

The Fundamental Difference Hypothesis

Differences between child L1 and adult L2 language acquisition:

1. very few adults reach L2 competence that is native-like
2. otherwise perfectly fluent nonnative speakers variable produce errors and nonerrors in the same linguistic environments, labeled *fossilized variation*
3. the adult L2 learner is not equipotential for language acquisition in the way the child L1 learner is
4. the adults learner's prior knowledge of one language has a strong effect, called *transfer* or *crosslinguistic* effects

Schachter rejects the UG-for-all position and argues that what a mature speaker of an L1 has as a result of L1 learning is a grammar of L1 stripped of those aspects of UG not incorporated into the L1 grammar.

Biology

If one accepts the claim of UG as an inherent, "biological" feature, then it follows that the brain of a child at the outset of language acquisition is distinct from the brain of that same individual when the language has been learned. On the other hand, some aspects of cognitive systems of humans and other mammals show remarkable *plasticity* throughout life.

Critical period for L1 acquisition

Periods of heightened sensitivity or responsiveness to specific types of environmental stimuli or input, bounded on both sides by states of lesser sensitivity → maturational constraints on first language learning. Studies of abnormal language acquisition indicate that individuals who began acquisition in childhood but later than the most typically active years show deficits in grammar acquisition. One proposed explanation for the critical period is that of hemispheric lateralization. There is considerable evidence that multiple critical periods exist for different components of language; lesions in the same region of the brain produced different types of aphasia according to age group.

Critical period for L2 acquisition (Principles and Parameters)

Adult Grammar (two possibilities):

- general schema (principles of UG which are said to be universal) plus information about how parameters have been set for a particular language
- specific set of parameter settings as instantiated in a particular set of rules or representations

A different perspective is to consider the development of a given principle of UG: there is a class of principles whose function is dependent on other properties, innate or noninnate. Subjacency (a principle which constrains extraction rules at the level of S-structure); it is dependent upon extraction phenomena such a wh-movement, topicalization, and so forth, which exhibit dependency relations between the extracted element and its trace. If the learner has not mastered structures that exhibit such relations, Subjacency will have nothing to constrain. Schachter extends this notion of the dependent emergence of certain principles and argues that certain principles of UG are triggered in L1 acquisition only if certain properties are found in the input to the child. If, in the course of development, such properties are not found in the input and incorporated into the grammar, the principles dependent on them do not subsequently form part of the adult grammars of speakers of these languages. The L2 language learning consequence of this view is that the NS of nonextraction language will end up with no clue at all as to the existence of the principle and will not have it available as a knowledge source to constrain the acquisition of an L2 as an adult → *Incompleteness Hypothesis*. UG as the initial state is not available as a knowledge source for the adult acquisition of an L2.

The study

Schachter looked for evidence for the Subjacency Principle in the grammaticality judgements of proficient English-speaking adults whose L1s were either Dutch, Chinese, Indonesian, or Korean, as compared with those of NSs of English. The principle states that no application of a movement rule can cross more than a single barrier, barriers for English being noun phrase (NP) and S.

- (1) What does the professor expect us to know for the exam?
- (2) Who did the President say he planned to appoint as ambassador?
- (3) a. What did Susan destroy?
What [_s did Susan destroy *t*]
b. *What did Susan destroy a book about?
*What [_s did Susan destroy [_{NP} a book about *t*]

The test involved judgements of well-formedness on sentences of the types illustrated below:

- (4) a. The theory we discussed yesterday will be on the exam.
b. *What did Susan visit the store that had in stock?
- (5) a. The judge rejected the evidence that the student committed the crime.
b. *What did they have to accept the idea that they couldn't operate by themselves?

The results:

The Dutch subjects performed as the English NSs controls (in Dutch Subjacency is instantiated as it is in English).

The Chinese and Indonesian accepted the grammatical sentences but showed only partial ability to reject the ungrammaticals (Chinese and Indonesian show only limited Subjacency effects).

The Korean subjects accepted the grammatical sentences, but performed randomly on the ungrammaticals (Korean shows no Subjacency effects at all).

Conclusion: The Korean subjects did not have access to UG!

In another study Johnson and Newport could show that the correct detection of Subjacency violations by L1 Chinese speakers of English L2 was clearly associated with age of arrival. They concluded that maturation affects the learning of both language-specific and language universal structures.

Continuity Hypothesis: UG in its entirety is fixed at birth and never changes over the course of development

Maturation Hypothesis: the principles of UG (or certain other linguistic properties) are subject to an innately specified maturation schedule → this means that there is a period before maturation during which the parameters associated with a certain principle cannot be set by the child, even though data may have been available in the input.

Windows of opportunity

There is a period *before* which and there is a period *after* which the principle is not available to the learner. In this view, for certain principles and parameters that depend on interaction with the environment, the principle or parameter will mature; there will exist a sensitive period for that principle or parameter; then the sensitive period will end and that principle or parameter will no longer be available for fixing.

Bibliography

Schachter, Jacquelyn (1996). "Maturation and the Issue of Universal Grammar in Second Language Acquisition." *Handbook of Second Language Acquisition*. Eds. William C. Ritchie & Tey K. Bhatia. San Diego: Academic Press, 159-193.