, or failed to learn language at all.

One of the most famous of these cases is that of Victor, 'The wild boy of Aveyron', immortalized in a film by Francois Truffaut called *The Wild Child (L'Enfant Sauvage)*. Victor was captured in 1800, when he was about ten or eleven. He was studied by a young physician named Jacques Itard, who creatively and painstakingly tried to teach him to speak, read, and write. But despite Itard's best efforts (many of which became the foundation of the Montessori Method for teaching), Victor never learned to speak; he learned to read and print only a small set of words.

We also know cases in which children grew up in social or linguistic isolation because of tragic family circumstances. One of the best-known of these is the case of Genie, whose childhood was one of extreme neglect, deprivation and abuse. For over twelve years, her father shut her away in a small bedroom, tied with a harness to an infant potty seat. When her blind mother finally escaped with Genie in the early 1970s and applied for welfare, the police intervened, and Genie was put in the rehabilitation ward of a children's hospital. She was thirteen and a half years old and knew no language.

Genie was studied by linguists for almost a decade. She was of normal intelligence; she rapidly learned words within a few months after her discovery, and soon began to combine them. However, she did not use grammatical elements like tense or agreement markers, articles, pronouns, or question words—the pieces of English that turn a string of words into grammatical speech. Most of her linguistic development consisted of learning more words and stringing them together into longer, semantically coherent utterances. In context, she could make herself understood. Her speech did not stick to standard English Subject-Verb-Object word order, but she performed well on word order comprehension tests: She differentiated sentences like ‘The girl is pushing the boy’ from ‘The boy is pushing the girl’, showing that she understood more than she could produce. Even after many years, however, she developed

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little knowledge of grammar. Interestingly, Genie was a powerful *non-verbal* communicator, providing strong evidence that language is not the same as communication.

Children without hearing are not as handicapped as Genie was. A deaf child can still have language and relate normally to others through signing—as long as language development starts early. There are a number of studies that show that the sooner a deaf child is exposed to a natural sign language, such as American Sign Language, the more proficient a signer he or she will become. As in other cases of linguistic isolation, the ability of deaf people to learn new *words* is not affected by the age at which they are exposed to language. But their ability to learn grammar is dramatically affected. Studies of deaf children exposed to sign language after the preschool years show that there is a critical window for grammatical development, which ends, perhaps, in the early school-age years.

Exciting recent evidence that a child brings something unique and necessary to language development comes from the creation of a new sign language in Nicaragua. After the Sandinistas came to power there, for the first time deaf teenagers and adults had the opportunity to come together as a community. This first generation created a rudimentary system of gestures for communication. But when young children, under the age of ten, joined this community, they transformed this system into a real language, embodying the structural elements and characteristics that define all human grammars. Over a short time, that language has become increasingly rich and complex grammatically.

People without hearing are typically normal and grow up in caring social environments that allow them to lead full lives. This

is especially true for those who become part of culturally Deaf* communities and learn to communicate in sign. Hearing people
*In current usage, 'deaf' is lowercase when it refers to loss of hearing, capitalized when it refers to communities of deaf persons using sign language.

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who are raised without language, on the other hand, typically grow up with no social community, in circumstances that have profoundly negative psychosocial effects. Therefore, while growing up without hearing poses many difficulties in life, growing up without *language* is significantly worse. Language is so central to being human that lacking it can mean a lifetime of social deprivation and isolation.

About the author

Susan Curtiss is Professor of Linguistics at UCLA. She is the author of *Genie: A Psycholinguistic Study of a Modern-Day 'Wild Child'*, as well as close to one hundred journal articles and book chapters. She has also authored numerous language tests, including the Curtiss-Yamada Comprehensive Language Evaluation (the CYCLE), used by researchers across the U.S. and overseas. Her research spans the study of language and mind, the 'critical period' for first language acquisition, Specific Language Impairment, mental retardation, adult aphasia, progressive dementia, and the genetics of language. Her current work has focused on language development following hemispherectomy (removal of one hemisphere of the brain) in childhood.

Suggestions for further reading

In this book: Other chapters discussing language acquisition by children include 8 (pidgins and creoles), 13 (babies and language), 15 (language and the brain), 23 (sign languages), and 33 (children and second languages). The importance of grammar as a part of full language capability is discussed in chapters 11 (grammar in general), 12 (universal grammar), and 14 (animals and language).

Elsewhere:

Curtiss, S. *Genie: A Psycholinguistic Study of a Modern-Day 'Wild Child'* (Academic Press, 1977). A fascinating account of Curtiss's experiences and research with Genie and the implications of this work.

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Lane, H. *The Wild Boy of Aveyron* (Harvard University Press, 1976). A rich, very readable description of the case of 'Victor' and the issues his case raises.

Newport, E. L. 'Maturational constraints on language learning', in

Cognitive Science (1990) Vol. 14. Describes research on the effects of age on the acquisition of the grammar of American Sign Language (ASL) by Deaf individuals who were exposed to ASL at different ages, some not until adulthood.

Senghas, R. J., A. Senghas, and J. E. Pyers. 'The emergence of Nicaraguan sign language: questions of development, acquisition, and evolution', in J. Langer, S. T. Parker, and C. Milbrath, eds., *Biology and Knowledge Revisited: From Neurogenesis to Psychogenesis* (Lawrence Erlbaum Associates, 2006). Describes the emergence of a brand-new sign language in Nicaragua and the special properties young children bring to language learning.