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Second Language Acquisition and Age

Language acquisition has been a major topic of research in linguistics for several decades. Attempts to explain the differences between children's and adults' acquisition of first and second languages have led to the development of the Critical Period Hypothesis (CPH). This hypothesis states that there is "a biologically determined period of life when language can be acquired more easily and beyond which time language is increasingly difficult to acquire." (Brown 53) Originally, this hypothesis only included first language acquisition, but later researchers have extended it to second language as well. Many aspects of first language acquisition were brought into the domain of second language acquisition, but the assumption that the two types of acquisition are similar is fundamentally flawed.

Genesee's article explains the research of linguists who tried to relate the CPH to second language acquisition, but whose results remained questionable or inconclusive. Working independently, Penfield and Lenneberg suggested two reasons why language acquisition is difficult after puberty. Penfield maintained that the plasticity of the brain is lost "at puberty, after which complete or nativelike mastery of languages, first or second, is difficult and unlikely." (Genesee 98) This plasticity assigns functions to different areas of the brain and cannot be changed. Penfield noted that children who suffered brain damage before 9 to 12 years of age could recover language skills completely, but children who had suffered brain damage after puberty could not.

Lenneberg agreed that language learning after puberty was more difficult, but argued that the completion of "lateralization of language functions in the left hemisphere" (98) was the cause. Lenneberg studied children who suffered damage to the left hemisphere of the brain

before and after the age of 12. The transfer of language function to the right hemisphere was found in children who suffered damage before age 12, but rarely in those who suffered damage after age 12.

The main problem with Penfield's and Lenneberg's research is that it only applies to first language production. First language skills were studied before and after brain damage, but there were no studies of second language skills in healthy brains. Further research by other linguists, such as Krashen, provides evidence against the rigid completion or loss of plasticity or lateralization by puberty. (99)

Evidence of children outperforming adults in second language acquisition is misleading because the manner of learning instead of age may be the main factor in determining successful acquisition. Most children learn a second language in a natural setting, whereas adults learn in a formal classroom setting. Because adults possess many inhibitions and attitudes about speaking a foreign language, they are less likely to attempt meaningful learning. Most students in higher education are required to take foreign language courses in order to graduate. Other students take foreign language courses because they want to learn the language, but are not taught to study effectively or are afraid to speak in class for fear of embarassment.

Nevertheless, "research on the acquisition of authentic control of the phonology of a foreign language supports the notion of a critical period." The most compelling disadvantage for adults is the failure to "acquire authentic (native-speaker) pronunciation of the second language" (Brown 58) which unfortunately, many people judge as an extremely important feature of successful acquisition. Many adults who learned a second language can have fluent control of grammar and communicative functions, but also a foreign accent. This does not mean, however,

that their acquisition of the second language was not successful. In fact, it seems that adults exceed children in all aspects of second language acquisition, except for accent.

Blakeslee's article expands on the role of accent and pronunciation in second language acquisition. New research provides evidence that "the adult brain is capable of substantial change" (2) indicating that plasticity may not be as inhibited as dictated by the CPH. Although newborn babies are able to distinguish between the sounds of all human language, adults can not. Neuroscientists hypothesize that as humans grow older, information is embedded in the neural tissue as cells form circuits. Because speech comprises only a small section of the brain, speech sounds have limited space and "strong boundaries." Therefore, if the critical period does exist for humans, it should be impossible for adults to achieve native fluency in pronunciation.

Yet there are several individuals who learned a second language after puberty and attained native pronunciation. This fact led Dr. McClelland of Pittsburgh has tested the hypothesis on Japanese speakers who are learning English as a second language. He found that the subjects could produce native pronunciation of sounds in English (/l/ and /r/, which are allophones of the same phoneme in Japanese) after intensive training of exaggerated and natural speech in a relatively short amount of time. McClelland notes that the "subjects do not generalize what they have learned to all /l/ and /r/ sounds" (3) but the experiment is a promising start to training adult brains to adapt to new sounds. McClelland's findings have not yet been repeated in other experiments, but further research will be done on accent reduction and elimination in adults.

The Critical Period Hypothesis for second language acquisition has not been conclusively proven by research, nor has it been completely disproved. Most research indicates that CPH does not exist for all aspects of second language acquisition, but there is "powerful evidence of a

critical period for accent." (Brown 59) While there are many advantages to an early age for second language acquisition, there is little evidence to support the idea that adults are unable to successfully learn a second language. And further experiments like McClelland's may prove that fluent pronunciation is equally attainable for adults as it is for children.

Works Cited

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