

How infant language prepares the child's brain to read

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The linguistic architecture of sign language is similar to that of spoken language and it is comprehended and produced similarly as well. However, unlike hearing children who acquire spoken language from birth, deaf children often acquire sign language at ages well past early childhood. In this talk I discuss recent research investigating the effects of sparse linguistic input during early childhood from two different perspectives: language acquisition and brain language processing. First I ask what the content and trajectory of sign language acquisition looks like when it begins after early childhood. Next I ask how the adult brain process sign language after a lack of language acquisition during early childhood. These studies show that that the infant's remarkable capacity to acquire language is diminished by a lack of linguistic stimulation from the environment. When language is absent from the young child's environment, only simple language structures can be learned, and the mature brain processes language in atypical ways. These linguistic and neural effects of a late onset of language acquisition help explain why deaf individuals who are highly proficient in sign language can become literate, and why many deaf students struggle to learn to read well.