## Language as "something strange"

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In a 1997, Noam Chomsky offered this informal observation about language acquisition: "Like other kinds of growth, language acquisition happens easily at a certain age, but not later. There comes a time when the system doesn't work anymore. There are individual differences [...] but for most people, after adolescence, it becomes very hard. The system is just not working for some reason, so, you have to teach the language as something strange." (Chomsky, 1997, p. 128)

Before the relatively recent research in sign language acquisition so insightfully summarized by Mayberry and Kluender (2017), researchers had information about first language acquisition in childhood, second language acquisition in childhood, and second language acquisition after childhood. However, we lacked reliable information about first language acquisition after childhood. That is, we had [+child, +first], [+child -first], and [-child, -first], but we lacked [-child, +first]. Because of this lacuna, it was difficult for second language acquisition researchers and theorists to disentangle effects related to age from effects related to whether the language was the first to be acquired. The reason for this gap was largely practical. Except for a few very unusual cases (wild children, or cruelly isolated children, for instance), researchers lacked good examples of people who did not acquire a language as a child, but who learned, or attempted to learn, a language after childhood. Mayberry and Kluender convincingly show how research into acquisition of American Sign Language can help to fill this gap.

Much second language acquisition theorizing has contrasted child first language development with adult foreign language learning. My own early work, for example, proposed that domain-specific learning processes (then couched in the terminology of Chomskyan Universal Grammar) guide child language development, but that these are not available after childhood, so that adult language learning scaffolds on first-language knowledge and relies on non-language-specific learning processes (the "Fundamental Difference Hypothesis"; Bley-Vroman, 2009, and references cited there). An obvious weakness in the empirical support (or disconfirmation) of this hypothesis has been that age is proposed as the chief causal factor, but the effect of age

independent of the effect of having already acquired a first language was not considered.

The research that Mayberry and Kluender report is, at a very general level, consistent with Chomsky's informal remarks quoted above, and it brings us to a point where we can begin to put some flesh onto "doesn't work anymore" and "something strange." The present commentary focuses on two general areas of results emerging from Mayberry and Kluender's summary, and the implications for second language acquisition, and, indirectly, for language pedagogy.

First, the evidence summarized by Mayberry and Kluender show L1 learning after childhood to be incomplete, variable, and prone to error. While late L1 learners readily learn lexical items and combine them into simple sentences, they do not progress to morphosyntactically complex structures. As Mayberry and Kluender put it, development "becomes asymptotic at low level of language development." Neural processing results are consistent with the large picture.

For second language acquisition researchers, specifically those working in the generative framework, these results will challenge models that assume that the same Universal Grammar drives both child language development and adult language learning. The results are more comfortable for views that either altogether deny the continuity of UG-based system from childhood to adulthood, or that posit a selective impairment of such systems after childhood. Particularly challenging is the finding that morphosyntactically complex structures do not develop. Much depends precisely what is meant by morphosyntactic complexity, but if the deficit is global, even theories of selective impairment will face a significant challenge. Morphosyntactic complexity is at the heart of generative grammar. These challenges can perhaps be met, but they must be part of the context of second language empirical work and theory development.

From the point of view of language pedagogy, it means that all methods that attempt to have adults learn a foreign language "as a child" are highly questionable.

Second, it now seems clear that language acquisition after childhood is actually helped by knowledge of a first

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language acquired during childhood, at least from the point of view of competent use of the language and the employment of complex structures. From a 21st century vantage point, it is difficult to recall that, at least through the 1950s, knowledge of a first language was believed to be an obstacle to the acquisition of a second language, rather than a help. Habitual first-language language patterns interfered, rather than helped, in the formation of new habits. The picture, rather, is that post-childhood language acquisition cannot proceed as in childhood, but that an existing L1 can provide a kind of scaffold on which to build L2 knowledge. In Chomsky's metaphor, adults approach a foreign language as "something strange." Building on this metaphor, we might say that learning one language makes learning the second less strange. We can now give more concrete content to the metaphor: as Mayberry and Kluender state, "the brain system requires linguistic experience in order to potentiate its development from infancy to adolescence." Adult L2 knowledge may in part invoke non-language-specific systems which build

on L1 knowledge, as well as input, instruction, and the like. Adult L2 knowledge then will be of a different kind, both conceptually and neurally from childhood-developed knowledge. If this general picture is correct, one might expect variable outcomes in adult foreign language learning, as well as the observed effects of motivation, diligence, and teaching.

## References

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