

ARE FIRST AND SECOND LANGUAGE ACQUISITION COMPARABLE PROCESSES? ARGUMENTS FOR THE NON-EQUIVALENCE OF L1 AND L2 LEARNING*

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ABSTRACT. *This paper discusses some of the main approaches to the study of second language acquisition and their implications with regard to the issue of whether L2 learning is essentially a similar process to L1 learning or a different one. After discussing three theoretical approaches that could be used as support for an equivalence position (i.e. Monitor Theory, Cognitive Theory, Universal Grammar), three other approaches (i.e. inaccessibility of Universal Grammar in second language acquisition, Language Transfer, and the Linguistic Interdependence Hypothesis) are argued to constitute stronger evidence for the distinctiveness of L2 acquisition and its non-equivalence to L1 acquisition.*

KEYWORDS. *Second language acquisition, L1 acquisition.*

RESUMEN. *Este artículo presenta algunas de las principales propuestas teóricas en el estudio de la adquisición de una segunda lengua, con el fin de ver si se puede tomar partido acerca de si cabe considerar la adquisición de L2 como un proceso esencialmente idéntico o distinto de la adquisición de L1. En primer lugar se presentan aquellas posiciones teóricas que podrían constituir evidencia de una equivalencia entre el aprendizaje de la L1 y la L2, concretamente se incide en la Teoría del Monitor, la Teoría Cognitiva y la Gramática Universal. A continuación se describen los tres enfoques teóricos que aportan una mayor evidencia a la conclusión final de que el aprendizaje de la L2 es claramente distinto al aprendizaje de la L1: la inaccesibilidad de la Gramática Universal en la adquisición de segundas lenguas, la transferencia lingüística, y la Hipótesis de Interdependencia Lingüística.*

PALABRAS CLAVE. *Adquisición de segundas lenguas, adquisición de L1.*

The question of whether L1 and L2 acquisition are comparable processes or rather different ones is one of the main theoretical problems that underlie the study of second language acquisition. Much of the research conducted on L2 acquisition processes assume either one of these two conflicting approaches without further addressing the

central discussion of what evidence exists to support one or the other. In this article, I intend to present some of the empirical and theoretical bases for each position, before concluding that the ‘difference’ approach is the one that currently looks as the most plausible one.

1. L1 AND L2 LEARNING AS COMPARABLE PROCESSES

The position that L1 and L2 learning are comparable processes is shared by three groups of clearly differentiated researchers. First, there are those who endorse the principles of the Monitor Theory envisioned by Krashen (1982, 1985). Next, we may find most researchers working within the framework of cognitive psychology (McLaughlin 1987, 1990; Bialystok 1988). The third group is formed by those who stand for a nativist theory of second language acquisition, and more particularly those who embrace a Universal Grammar (UG) theory (Gregg 1989; White 1996; Flynn 1991; Finer & Broselow 1986).

1.1. *Monitor Theory*

Krashen built this theory around five different hypotheses (Krashen 1982, 1985), which were all based on the basic assumption that second language acquisition was nothing but a late repetition of first language acquisition, with some differences in the amount and the quality of input received by adults and children, as well as some differences regarding the *position* (either *up* or *down*) of the “affective filter” in the learner’s mind. These two types of differences would account for the different outcomes of adult and child language acquisition. What would remain unaltered, according to Krashen, would be the internal language processing system and the mechanisms used for the acquisition. Input would therefore be the key element for language acquisition, and would be responsible for the final level of proficiency in the second language, regardless of any action taken by the acquirer, such as conscious study and analysis of the target language.

One very controversial aspect of Krashen’s theory has been the postulated distinction between learning and acquisition, which he argued to be two clearly distinct processes. If we accepted this distinction, only the latter would be comparable to first language acquisition, since Krashen defined learning as a completely different process, in which consciousness took an active participation. Those researchers working within this framework would say that second language acquisition is like first language acquisition, but only those people who develop knowledge of a second language in the same manner as they did with their first language can be considered *second language acquirers*, in opposition to *second language learners*. The previous statement is quite a circular argument, as critics of the Monitor Theory (notably McLaughlin 1987) have pointed out.

1.2. *Cognitive Theory*

Researchers working under the cognitive tradition of psychology maintain that there is no reason to create a distinction between learning and acquisition, or even between language learning and the learning of any other skill. McLaughlin (1987, 1990), Bialystok¹ (1988) and Johnson (1996), among others, argue that there is one single cognitive mechanism of incorporating knowledge, which is applied to any kind of knowledge, whether it is a foreign language or, say, the ability to play the piano. Ellis (1990: 176) outlines the main purpose of cognitive theory applied to language learning as being able to answer three basic questions:

- i. How is knowledge initially represented?
- ii. How does the ability to use this knowledge develop?
- iii. How is new knowledge integrated into the learner's existing cognitive system?

With regard to the initial representation of knowledge, this is realised by first incorporating selected items from the environment into short-term memory, and then transferring some of this information into long-term memory. Previous knowledge, degree of attention to the feature, repetition, and motivation or interest in a particular feature will be responsible for the transfer of some items into long-term memory and the non-transfer of some others.

The ability to use knowledge that is already represented in the mind will depend on two dimensions: the control/analysis dimension, and the automatic/procedural one. These two dimensions will determine the fluency (automatic) and accuracy (analysis) of a speaker, and they may be developed independently, although the ideal state is for them to develop in a balanced progression (Bialystok 1988).

Finally, the integration of new information into the existing cognitive system involves the use of a strategy called 'restructuring', by means of which the organization of knowledge is constantly modified in order to accommodate new items that may not totally fit into the existing pattern (McLaughlin 1990).

This theory views L2 learners as no different from L1 speakers, except for the amount of knowledge of the language incorporated into the short- and long-term memory, and its degree of integration into the existing cognitive system. L1 speakers are normally able to retrieve information more automatically -and have a larger data-base of items- than L2 speakers, although there is no reason for a L2 learner not to develop a second-language system comparable to that of a native speaker.

1.3. *Universal Grammar Theory*

Many linguists would subscribe to the claim that children learn their first language due to the existence of an innate Universal Grammar in their mind. The main argument to support this claim is the apparent ease with which children learn their first language in spite of their mental immaturity and the deficiencies of the language they are exposed

to. Chomsky pointed out the paradox of learning such a complex system with such a limited set of capacities and *imperfect* external conditions:

“A consideration of the character of the grammar that is acquired, the degenerate quality and narrowly limited extent of the available data, the striking uniformity of the resulting grammars, and their independence of intelligence, motivation and emotional state, over wide ranges of variation, leave little hope that much of the structure of language can be learned by an organism initially uninformed as to its general character.”

(Chomsky 1965: 58)

Nevertheless, such wide agreement vanishes when we get to the acquisition of a second language, and the positions tend to be more divergent and confronted. On the one hand, we have those scholars who maintain the centrality of UG in second language acquisition (Gregg 1989; White 1989; Flynn 1991). On the other hand, there are those who argue that UG is not fully implicated in SLA (Bley-Vroman 1989; Birdsong 1992; Schachter 1996a), although the exact role of UG -whether it is only partially active or no active at all- and the reasons why it is not as central in second language acquisition as it is in first language acquisition are still under dispute.

Skehan (1998) summarises divergent positions within UG theory with regard to SLA as follows:

- (1) UG is still functioning, in the second language case, in exactly the same way as in first language
- (2) UG is completely unavailable for the second language learner
- (3) UG is essentially inoperative in the second language case as a system which can be newly engaged, but the effects from its operation in first language acquisition are still available.

(Skehan 1998: 78)

Gregg (1989) bases his claim for the use of a generative approach in the study of second language acquisition on the sound internal coherence and formality of generative grammar over more discourse-based approaches. He argues against what he calls *reductionist explanations* such as Skinner's (1957), and discourse-functional approaches to language -as the one taken by Givón (1985)- which in general “attempt to show that phenomenon X is nothing more than a special case of phenomenon Y, and that X is thus explained if Y is explained” (Gregg 1989: 25). Gregg's argument against those *reductionist explanations* is that they do not contribute to the consolidation of SLA theory, and that it makes more sense to consider language as a system independent from any other human knowledge or ability.

Finer & Broselow (1986) showed that there is long-distance reflexive binding even in those cases where such binding does neither exist in the learners' first language grammar nor in the L2 input. This evidence was used to claim there is direct access to

UG by adult second language learners, which eventually would take us to the acceptance of the essential similarity between L1 and L2 learning.

As Skehan (1998) concedes, accepting the existence of a fully-active UG in second language learning “would make important links between second language acquisition and linguistic theory”, which is one of the main goals of many SLA researchers that work within the UG framework. However, the UG approach to SLA is not as precise and well-tested as it may appear at first glance, as most UG studies are rather based on the researcher’s introspective analysis of sometimes anecdotal evidence than on actual empirical one. According to Skehan, UG studies suffer from a lack of external validity, which logically “undermines the relevance and significance of the UG-based account” (1998: 79). Consequently, in section 2.1 below, the position that claims the inaccessibility of UG in SLA will be discussed as one of the arguments for the difference between L1 and L2 acquisition.

2. ARGUMENTS FOR THE DIFFERENCE BETWEEN L1 AND L2 LEARNING

This paper takes position for the essential difference between L1 and L2 acquisition, and this section presents three different arguments that can be put forward to prove the different characteristics and condition of SLA with respect to L1 acquisition. These arguments are based on three different ways of approaching SLA: UG research illustrating the inaccessibility of UG in SLA; language transfer studies; and the Linguistic Interdependence Hypothesis.

2.1. *Inaccessibility of UG in SLA*

A position which has contributed highly valuable proposals to the debate on second language acquisition is Bley-Vroman’s (1989), in which the so-called “logical problem of foreign language learning” is described as the paradox of having to explain “the quite high level of competence that is clearly possible in some cases, while permitting the wide range of variation that is also observed” (Bley-Vroman 1989: 50), which leads the author to proposing the Fundamental Difference Hypothesis (FDH). This hypothesis accounts for the existence of two separate mechanisms in L1 and L2 acquisition, and it claims that a child’s language acquisition system is made up of: a) Universal Grammar; and b) a Specific Language Learning Procedure. The adult, however, is claimed to make use of: a) Native language knowledge, in order to create “a kind of surrogate for Universal Grammar”; and b) a General Problem-Solving System. These two differing mechanisms (*L1* for *UG*, and *General Problem-Solving System* for *Specific Language Learning Procedure*) explain the differences between L2 and L1 acquisition, as well as why L2 learners are so different among themselves in terms of final success, regardless of the uniformity or variety of conditions in which they may learn the L2.

Bley-Vroman thus provides a quite elegant explanation for the well-tested phenomenon of the influence of the L1 in the formulation of hypotheses about the L2. Broselow & Finer (1991) similarly claim that both UG and native language interact in the formulation of hypotheses by the second language learner:

“It appears at this point that the ‘learning module’ in L2 acquisition accesses the same grammatical principles and markedness relationships that are available to the child learning a first language. However, rather than beginning with the least marked setting for a given parameter, as children are assumed to do, these results at least suggest that adult learners of a second language appear to transfer their NL parameter settings, in both phonology and syntax, regardless of whether the L1 setting is more or less marked than the L2 setting”.

(Broselow & Finer 1991: 55)

The above quote illustrates the authors’ attempt to acknowledge the mediating role of L1 in second language acquisition without giving up their attachment to the UG approach. In a similar vein, Coppieters (1987) concludes his empirical study with native and very competent non-native French speakers that NSs and NNSs develop “significantly different grammars” (Coppieters 1987: 565). The particularity of his claim resides in the explanation of the nature of this difference. Apparently, NNSs and NSs are most similar in areas normally considered within UG, whereas the greatest divergence is those areas traditionally covered by functional grammar. Coppieters’ results are somehow puzzling, since they present second language learners as unable to reach the same level -or even a comparable type- of competence as first language learners. However, the author concludes that the results in those linguistic areas that can be considered within UG are comparable for both L1 and L2 speakers. Therefore, the contradiction is evident between claiming that UG is equally active in both L1 and L2 learning, and simultaneously affirming that L2 learners have a different set of intuitions about the language from L1 learners.

One may not comment on Coppieters’ paper without mentioning Birdsong’s (1992) critical review and replication study. Birdsong’s main criticisms concerned some methodological decisions in Coppieters’ study, as well as the limited face validity of some results that were crucially used by Coppieters in raising his claims. In essence, Birdsong’s position is that: “the Coppieters study must be viewed with some skepticism. At the very least, it should be evident that the two main questions of maturational effects in L2A -whether there are competence differences between NNS and NS, and if there are, which linguistic domains are affected- remain open” (Birdsong 1992: 716).

One interesting finding reported by Birdsong is that some non-native speakers performed within the range of native speakers, which was in contradiction with findings by Patkowski (1980), Coppieters (1987), and Johnson & Newport (1989). Therefore, Birdsong claimed that it is possible for non-native speakers to reach native-like competence. The discussion on ultimate attainment in second language acquisition is still open to enquiry (see the works included in Birdsong (1999) for a recent selection of

studies and discussions on this topic), but regardless of whether some learners can eventually reach a native-like pronunciation, grammar, discourse, etc., Bley-Vroman's claims of the inherently different processes involved in L1 and L2 learning remain well-argued and very convincing.

With regard to the role played by UG in second language learning, Birdsong states that "the data relevant to the locus of maturational effects do not support the idea that UG-type structures enjoy a privileged immunity" (1992: 743). He, as many others, rather disregards UG as being involved in second language acquisition. As it has already been pointed out elsewhere (Schachter 1996b; Selinker 1996; Llorca 2000), applying a model like UG, which was conceived as a model that could contribute to the analysis and exploration of monolingual first language acquisition, to second language acquisition has brought some problems that can only be attributed to the divergence in nature between L1 and L2 learning. Instead, it is quite clear that considering these two processes as separate will help clarify the role of UG in language learning.

2.2. *Language transfer*

If one linguistic phenomenon is characteristic and exclusive of L2 learning, that undoubtedly is language transfer. Research seems to confirm that some sort of language transfer or cross-linguistic influence does really exist in SLA (Gass & Selinker 1983; Kellerman & Sharwood-Smith 1986; Ringbom 1987; Odlin 1989). Therefore, L2 learning must necessarily be different from L1 learning, if only for the existence or lack of existence of transfer from another –previously acquired– language.

The importance attached to language transfer in the description of second language acquisition has greatly varied along the short history of SLA research, from the leading role attributed to it by Lado (1957), to its dismissal as a significant factor by Dulay, Burt & Krashen (1982). More recently, language transfer has regained its role as an important –but not exclusive– element in SLA. Gass & Selinker (1983) and Kellerman & Sharwood-Smith (1986) are collections of papers that illustrate the varied contexts where transfer may appear, and Odlin (1989) shows that language transfer affects all linguistic levels: from discourse to phonology. Second language acquisition is influenced by many factors, and language transfer undoubtedly is a key one. Overgeneralization and simplification are processes common to both L1 and L2 acquisition, but language transfer is specific of second language learning and never fails to appear. This fact could be enough proof for the distinctiveness argument. Language transfer clearly makes the process of learning a second language unique and different from child first language acquisition. However, a further line of argument may still be explored within the area of bilingualism and bilingual education studies.

2.3. *Linguistic interdependence in bilingual speakers*

The linguistic development of bilingual students has been extensively treated in the literature of the last 25 years. Lambert (1974) distinguished between additive and

subtractive bilingualism, on the basis of the interrelation between bilingual competence and the dominance of the languages in question. Additive bilingualism appears when speakers' incorporation of a new language does not produce any negative effect on the L1; in that case, attitudes towards the languages and the communities involved are positive, and improvement in one language benefits the other. This is observable in Canadian immersion programs, in which students belonging to the high prestige ethnolinguistic group (English speakers in Canada) have no objection to participating in a program which uses French as the only language of instruction. Subtractive bilingualism, on the other hand, appears in low-prestige ethnolinguistic groups, in which the acquisition of a second language implies a transmission of higher values toward that language and its culture, as well as a loss of their own socio-cultural values. In such conditions, the acquisition of L2 works against the maintenance of L1, generating ambiguity and insecurity in the subject, and hindering not only adequate language development but also instructional processes. This process will eventually lead to language substitution in ethnic minorities or groups of immigrants.

Lambert's (1974) distinction was followed by several proposals that attempted to explain the relations between the development of L1 and L2, but none was as widely supported as Cummins' (1979) idea of "linguistic interdependence". According to him, as far as the instruction in language X is effective in promoting competence in that language, transference of this competence onto a language Y will happen whenever there is an adequate exposure to Y, either at school or in a naturalistic environment, plus an adequate motivation to learn this language Y. The linguistic competence of bilingual speakers is considered to be interdependent, that is, competence in L1 and L2 are closely related. In other words, the competence reached in a given language X is dependent on the competence reached in language Y, provided there is enough input and motivation to learn language X. The hypothesis assumes the existence of a common underlying competence in L1 and L2 that enables the transfer of skills from one language to another. This hypothesis, although still controversial², has been supported by several studies (Cummins 1991; Arnau 1992; Verhoeven 1994; Durgunoglu 1998; Hugué, Vila & Llorca 2000).

In addition the concepts of interdependence and transfer that appear more or less implicit in the hypothesis have been largely supported by many other studies. Among them:

- studies that analyze the results of bilingual education programs (Cummins & Swain 1986; Genesee et al. 1986; Lasagabaster 2000)
- studies that relate age of arrival of immigrant students to SLA (Oyama 1976; Johnson & Newport 1989; Flege 1999)
- studies that relate the use of two languages to cognitive development and academic success (Johnson 1991; Cenoz & Valencia 1995)
- studies about the relations between competence in L1 and L2 (Lambert & Tucker 1972; Cummins 1991)

One very clear implication of invalidating the independence of the two linguistic systems of bilingual speakers is that only in the case that L1 and L2 were stored separately could we claim that their learning processes were equivalent, since they were both occupying an empty space in the mind. Once we admit there is some kind of connection or interdependence between the languages of a bilingual person, then we have to support the idea that learning the L2 is somehow mediated by the L1, and therefore the processes of learning one and the other are essentially different.

3. CONCLUSIONS

Based on what has been said above, it must be concluded that L1 and L2 learning are clearly different processes, and therefore attempts to transfer findings and expertise obtained from research on the acquisition of L1 onto L2 acquisition are deemed to fail, or at least will surely lead to misconceptions on the nature of second language acquisition, as research will be guided by a biased account of what it means to learn a second language.

A great number of theories of second language acquisition have been proposed so far, but research is still a long way from being close to finding a definitive answer to the question of how a second language is learned. In the meantime, we can rely on the pieces of evidence we have available in order to assert the distinctiveness and originality of this complex and fascinating process.

Implications for second language teaching are clear, as it has been sometimes claimed that second languages should be taught in a way that closely reproduced the pattern of first language acquisition (e.g. teachers should respect the “silent period” of learners). Concluding that L2 is a completely different process forces us to disregard such approaches to language teaching and rather embrace a methodology and a set of teaching activities that makes the most out of what the learner already knows (i.e. the L1) and exploits to the maximum the language awareness potentiality of the learners.

NOTES

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1. Bialystok, in a previous paper (1982), presents a model that tries to unify cognitive proposals with Krashen's theory, and she proposes two different types of linguistic knowledge: explicit and implicit. She does not maintain that they are kept totally separate -as Krashen would do- but that there is an interface and a flow of information from one to the other. This model was considerably changed in her 1988 paper, which is the one quoted above.
2. De Houwer (1995) argues that the question of whether the two languages of a bilingual child are stored separate or together is far from settled, and further claims that bilingual children do not take excessively different paths from those taken by monolingual children. She concludes that “much remains to be discovered” (1995: 249), which mirrors the still tentative stage at which we are when dealing with the issue of bilingual language acquisition.

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