A REVIEW OF INTERLANGUAGE SYNTAX: LANGUAGE TRANSFER AND LANGUAGE UNIVERSALS

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In attempting to come to an understanding of the processes involved in acquiring the syntax of a second language, it has become evident that we must consider generalizations and approximations of target language (TL) structures. However, it is also clear that an explanatory account of L2 acquisition cannot be given on the basis of the TL alone. There are additional factors that shape the progress of development. Two major ones have been suggested: language transfer and language universals. The former has a long history and tradition (cf. Gass and Selinker 1983 for a discussion), while the second has only recently begun to attract attention. In this paper I will review the separate literature of each of these areas and show that both are important not only as single shaping factors, but also as interacting ones.

LANGUAGE TRANSFER

The study of language transfer in second language acquisition has had an unusual history. Lado (1957), in turn influenced by Fries (1945) and the bilingual studies of Haugen (1953) and Weinreich (1953), published an influential work in which he provides what he takes to be principles underlying learners' behavior. This was the basis of the contrastive analysis hypothesis which relates learner difficulty to differences between the target language and the native language. These differences were determined on

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the basis of a contrastive analysis of the two languages in question because, as Lado (1957:2) put it:

Individuals tend to transfer the forms and meanings and the distribution of forms and meanings of their native language and culture to the foreign language and culture—both productively when attempting to speak the language and to act in the culture, and receptively when attempting to grasp and understand the language and the culture as practiced by natives.

However, it became apparent to researchers and teachers involved with second language learners that transfer, or the use of the L1, was not the only active force in second language learning. On the one hand, not all that a learner produced could be attributed to transfer from the native language, while, on the other hand, one could find instances when transfer, as predicted by a contrastive analysis, could have occurred, yet didn't. Data (or lack thereof) of this sort led researchers to call into question transfer as a dominant force in L2 learning. In fact, Dulay and Burt (1974) claim that it is the structure of the L2 and not the L1 which guides L2 acquisition.

In addition, there were other reasons for the shift in emphasis in the late 60s and early 70s away from language transfer studies. Transfer studies, both linguistic and psychological, had been associated with the dominant theoretical schools of the time—structural/behaviorism—whereas research in the late 60s was strongly influenced by a Chomskyan framework, clearly anti-behaviorist in its orientation. These factors were influential in causing researchers to downplay the role native language influence was thought to have on L2 acquisition. Language transfer seemed to be an "embarrassment" since there was no way of incorporating it within existing models. Further support for the lack of L1 importance could be offered since many of the errors previously attributed to the L1 could be accounted for differently, for example, by "developmental" factors.

As a result, researchers turned their attention to similarities in the acquisition process among all language learners regardless of native language background. As attention was focused on similarities in language learning, there was a concomitant disinterest in the phenomenon of language transfer and the dissimilarities among language learners (e.g., Richards 1971). Therefore, both the theoretical school with which transfer had been associated and the interest in looking at the common factors of language learning turned the attention of many researchers away from language transfer. In terms of accountability, this was theoretically possible, since with most data there was ambiguity with regard to the

source of a given error. Because other possible sources of errors existed, many researchers felt justified in claiming that transfer could clearly not be the major or only source of learners' errors.

However, in the past few years there has been a resurgence of interest in the phenomenon of language transfer, not as a mechanical transference of first language structures but as one of a number of cognitive mechanisms which underlie second language acquisition. I will return to this point later.

Criteria for language transfer

A question which arises in a discussion of language transfer is how to determine when something has been transferred or when language transfer has occurred. As mentioned above, there are many instances of what can be viewed as language transfer but which can also be given a different and equally reasonable explanation. That is, there might be a form used by a learner which resembles a form in the learner's native language. A most likely explanation is transfer. However, if we see the same elements in the speech of learners whose native language does not have this form, then we must question transfer as the sole explanation. The fact that L2 production contains forms which resemble forms in the native language does not necessarily mean that transfer as a process has taken place. Selinker (1966:103) defined language transfer as

a process occurring from the native language to the foreign language if frequency analysis shows that a statistically significant trend in the speaker's native language... is then paralleled by a significant trend toward the "same" alternative in the speaker's attempted production of the foreign language sentences, phonetic features, phonetic sequences, etc.

To that definition Gass (1979) added the requirement that a direct comparison be made between speakers of a language with the pattern in question and speakers of a language without the pattern in order to show language transfer. However, neither of these approaches will help in teasing apart the possible causes of ambiguous cases, if indeed there is a single etiology for language behaviors.

Recent perspectives on language transfer

In recent studies, transfer has been examined from an increasing number of perspectives and it has been observed that first language influences occur not only as *direct* linguistic reflexes. Zobl (1980a, 1980b, and 1982) views

transfer and developmental influences not as two opposing processes, but rather as interacting ones. He argues that the effect of the L1 can be manifest (1) in a prolongation or delay in the restructuring of an interlanguage rule or (2) in the number of rules traversed on the path from the acquisition of one form to another.

With regard to the first type of L1 effect, he presents data suggesting that if there is a natural developmental stage which corresponds to a pattern in a learner's native language, the learner will use that pattern longer than if it were not in the native language. To give an example, Spanish speakers often use preverbal negation in English, as in (1), an example from Schumann (1976):

(1) I no use television

As this structure is similar to the negative in Spanish, its occurrence has often been attributed to transfer. However, we also find that preverbal negation is typical even of speakers of languages which do not have preverbal negation. However, according to Zobl, the difference between these two language groups is that Spanish speakers will use this negation form longer than will speakers who do not have preverbal negation in their L1. This is clearly an influence of the native language on the developing interlanguage, but very different from typical treatments of transfer. Similarly, comparing Japanese speakers to Spanish speakers, Schumann (1982) claims that no + VERB forms in Spanish-English IL will be more pervasive and enduring.

As an example of the second type of L1 effect, Zobl (1982) presents data on the acquisition of articles by a Chinese child (from Huang 1971) whose native language does not have the formal category of articles and by a Spanish child (from Hernández-Chávez 1977) whose native language does have articles. The Chinese child initially used a deictic determiner to approximate English article usage. For the Spanish child the deictic determiner did not occur as a stage of acquisition preceding the use of English articles. Thus, the route of acquisition differed for the children of different language backgrounds.

Wode (1977) claims that the acquisition of prerequisite structures must occur before transfer can take place. In other words, L1 rules can have an effect only after L2 developmental prerequisites have been met. A crucial prerequisite is a certain amount of similarity between L1 and L2 structures to enable the learner to recognize that a similarity between the L1 and the L2 structures exists. To support this he presents evidence from German

children learning English. Initially, these children negate utterances with no, as in 2 and 3:

- (2) no cold
- (3) no play baseball

At a later stage the children produce utterances such as those in (4) and (5):

- (4) that's no right
- (5) it's no Francisco

In (2) and (3) there is no similarity between the IL forms and the L1, whereas in (4) and (5), there is (NEG placement with respect to the copula). It is at this stage that these children begin to produce utterances such as those in (6) and (7) which are L1 influenced, as exemplified by the postverbal negation:

- (6) I'm steal not the base.
- (7) Marylin like no sleepy.

Similarly, in a study comparing a Japanese, a German, and a Finnish child's acquisition of interrogative structures, Keller-Cohen (1979) found that the lack of congruence between L1 and L2 structures resulted in the slower development of the productive use of yes/no questions in English on the part of the Finnish child in comparison with the German and Japanese children.

Yet another example of new perspectives on L1 influence comes from Schachter's examination (1974) of the production of English relative clauses by Persian, Arabic, Chinese, and Japanese students. She found that in a set of 50 compositions from each language group, Chinese and Japanese learners produced far fewer relative clauses than did the Persian and Arabic students. She hypothesized that the major syntactic difference between Chinese and Japanese on the one hand and English on the other (i.e., position of the head noun with regard to the relative clause), a difference which does not exist between Arabic and Persian and English (all right-branching languages), resulted in difficulty for the Chinese and Japanese learners which was manifest not in errors, but in lack of use or, as Schachter claims, avoidance of a structure. Her hypothesis is supported by similar data from Kleinmann (1977) and Hakuta (1976). Thus, we again see clear native language influence which would have been unrecognizable as such if the definition of transfer were limited to traditional notions of transference of form and meaning.

In examining compositions of Chinese and Japanese students whose native languages are topic-prominent, Schachter and Rutherford (1979) noted an overproduction of particular target language forms: extraposition sentences like *It is fortunate that*... and existential sentences with *there* as in *There is a small restaurant near the city*. The form was being used to carry the weight of a particular discourse function, even though the target language makes use of other forms for that same function. They hypothesized that overproduction of this sort is a type of language transfer: that of L1 function to L2 form.

Ard and Homburg (1983) propose that transfer be viewed in its original psychological sense as a facilitation of learning. They investigated the responses of native Spanish and Arabic speakers to vocabulary questions on one version of the standardized Michigan Test, using a statistical procedure which compared the overall shapes of the response curves of the two groups. This procedure is powerful enough to not be affected by the fact that Spanish speakers are generally more advanced in English lexical competence than are Arabic speakers. Where the response curves were different there was a differential effect of language background on learning, a type of transfer in the original sense of the word. Traditionally in second language acquisition research, so-called "language transfer" was restricted to cases of the carry-over of items or patterns from the native language. This was clearly insufficient to account for the results of Ard and Homburg's study. Test items in which a relevant English word closely resembled a Spanish word in form and meaning yielded the kind of response curves that we might expect. However, many test items in which no relevant English words resembled Spanish words also yielded different response curves. In fact, Spanish speakers performed significantly better than Arabic speakers on these groups of items. Thus, there was native language influence even in the absence of overt similarity, that is, the nature of the native language affected language learning even where the conditions of language transfer were not met.

Another departure from traditional notions of language transfer comes from Schachter (1983), who claims that language transfer is not a process at all, but rather a constraint on the acquisition process. A learner's previous knowledge constrains the hypotheses that he or she can make about the L2. Previous knowledge includes not only knowledge of the native language or other languages known, but is cumulative in that whatever is acquired of the target language is also part of one's previous knowledge and is thus available for use in further L2 learning. In addition to the knowledge of the L2 already obtained (be it complete, incomplete, accurate, or inaccurate), learners' expectations about the target language are also included in this

category of prior knowledge. In some respects this is similar to Taylor's claim (1975) that transfer and (over)generalization of TL material involves the same cognitive process: reliance on prior linguistic knowledge—in the first case the native language and in the second, the target language.

For most researchers the notion of language transfer involves the use of native language (or other language) information in the acquisition of a second (or additional) language. A broader definition of this sort allows for observed phenomena such as (1) delayed rule restructuring, (2) transfer of typological organization, (3) different paths of acquisition, (4) avoidance, (5) overproduction of certain elements, (6) additional attention paid to the target language resulting in more rapid learning, or (7) differential effects of socially prestigious phonological forms (Beebe 1980).² These phenomena were difficult to detect within the framework of early transfer studies.

Predicting language transfer

A theory of language transfer requires that we have some ability to predict where the phenomenon in question will and will not occur. In this regard contrastive analysis alone falls short; it simply is not predictive. A major question in language transfer research is "What is transferred?" (cf. Selinker 1969). This is a significant question and one which should be kept in mind during the following discussion on predictability and selectivity. What linguistic elements are selected by the learner as transferable?

Kellerman (1979, 1983), reacting to earlier approaches in L2 acquisition studies which attempted to deny the importance of language transfer, argued that language transfer is indeed a cognitive process. The constraints on language transfer transcend the linguistic similarity/dissimilarity of the native and target languages encompassing as a major variable the learner's decision-making processes relating to the potential transferability of linguistic elements. Of course, the similarity/dissimilarity dimension has major import in these decision-making processes.

In Kellerman's framework there are two major factors which interact in the determination of transferable elements. One is the learner's perception of L1-L2 distance and the second is the degree of markedness of an L1 structure. There are parts of one's language which native speakers consider

²In her article, Beebe shows that Thai learners of English transfer a socially prestigious phonological variant of /R/ in formal contexts although in informal settings other variants are used.

irregular, infrequent, or semantically opaque. In Kellerman's terms, these items are highly marked and are less transferable than frequent and regular forms. The former he refers to as language-specific while the latter are language-neutral. Language-specific elements are those which a learner views as unique to his or her language, whereas language-neutral elements are those which the learner believes to be common to at least the native and target languages.

To give examples at the extreme ends of what is actually represented as a continuum, consider the following two examples:

- (8) He kicked the bucket.
- with the idiomatic meaning of He died, versus
 - (9) He kicked the ball.

The first example is one which is most likely viewed as language-specific and not transferable to the L2, whereas the second is most likely considered language-neutral and would be transferable to the L2. It is important to note that these are relative notions, expressible in terms of a continuum from language-neutral to language-specific interacting with a continuum of perceived language distance. For example, Spanish speakers learning Italian might consider more elements transferable than Spanish speakers who are learning Japanese. The perception of the L2 and the distance from the L1 Kellerman refers to as a learner's "psychotypology" which develops on the basis of many factors, not the least of which is actual linguistic typology.

Thus, transferability in Kellerman's framework is a relative notion depending on the perceived distance between the L1 and the L2 and the structural organization of the learner's L1. The notion of perceived distance changes continually as the learner acquires more of the L2.

Jordens (1977) has shown that advanced Dutch learners of German are more likely to accept as grammatical the German equivalent of (10) than of (11):

- (10) It is awkward to carry this suitcase.
- (11) This suitcase is awkward to carry.

despite the fact that the translation equivalents are acceptable in both German and Dutch. Jordens claims that the former is semantically more transparent than the latter and is less marked, hence its greater availability for transfer.

In a similar vein, in Gass (1979) I observed that language transfer was promoted in cases where the resultant interlanguage form was closer to the logical form (corresponding to the TL form) than to the actual syntactic

form of the TL. Learners tended to transfer pronominal copies into relative clauses resulting in sentences such as those in (12):

(12) The man that I saw him is her brother.

The logical form of (12) contains a bound variable or its equivalent. A bound variable is roughly equivalent to a pronoun, in this case *him*. Including the anaphoric *him* leaves no doubt as to the relationships of the NPs within the relative clause.

A different perspective on what is and what is not transferable comes from Rutherford (1983). He examined the ILs of Mandarin, Japanese, Korean, Spanish, and Arabic speakers learning English, focusing in particular on language typology. He discussed three kinds of typological organization: (1) topic-prominent versus subject-prominent languages, (2) pragmatic word order versus grammatical word order, and (3) canonical arrangements. He found that topic versus subject prominence and pragmatic versus grammatical word order figure in language transfer but not the canonical arrangements of the primes of subject, verb, and object. For example, Japanese learners do not go through a stage in which they place the verb in sentence-final position, despite the fact that Japanese is a verb-final language. The two typologies which were transferred, topicprominence and pragmatic word-order are discourse phenomena, while the ordering of subjects and verbs is a sentence-level phenomenon. Based on the above observations, Rutherford further speculated that it is discourse and not syntax which guides the overall development of an L2. On the surface Rutherford's data seem to contradict Kellerman's claims that if two languages are very different, the learners will find little available in the way of correspondences; perception of L1-L2 distance will then be great, leading to a lesser likelihood of transfer. However, Rutherford (1982) attempts to put his results within Kellerman's framework by suggesting that learners may perceive discourse-related information as being less marked, or more universal, than syntax-related information and hence more available for transfer. Another way of accounting for the apparent contradiction is to consider that there must be a certain level of awareness on the part of the learner before such notions as L1-L2 distance are even appropriate. Ordering of elements within a sentence is something which at least tutored learners are conscious of. Textbooks generally deal with sentences and arrangements of elements within the sentence and only infrequently deal with such concepts as emphasis and topic. This may contribute to the learner's awareness of the former concepts, but not the latter. Being aware of canonical organization, the learner will immediately

notice that the target language and the native language are different and will be unlikely to transfer.

What I have shown is that language transfer seems to be predictable in a probabilistic sense. We are able to restrict the range of transfer. Some things will not happen, while others probably will happen. The behavior of an individual learner is not absolutely predictable, but he or she operates with given constraints and within a range of possibilities. The variables which enter into "decisions" about transfer on the part of the learner involve unpredictable combinations of many aspects of the learner's experience, including other languages known, success with the target language, importance attached to social factors (Beebe 1980) (see fn. 2).

Bidirectional approaches to language transfer

Given the view of language transfer which was presupposed within the contrastive analysis framework, we would expect a mirror image relationship between speakers of language A learning language B and speakers of language B learning language A. Differences would lead to errors in both directions while similarities would lead to problem-free learning. If language transfer were simply a matter of differences and similarities, then it should be a symmetric phenomenon. That is, if two languages differed in some regard, speakers of these languages would be equally likely to adopt features of their native language in learning the other. However, it is now recognized that we are dealing with individuals who are making "decisions" about transferability. Hence, bidirectionality in transfer is not inevitable.

There are examples in the literature which show a lack of bidirectionality. Swain, Naiman, and Dumas (1972) give the examples given in (13) and (14) of English speakers learning French:

- (13) *Le chien a mangé les.
 - "The dog has eaten them."
- (14) *Il veut les encore.
 - "He wants them still."

The correct form of these sentences in French would place the object pronoun before the verb. French or Spanish learners acquiring English as an L2 have not been attested to make the analogous error. Thus, they do not make errors of the type in (15) or (16):

- (15) *The dog them ate.
- (16) *He them still wants.

Zobl (1980a) puts the explanation for this discrepancy into the framework of linguistic typology. Preverbal clitics are inconsistent with normal SVO word order in Spanish and French since full noun objects are postverbal. In Kellerman's framework they would be marked and hence relatively unavailable for transfer. Children learning French do not use preverbal clitics early. Rather, they use full nominal SVO syntax. Hence, the adult L2 learners are following a developmentally motivated interlanguage structure which promotes L1 transfer. However, if this is truly a developmentally motivated phenomenon, one cannot know, in the absence of comparative data, whether these are examples of language transfer or not. Furthermore, the very fact that these pronouns are clitics, essentially bound morphemes, may militate against transfer (cf. Zobl 1980a for a discussion of bound morphemes). The issue of bidirectionality, sometimes referred to as reversibility (Selinker 1972), is an interesting and potentially revealing one. If elements are transferred in one direction and not in another, this is clearly evidence that language transfer is not purely a matter of linguistic reflexes. Studies in bidirectionality of language transfer are particularly illuminating since we are dealing with the same linguistic structure in both languages. We can therefore gain greater insight into what factors other than purely structural ones must be taken into account in an understanding of the phenomenon of language transfer. This is certainly a fruitful area for empirical research (cf. Fathman and LoCoco, forthcoming, and LoCoco and Fathman 1982).

LANGUAGE UNIVERSALS

We now turn our attention to the second major suggested source of influence on L2 acquisition: language universals. By universals I do not intend universals of second language acquisition, that is, those elements/processes/strategies which are common to all second language learners, but rather universals of language, those linguistic elements which are common to all languages (in the form of either absolute or statistical universals). The literature specifically relating second language acquisition and language universals is scant. In fact, a bibliographical search elicited only about 30 articles—of which less than a third were actually relevant—compared to approximately 250 references to recent articles dealing with language transfer.

There are two types of universals which are generally discussed in the

literature: absolute and statistical. The former consist of the set of universals which are true for all languages, whereas the latter consist of those universals which are true for most languages. They are frequently expressed in terms of universal tendencies (Comrie 1981, forthcoming). Within each of these categories, implicational statements or hierarchies may be included.

Adjémian (1976) claimed that ILs are natural languages. If this is the case, then we would expect that whatever universal constraints hold for natural languages would also hold true for ILs. That is, ILs will not violate language universals. Hence, since sentences like (17), where he and John are coreferential, are impossible in natural languages because he both precedes and commands John, we would not expect a similar IL sentence to occur.

(17) He said that John couldn't come.

It is important to note, however, that the relationship between universals and ILs is one that must be established empirically, one which needs to be tested against IL data and not accepted a priori. A number of researchers have presented evidence which suggests the validity of Adjémian's claim: Schmidt (1980) with data from coordinate structures, Gass (1979) and Ioup and Kruse (1977) with data from relative clauses, Frawley (1981) with data from complements, Anderson (1983) and Tarone (forthcoming) with data from syllable structures (cf. Sato 1983 for counter-evidence), and Broselow (1983) with epenthesis data.

As Eckman (forthcoming) points out, language universals have been described and verified on the basis of native language data, that is, on the basis of language systems which have been learned by children without the influence of other competing language systems. Clearly, ILs do not fit this category so that if ILs were to violate language universals, one could claim that the domain over which language universals hold is that of primary languages, not secondary languages.

However, an approach such as this does not take into account the motivating force of universals. Why is a universal a universal? Does it have to do with the shape of the vocal tract? Does it have to do with the human cognitive system? Does it have to do with the way humans interact with one another? If the answer to these questions or other similar questions is yes, then there is no reason to assume that the answers are different for performance in a *second* language. Therefore, if we take natural human properties as forming the basis of at least some universals, then a violation

of the universal on the part of an L2 learner may cause us to question the universal itself.

Gass and Ard (forthcoming) have proposed a model to account for the relationship between second language acquisition and language universals in which the effect of a particular universal on L2 acquisition is predicted on the basis of the ontology of that universal. For example, the potential influence of a universal which has its basis in perceptual, cognitive, or physical factors will be greater than the influence of a universal which has arisen out of diachrony. As an example, consider the universal Accessibility Hierarchy proposed by Keenan and Comrie (1977). On the basis of cross-linguistic data they claim that (1) there is a hierarchy of relative clause types which a language can relativize and (2) pronominal reflexes are more likely in some hierarchical positions than in others. Keenan (1975) suggested that there is intralinguistic validity to the hierarchy as well as cross-linguistic validity, that native speakers "behave" in accordance with the hierarchical principles, finding it "easier" to produce some relative clauses than others. Keenan and Bimson (1975) and Givón (1975), while suggesting different explanations for the universal, both provide explanations which fall into the perceptual/cognitive domain.

In Gass (1979), I presented data from second language learners relating to this particular universal. Those data can be summarized as follows: (1) Learners generally follow the pattern of the hierarchy in terms of accuracy of RC production, avoidance of structure, frequency of production, and judgments of grammaticality, (2) native language and target language factors play a counterbalancing role, resulting in nonhierarchical ordering in some instances.

Dryer (1980) presented a universal hierarchy of sentential complements suggesting as its basis cognitive principles. According to Dryer's hierarchy, given below, complements are most likely to occur in clause-final position and least likely to occur in clause-internal position:

Complement Hierarchy (from Dryer 1980)

clause final > clause initial > clause internal

Frawley (1981) found that the orderings suggested by the hierarchy were also followed by L2 learners. That is, they used more sentential complements in clause-final position than in clause-initial position than in clause-internal position.

Unlike the above cited cases of RCs and complements and other

examples such as coordinate structures (Schmidt 1980) and anaphora (Gundel and Tarone 1983), there are examples of putative universals which do not seem to affect the acquisition process. An example can be found in the case of many word order universals. Ard (1975), Givón (1971), and Jeffers and Lehiste (1979) suggest that the mechanism through which these universals arise is the creation of new items and structures. In other words, the word order relationships are motivated by diachronic factors. We would then expect little or no effect on acquisition since there is no direct connection between the two. That is, there is no immediate relevance of word order relationships on the structuring of the learner's grammar. Gass and Ard (1984) in fact presented data from English learners of German, Spanish learners of English, and English learners of Spanish to show that at least in that domain these predictions are borne out (cf. also Fathman and LoCoco, forthcoming).

Kumpf (1982) presented evidence from untutored learners to suggest that the tense/aspect system of those learners did not correspond to the system of either the NL or the TL. She speculates that in such cases the IL "system reflects the capacity of humans to create... unique form to meaning to function relationships," and, importantly, these newly created systems will correspond to universal principles of natural languages. For example, one of her subjects had created an aspectual system, basically a morphological means of marking completed versus noncompleted action, unlike that of either the NL or the TL system. She pointed to evidence from languages of the world and from child language acquisition that aspect is primary to tense, so that what is found in her subject's system corresponds to what would be predicted on the basis of universal principles.

Eckman (forthcoming) investigated the question of violations of language universals in nonnative languages. In looking at data from phonology and syntax, he found that when violations of universal constraints do occur, they can be accounted for on the basis of the contact situation. That is, the explanation for the nonconformity with a universal can be found by looking at native language or target language facts. He predicts that violations of universals not accountable by target language or native language facts are impossible ILs. For example, given English and Arabic, both of which have voicing contrast in word-final position, one would not find a rule of schwa parogoge, a rule which inserts a schwa following a word-final voiced obstruent, in the IL of English speakers learning Arabic or Arabic speakers learning English precisely because a rule of schwa paragoge violates a universal constraint and both the native

and target languages allow word-final obstruents. Thus, phonological considerations based on the native language or target language would not be sufficient to account for the violation of the universal.

LANGUAGE TRANSFER AND LANGUAGE UNIVERSALS AS INTERACTING PHENOMENA

Relating the two issues dealt with in this paper, we find that transfer interacts with language universals in interesting ways. If we consider implicational universals or differential aspects of a universal, we find that those elements which are universally "easier" vis-à-vis the other elements are most likely to be transferred. This was the case with the RC data discussed above. The more accessible part of the hierarchy was also the part where transfer effects were most likely. Those positions which were least accessible resulted in greater difficulty for speakers of all language backgrounds: The structures produced reflected universal principles rather than L1-based structures. Some examples are Kellerman's investigation of polysemous lexical items and Gass and Ard's study (forthcoming) of L2 tense/aspect systems. The results of Kellerman's study are similar to those from his work on idioms. He found that those meanings which were closer to the "core," that is, were more basic in meaning, were more likely to be transferred than those which were furthest from the core. For example, Dutch learners of English were more likely to select I broke the glass as acceptable in English than The bookcase broke my fall, despite the fact that both are acceptable in Dutch and English.

In a test of grammaticality judgments of tense/aspect, Gass and Ard found that those aspects of the L2 tense/aspect system which were closer to a universal core were accepted as grammatical in the L2 with significantly greater frequency than those items which were more distant. The more distant items were not accepted even in instances where the NL used the translation equivalent with the same function.

What we can conclude is that language universals serve as an overall guiding principle in second language acquisition, interacting with the native language and the target language systems, at times resulting in violations of a proposed universal, at times being consistent with a given universal. If it is the case that universals affect L2 acquisition in the ways suggested, then we reiterate a claim made by Gass and Ard (1980 and forthcoming), Comrie (forthcoming), Sharwood Smith (1980), Kumpf

(1982), and others that second language acquisition data may be a fruitful basis for testing universals, in fact, perhaps even more fruitful than first language acquisition.

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