

Theory Construction in Second Language Acquisition

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Introduction

Language teachers in general have given up trying to find a theory of second language (L2) acquisition upon which to base their language teaching methodology. And it is of no wonder. While the linguists quibble over which sentences are intuitively grammatical and the psycholinguists are trying to figure out if children do imitate adult language or only imitate “deep structure” (Brown 1987), and researchers in L2 acquisition remain deeply divided over whether or not we want to construct a process or a competence theory, language teachers have merely gone about their business which, of course, is teaching. Most language teachers with experience and academic background have no problem finding methods, mostly eclectic, which work with their students.

Language teaching remains, as it always has been and probably always should be, more of an art than a science. However, the current situation does not dissuade those of us who can not stop asking the question: Just how do people learn (acquire, develop, whatever you will) a second language? Unfortunately, as much as we have advanced in the last thirty years, there is still no theory of L2 acquisition, in the sense that the majority of those who work in the field are in consensus that a certain theory has been proven beyond a doubt to account for the phenomena under study. In fact, there have, in recent years, appeared to be two polemic views towards how we might go about constructing a theory: there are those who claim that a theory of L2 acquisition should be a description of the processes that a learner goes through in the development of the second language (Tarone 1982, 1983, 1990; Ellis 1986, 1990 among others). Others believe that a theory of L2 acquisition should be a description and explanation of the learner’s competence (linguistic knowledge) (Gregg 1990a, 1990b). There has been a growing debate on whether we should focus our attention on “processing models” or “competence models.” I firmly believe that any viable account of the L2 acquisition process should include both.

Flynn (1987) presents a detailed and interesting account of two traditional theories of L2 acquisition, the Contrastive Analysis Hypothesis and the Creative Construction Hypothesis, and convincingly shows how these fail to fully account

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for the adult L2 learning process. She proposes a third theory, the parameter-setting model of Universal Grammar, and suggests that “it may explain how and why L2 acquisition appears to be both a contrastive and a constructive learning process” (Flynn 1987: 1).

In this article I will present a brief summary of the three theoretical approaches to the study of L2 acquisition and argue, as Flynn does, that the third is superior to the other two in terms of the contributions it can make towards the construction of a competence theory of L2 acquisition.²

Contrastive Analysis

The main proponents of the Contrastive Analysis Hypothesis were Charles Fries (1945) y Robert Lado (1957) who maintained that the principal obstacle for the L2 learner was the interference of the first language (L1). This hypothesis had two theoretical bases. First, it was based on structural linguistics whose goal was to describe different languages taxonomically. A language was seen as the sum of its parts. One could divide a language up into its separate components: phonological, morphological, syntactic, etc., describe them and even teach these separate parts to language learners and expect the language learner to add them all together to have a fully functioning language. Languages were distinguished for their differences. The second theoretical foundation upon which the contrastive analysis hypothesis was supported was behavioristic psychology which basically sustains that learning (and language learning as well) is a process of stimulus-response. Language learning is seen as the building up of new habits, one by one.

The Contrastive Analysis Hypothesis maintained that when the structures (basically syntactic and phonetic) of the L1 and L2 were similar, there would be positive transfer and the learner would have no problems in learning the target language structures. When the L1 and L2 differed, there would be negative transfer (interference) and the learner would have difficulties learning these structures. In order to identify these areas of difficulty and to prevent the problems students might have, a procedure was developed where the structures of the two languages under study were analyzed and compared. The hypothesis failed both theoretically and practically. Theoretically, our ideas of what language is were changing with the development of Chomsky's and his followers' work in transformational-generative grammar. In a like manner, our ideas about human behavior and learning were also undergoing dramatic changes. On the practical side, language teachers maintained that the predictive purpose of Contrastive Analysis failed: learners didn't always commit errors that the analysis had predicted they would and they made other errors in areas in which the analysis

² For a more complete account of these theories see Flynn (1987), Chapter 2: "Traditional Theories of L2 Acquisition."

had predicted they would have no difficulties. And finally, many errors did not reflect interference from the mother tongue at all but rather, were similar to the developmental errors children make in developing their first language.

The Creative Construction Hypothesis

Partially due to the failure of the Contrastive Analysis Hypothesis, in the 1970's, the idea arose that the L2 acquisition process was similar to that of children developing their first language, and that all learners, regardless of their L1, acquired a second language in the same way. The principal proponents of the hypothesis, the Creative Construction Hypothesis, are Heidi Dulay and Marina Burt (1974) and Stephen Krashen (1981, 1982).³ This hypothesis is theoretically based on the generative grammatical framework, but only in a limited sense. It incorporates general notions of universality, innateness, and creative constructive powers to hypothesize, albeit unconsciously, about the language.

Stimulated by the research in L1 acquisition which revealed that children follow a fairly regular route in the acquisition of certain morphemes and grammatical structures, researchers began to look for a similar route among L2 learners. Through error analysis researchers identified that the majority of L2 learners' errors were developmental and not due to interference. Many maintained that this was evidence that the psycholinguistic processes were the same for both L1 and L2 acquisition.

Among the problems this hypothesis has had are that its claims are too general, and not always testable. The evidence is inconclusive, inconsistent and contradictory. Many studies have had highly variable results. It ignores errors that do result from mother tongue interference or dismisses them as minimal or unimportant. And finally, although it claims to be based on current linguistic theory, its treatment of the L2 acquisition process continues to be based on descriptions of surface structure phenomena; therefore, its aims are descriptive and not explanatory.

As can be seen, these two hypotheses are in conflict. The first one claims that the L2 acquisition process in adult learners is greatly influenced by the L1. The second one maintains that the L1 plays a minimal role and that adults go about learning their second language in the same way children do their first. The evidence for one is counter-evidence for the other and vice-versa.

Universal Grammar

³ See also Dulay, Burt and Krashen (1982).

Universal Grammar, developed and put forth by Noam Chomsky⁴, but used as a theoretical framework in L2 acquisition research by Flynn (1987, 1990); White (1987, 1990); and Liceras (1986, 1990), can reconcile the two conflicting hypotheses, account for the data derived from both and explain how the L2 acquisition process is both a contrastive and creative one at the same time.

The goals of Universal Grammar are twofold: 1) to describe language as a property of the human mind; and, 2) to explain its source (Cook 1989). It's central concept is that language is a system of principles, conditions, and rules which are properties of all human languages. It distinguishes itself from other grammatical theories in that it is a theory of knowledge, not behavior. Therefore, Universal Grammar contains a set of principles which is common to all languages; and a set of parameters which varies from language to language. It depends on the individual language how it will set the parameters, and it is this difference in the setting of parameters which distinguish the different languages of the world (Cook 1989).

The Structure Dependency Principle

An example of a principle which seems to be common to all known human languages is the Principle of Structure Dependency, which maintains that the "knowledge of language relies on the structural relationships in the sentence rather than on the sequence of items." (Cook 1989: 2) For example, in the following sentences:

- a. Tom will always love teaching.
- b. The new foreign students will arrive next week.
- c. The letter which will help you get the job will arrive tomorrow.

one must have a knowledge of both syntactic categories and the structural relationship of the elements of the sentences in order to transform them into yes/no questions. It's not just a question of moving the nth word of the sentence to the front. In sentence (a) the second word is fronted to get the correct yes/no question⁵, and in (b) the fifth word is fronted⁶. Nor is it a question of moving the auxiliary of the verb phrase to the front of the sentence. One must know which auxiliary verb is fronted. In the case of (c), it's not the first "will" which is fronted⁷, but rather the second one, which is the auxiliary for the main verb

4 The specific proposals of Universal Grammar are set forth in Government and Binding Theory (Chomsky 1981) and developed further in *Knowledge of Language* (Chomsky 1986a) and *Barriers* (Chomsky 1986b).

5 Will Tom always love teaching?

6 Will the new foreign students arrive next week?

7 Which would erroneously give us: *Will the letter which help you get the job will arrive tomorrow?

phrase⁸. Of course, for a speaker to be able to do this, he must understand the hierarchical structural relationship of the elements of the sentence. All languages of the world appear to obey the Structure-dependency principle. However, languages differ in the kinds of structures that can be moved around.

Parameter Setting

Chomsky maintains that the child is born with a certain innate knowledge. This knowledge, which incorporates both general principles and parameters, constitutes universal grammar⁹. Upon acquiring her first language, the child learns how these general principles apply to the language and which values are appropriate for the parameters of the grammar (Cook 1989: 1-2).

An example of a parameter is that of the Head Parameter, which states that phrases can have their heads either to the left or to the right of their complements. Languages differ in that they can be head-first or head-last. English and Spanish are head-first, whereas Japanese is head-last, as evidenced in the following examples:

- a. English: The child who eats the rice is crying. (Cook 1989: 77)
- b. Spanish: El niño que come el arroz está llorando.
- c. Japanese: Go han o tabete iru ko ga naite imasu.
(rice eating is child crying is) (Cook 1989: 77)

In these examples, it can be noted that for both Spanish and English, the subject (the head of the sentence) comes first, followed by the predicate (the complement). In Japanese, the opposite is observed. The complement is first, followed by the head. This ordering of phrases within a sentence is not haphazard. For both English and Spanish, all modifiers follow their heads in noun, verbal, and prepositional phrases and relative, adverbial and adjectival clauses¹⁰. In Japanese, the modifiers precede the heads in these phrases and clauses. Universal Grammar's view of L1 acquisition is that it is a process whereby the child, based on positive evidence (input) from the environment, sets the parameters of the grammar that characterize her language. Those working within this framework in second language acquisition claim that L2 acquisition is a process of resetting the parameters of the L1 to conform with the parameters of the L2 based on the input the learner receives. Where the values of the parameters between the L1 and L2 do not match, the learner must assign a new value to the parameter. Where these values match, no new value will have to be assigned.

⁸ This time giving us the well-formed yes/no question: Will the letter which will help you get the job arrive tomorrow?

⁹ Lower case letters are used when referring to the concept and upper case when referring to the theory.

¹⁰ Hall (1994) points out that for English, one exception to the head-first ordering are adjectival phrases where the modifier comes before the noun. (For a further explanation of the consequences of this exception, see page ten of this article.)

Those researchers who work within this framework claim that both child L1 and adult L2 acquisition are constrained by the principles and parameters of Universal Grammar (Flynn 1987).

In a recent study, Flynn found that Japanese and Spanish speakers learning English were both sensitive to the head directionality of both their L1's and the L2. Whereas the Japanese speakers' errors corresponded to an early level of English L1 acquisition of complex sentences, the Spanish speakers' pattern corresponded to more advanced levels of development. Flynn explains that the differences observed between the two language groups could be explained that for the Spanish group the head directionality of the L1 matched that of the L2 and "learners can consult this in the construction of the L2 grammar. In the case of the Japanese speakers, since the configuration of the L1 does not match that of the L2, a new one must be established" (Flynn 1987: 186-187).

Hall argues that Spanish speaking students of English have problems with adjectival phrases in English because, although English is a right-branching (head-first) language as is Spanish, in English, the adjective follows the noun it modifies. "These students wrongly assume that English obeys the head-first ordering principle as well as their native language does" (1984: 28). These students' knowledge of Spanish as a right-branching language perhaps "interferes" in their L2 learning process of adjectival phrases; however, this knowledge is reinforced by the input they receive from English where they notice that English is also a right-branching language. This "interference", according to Universal Grammar Theory, should help the learners because they do not have to reset the parameter for directionality of heads and modifiers for most clauses and phrases. The students merely must learn the exception that applies in English for adjectival phrases.

It is in this way that Universal Grammar may explain how and why second language learning appears to be both a contrastive and a constructive learning process at the same time.

Conclusion

The theory as a model of second language acquisition is not without its faults and criticisms, of course. Universal Grammar deals with the knowledge and acquisition of a limited aspect of language: syntax, and so far, has only examined an extremely limited number of syntactic structures. It does not attempt to account for how learners acquire syntactic structures outside the realm of Universal Grammar. In addition, although it may be able to account for differences among learners from different native language backgrounds, it does not account for the differences among learners with the same first language, or for the variety in the degree of eventual success. (As opposed to the uniformity

among children in acquiring the syntactic structures of their native language).

Finally, there are those who argue that the adult second language acquisition process is markedly different from that of child first language acquisition, where, in adults Universal Grammar and the innate ability to construct a grammar no longer operate and, only a knowledge of the first language and a capacity for general problem-solving processes substitute for this loss (Bley-Vroman 1990: 54). I believe that this controversy can ultimately be settled through empirical inquiry of the second acquisition process utilizing theoretical models of the type set forth in Chomsky's Universal Grammar. It is only in this way that we will be able to confirm or disconfirm the claims made thus far.

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