

Crosslinguistic influence in second language acquisition

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Crosslinguistic Influence in Second Language Acquisition: An Introduction

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This volume brings together a collection of 14 original articles written by European-based researchers concerning an important aspect of second language acquisition: the interplay between earlier and later acquired languages—‘crosslinguistic influence’, as we call it. There are two main points which need to be made with respect to use of the term ‘crosslinguistic influence’ (CLI). First, it is relatively new (cf. Sharwood Smith, 1983; Kellerman, 1984; Sharwood Smith and Kellerman, forthcoming); second, it is theory-neutral, allowing one to subsume under one heading such phenomena as ‘transfer’, ‘interference’, ‘avoidance’, ‘borrowing’ and L2-related aspects of language loss and thus permitting discussion of the similarities and differences between these phenomena.

As is evident from the contributions in this volume, terms like ‘transfer’ and ‘interference’ are still current, though some scholars have felt that they belong properly to the parlance of laboratory learning experiments and should thus not be employed elsewhere because ‘they may perhaps . . . constrain one’s freedom of thinking’ (Corder, 1983: 86). It is certainly true that whatever its traditional associations, the term ‘transfer’, if only by virtue of its everyday meaning, does not permit a discussion of less obvious modes of crosslinguistic influence resulting in ‘avoidance’ or differential rates in the acquisition of certain L2 structures. This is indeed an unwarranted check on our thinking. We would like to see use of the term ‘transfer’ restricted to those processes that lead to the **incorporation** of elements from one language into another. Retention of the term would also prevent an undue proliferation of terminologies, thus reducing the risk of misunderstandings (cf. the problems of interpretation revolving round such terms as ‘markedness’, ‘universals’, ‘learning’, ‘acquisition’). Finally, when not being used specifically in the context of behaviourist theory, terms like ‘interference’ and ‘facilitation’, with their negative and positive connotations respectively, are best abandoned altogether: there is simply no reason to entertain value judgements concerning psycholinguistic processes that are being investigated in their own right. The teacher or layman may view the mixing of different language systems as an obstacle to learning or as a regrettable fall from grace: there is no reason why the researcher should think so as well.

‘Transfer’ and ‘interference’ have by convention been understood to relate only to the effect of L1 on L2 or L2 on L3. However, as Py’s contribution to this volume shows (and as Weinreich, 1953 and Haugen, 1956 showed some 30 years ago), there is also good evidence for the effects of L2 on L1. There is thus a need to find *ad hoc* labels to describe attrition in L1 competence caused by the L2. The situation is further complicated by the ambiguity of the term ‘language loss’, which has been used both to refer to the forgetting of a once-learned second language as well as to the loss of L1 competence. Here too the term ‘crosslinguistic influence’ can be used without further ado to label the processes involved irrespective of the direction of the influence (see also Sharwood Smith, 1983).

As we indicated earlier, a further advantage to be gained by the use of the term 'crosslinguistic influence' is that we can conveniently subsume terms like 'avoidance' (Schachter, 1974) under it. It is now established beyond doubt that the L1 can have a constraining role in the L2 production of learners—that is to say that the perception of differences between L1 and L2 by learners may effectively prevent transfer of L1 structures (just as the perception of similarities may lead to what Kean in this volume calls 'short-sighted transfer'). Avoidance in this sense presupposes that the learner is to some extent aware of what the target structure must be like, at least enough to know that it is *not* like the L1. Thus the ensuing linguistic behaviour—the avoidance—is also the result of crosslinguistic influence.

Similarly, the growing evidence demonstrating that structural identity is not a sufficient condition for transfer to occur (e.g. Andersen, 1983; Kellerman, 1983; Zobl, 1983), and that therefore there must be L1-related constraints on the form of interlanguages interacting with natural acquisitional principles, also constitutes an argument for a change in terminology. In such cases, L1 influence is no less real, if less tangible, in conditioning what learners will *not* do than in those cases where 'interference errors' appear or where learners resort to avoidance.

Last in this list of advantages accruing to a change in terminology, the use of the term 'crosslinguistic influence' need not be restricted to the study of second or foreign language acquisition. So much is clear from Wode's plea in this volume for research into CLI to be extended to many more kinds of language contact situation (e.g. naturalistic and tutored L2 acquisition, pidginizing contexts, relearning, cf. Andersen, 1984). Wode is concerned with the linguistic similarities that link the various contact situations he studies, similarities which show that, despite superficial differences from the sociolinguistic standpoint, the underlying psycholinguistic processes at work in CLI are essentially the same in all cases.

Non-specialists tend to assume that the L1 is a major factor in second language acquisition and performance. This notion was supported in the applied linguistic literature by the Contrastive Analysis Hypothesis (Lado, 1957), which viewed acquisition essentially as a process of overcoming L1 habits: L1/L2 differences brought about learning difficulty whereas similarities between the two languages facilitated acquisition. When the behaviourist basis for the hypothesis fell into discredit, so also did the idea that crosslinguistic influence played an important role in the acquisition of a second language, at least with regard to syntax and morphology. It is useful to consider briefly one or two of the arguments that have been put forward against crosslinguistic influence (however termed) as an interesting area of investigation in second language acquisition studies. Dulay and Burt, and later Krashen (see Dulay *et al.*, 1982, for a recent summary of this position) essentially base their rejection of the importance of crosslinguistic influence on the evidence of universal (i.e. common) orders of development as manifested in the performance of learners of English with markedly different mother tongues (cf. Bailey *et al.*, 1974 for a good example of this sort of argumentation). The fact that second language learners with differing language backgrounds follow similar developmental paths, and that the observed orders are similar if not completely identical to orders observed in first language acquirers, permits reinterpretation of apparent cases of transfer as cases of regularization (overgeneralization, cf. Selinker, 1972). Dulay and Burt, in an influential article on the interpretation of errors (Dulay and Burt, 1972), argue that

a mere equivalence between two products, a learner utterance and an equivalent native language utterance, is not enough to justify the assumption that the learner has resorted to the psycholinguistic process of L1 transfer: the fact that mother-tongue acquirers produce the same kind of forms is further reason to avoid this naive confusion of product and process. Subsequent research, while benefiting considerably from these insights, has nevertheless tended to confirm the importance of CLI. Even the morpheme acquisition data (on which much of the anti-CLI stance is based) can be shown to provide evidence of influence from the L1 (e.g. Rosansky, 1976; Andersen, 1978; for further discussion and references see Kellerman, 1984). As the papers in this volume make clear, CLI is a pervasive phenomenon in second language acquisition.

Apart from the fact that this book gives prominence to European research on CLI, it also concentrates on the theoretical implications and underpinnings of empirical research on CLI rather than on experimental investigations themselves. This is not to say that there is a lack of data in the ensuing chapters, but with theoretical issues having generally played second fiddle to discussions of data in the past, we feel that the time is now ripe for due attention to be paid to the clarification of problems that have emerged in the interpretation of data.

Consequently, the papers in this volume cover a wide range of linguistic domains, dealing with CLI in segmental phonology (James, Wode), suprasegmental phonology (de Bot, Wenk), lexical semantics and morphology (Kellerman, Ringbom), syntax (Kean, Kohn) and discourse (Jordens, Trévisé). Although the principal L2 discussed in the volume is inevitably English, the source languages are varied (Danish, Dutch, English, Finnish, French, German, Spanish, Swedish and so on). Additionally, Py addresses himself to Spanish as L1 and French as L2, Jordens looks at problems American and Dutch speakers have in learning German, and Trévisé's paper considers French both as learners' L1 and L2.

A number of papers in this book (Faerch and Kasper, Jordens, Kean, Kellerman, Kohn, Sajavaara, Sharwood Smith) deal primarily with the theoretical status of CLI. One view common to most of them is that there is a need to separate the processing dimension from the knowledge dimension, although the various contributors differ in the way this shared distinction is elaborated. Sharwood Smith is concerned to align his approach (the competence/control model) with a Chomskyan view of language acquisition, claiming that analyses of interlanguage surface forms will lead to unwarranted conclusions about the acquisition process as long as the assumption continues to be made that what a learner produces spontaneously is a direct reflection of his/her competence, and that, as a result, immature processing routines do not have any obvious role to play in the form that interlanguages take. Sharwood Smith proposes a more demanding research programme leading to greater theoretical responsibility.

Kohn similarly argues that it is necessary to distinguish between what learners know and what they can actually produce. Furthermore, CLI may operate both on underlying interlanguage knowledge and on the retrieval of that knowledge. Consequently, from a methodological point of view, there is no purpose in conducting error analyses of data from large numbers of learners, since if the knowledge/retrieval distinction is to be upheld, it only makes sense to show that it operates at the level of the individual learner. Hence the need to develop elicitation instruments which are

sensitive to this distinction. Kohn demonstrates what such instruments would look like and how they can be used.

Kellerman, on the other hand, is not concerned with performance as such; rather he seeks to develop reliable empirical means of predicting probabilistic constraints on the transfer of L1 knowledge in the development of the subjective L2 lexicon. That is to say, he is interested in determining what L1 knowledge is more, or less, likely to become part of the interlanguage. Like Adjémian (1983), he believes that predictions about instances of CLI in performance can only be rough approximations in view of the number of processing variables intervening between the accessing of knowledge and the production of the final utterance. Consequently, to determine the learner's knowledge there is a need for carefully controlled experimentation. As Kellerman goes on to show, it is possible to make a reasonably accurate prediction of the nature of learners' intuitions about the L2 lexicon via the statistical processing of L1 native speaker judgements of word frequency and sense similarity.

Faerch and Kasper, as well as Sajavaara, embed their discussions of CLI in the context of cognitive psychology. Sajavaara criticizes the notion of static hierarchically organized grammars because they cannot account for on-line language processing. Like Faerch and Kasper, Wode, and Sharwood Smith, Sajavaara challenges the view that CLI is a monolithic phenomenon. He proposes an interactive model of speech processing and illustrates his discussion using research deriving from the Finnish-English Cross-language Project. An important aspect of this paper is Sajavaara's clear exposition of the issues to be considered in any characterization of CLI and the number of potentially contributing variables.

Faerch and Kasper distinguish between declarative and procedural knowledge, a distinction not dissimilar to that pertaining to competence and performance (or Sharwood Smith's 'competence and control'). Their paper concentrates on CLI at the procedural level; that is to say, CLI is part of procedural knowledge (and it is part of declarative knowledge, too). What follows is a detailed typology of CLI at the procedural level, richly illustrated with material provided by Danish learners of English. Faerch and Kasper show how various modes of cognitive control, such as attention and automatization, are fundamental to a proper understanding of CLI in procedural terms.

Kean provides a critical discussion of the potential relevance of linguistic markedness for second language researchers, showing that a straightforward importation of specifically linguistic concepts into this field would be naive. Her focus is on the relationship between theories of grammar and second language acquisition, and in particular the relevance of the 'core/periphery' distinction for CLI. Kean illustrates her discussion by a consideration of the pro-drop parameter on the one hand, and pied-piping and preposition-stranding on the other. The clear exposition of the issues involved in applying notions of markedness to second language acquisition is especially welcome at a time when linguistic theory is once again beginning to make its presence felt in our sometimes over-enthusiastic field.

Jordens' paper shows how a specific model of language **performance**, Incremental Procedural Grammar (Kempen and Hoenkamp, 1982), can account for case-marking errors made by Dutch and American learners of German. Since it appears that native speakers of German also make the same errors from time to time, Jordens argues that such errors do not necessarily reflect underlying L2 competence, thus lending further

support to Sharwood Smith's and Kohn's demand for more sophisticated levels of analysis of IL data. There is a clear parallel here with Wenk's contribution to this volume (see below), though in a different area, for although *ad hoc* explanations for some of Jordens' examples could be found that make no appeal to performance models, there is a residue that could not be so explained. Jordens' interpretation thus has the decided advantage of accounting for more data and leading to a set of testable predictions.

The next three papers in this volume form a group by virtue of their shared linguistic interest, phonology. De Bot's wide-ranging contribution surveys the current state of research into CLI and intonation. Unfortunately, the situation depicted is a gloomy one, since it appears that there has been relatively little methodical research in this area. In fact the picture painted reminds one of the early days of contrastive analysis, when problems of description and analysis loomed large. The technical know-how is available, says De Bot, but without the means of collecting reliable data and without a willingness to learn the speech scientist's techniques, progress in this relatively undeveloped area of research seems unlikely.

Wenk's paper takes the study of CLI into virtually unexplored territory, the acquisition of L2 rhythm. Wenk's framework is his own analysis of French and English rhythmic patterning (Wenk and Wioland, 1982). This analysis, based on the concepts of **trailer timing** (French) and **leader timing** (English), proves superior to the orthodox syllable-timed vs. stress-timed distinction. Wenk shows how French and English rhythmic patterning interact to produce complex **developmental** forms. These forms cannot be predicted by a simple comparison of rhythm in L1 and L2, and *ad hoc* appeals to such notions as hypercorrection ignore the fact that Wenk's model of speech rhythm encompasses a wider range of phenomena than just those attested in his paper. Thus Wenk's model is powerful not only because it accounts for a larger set of data, but also because it is dynamic (since it specifically addresses the question of stages of development) and leads to testable predictions. (For a similar standpoint on *ad hoc* explanations see Jordens, this volume.)

James looks at the issues in second language pronunciation research that are highlighted by recent developments in theoretical phonology, and at ways in which theoretical frameworks might be expanded to account for L2 data, and in particular the kind of data exhibiting crosslinguistic patterning. James suggests that the 'componential' (roughly, modular) approach of those who favour a competence/performance division as well as a more abstract approach to phonology is better suited to accounts of CLI than the functional, 'language-in-use' tradition, which advocates a natural approach to the explanation of phonological phenomena. Received linguistic theories cannot be adopted without further ado. For instance, the relatability of L1 and L2 forms as assessed by the L2 learner in an elicitation test (thus providing the researcher with a basis for predicting phonic transfer) should be seen as operating on three levels—namely phonology, phonetics and articulation. James illustrates his points with reference to the acquisition of English by speakers of Dutch.

Ringbom's paper, like Kellerman's, is devoted to lexis. Ringbom describes particular aspects of the Finnish scene, where the presence of a bilingual community (Finnish and Swedish) in the south of the country permits close study of the differential effects of L1s on the acquisition of English as L2. Swedish speakers tend to perform better overall in proficiency tests than Finnish speakers; this difference is

certainly attributable to the perception of structural differences between the L1s and their relationship to English (see also Sajavaara, this volume), English providing far more opportunity for Swedish speakers to make crosslinguistic associations than Finnish. As Ringbom points out:

Whereas the English of Swedish learners in Finland almost never shows any traces of Finnish influence, although Finnish is a vivid language for them, there is a fair amount of lexical influence on the Finnish learners' English from Swedish. . . . A Finnish learner of English inevitably perceives the similarity between English and Swedish.

While Ringbom proposes a typological explanation for qualitative and quantitative differences in CLI, Py views crosslinguistic influence from a sociolinguistic standpoint, taking as his focus the Spanish immigrant workers who have established themselves in Francophone Switzerland. In this case, what is of interest is not evidence for transfer of Spanish to French (which one would anticipate, given the typological similarity of the two languages), but the very reverse. The reasons for this attrition in L1 competence are complex, but have to do with a loss of awareness of what constitutes the norm in Spanish, and a contraction in the range of communicative functions for which Spanish is needed in Switzerland, the L2 being the appropriate language of communication between guest worker and the media, government bodies, school, work, etc.

Wode, too, is interested in contact situations, but in a different sense. He proposes that all types of language contact may yield transfer data subject to the same structure-internal processes. This includes data from naturalistic L2 acquisition, tutored L2 acquisition, pidgins and creoles. The similarities that show up may be seen as evidence for general linguo-cognitive mechanisms that handle language contact. Such mechanisms are assumed to be part of the innate linguistic faculty that imposes constraints on the form of natural languages and also on the form transfer may take.

Finally, Trévise looks at CLI in the range of topicalization devices available to, and used by, English learners of French and French learners of English. She shows that French learners do not transfer 'non-syntactic' or pragmatic forms of topicalization but stick to more neutral syntactic devices permissible in *'le bon usage'*, such as 'canonical' subject-verb-object and extrapositional and identificational constructions ('It's really great New York'; 'Portugal it's very difficult to live there'). Since Trévise's subjects are all learners of English in formal settings, it is quite possible that their unwillingness to transfer most of the topicalization devices of spoken French comes from a norm-oriented desire to avoid the worst excesses of colloquial speech. Even quite unexceptional examples of thematic fronting found in English and French were never produced, so we cannot rule out the influence of the institutional setting. In the L2 French of English learners, subject-verb-object structures and anaphoric *'c'est'* were frequently used. Trévise's conclusion is that learners tend to choose a few neutral topicalization devices, which do not generally lead to error, although they may not always be felicitous.

The fact that the early behaviouristic approach to crosslinguistic influence is now generally viewed as invalid has not prevented the whole transfer question from re-emerging, albeit in new and more complex forms (see the contributions in Gass and Selinker, 1983, for instance). One reason for this may be the fact that research into 'transfer-free' second language acquisition in the 1970s scarcely got beyond the

grammatical morpheme and the acquisition of negation and WH-interrogation. This left very large areas of uncharted territory both within syntax and outside it where, in principle, L1 influence could play a significant role. In fact the transfer issue was never truly dead, as is made clear by the many purely taxonomic error analyses (e.g. Arabski, 1968; Duškova, 1969; Grauberg, 1971) and continuing discussions of the value of the Contrastive Analysis Hypothesis for second acquisition (e.g. James, 1971; Newmark and Reibel, 1968; Schachter, 1974; Taylor, 1975, etc.). A preoccupation with the role of L1 influence permeates even the most recent developments in second language acquisition studies, as can be seen in current work within a Government and Binding framework (cf. Flynn, 1984; Mazurkewich, 1984; White, 1984). What the contributions in the present volume show is not only that crosslinguistic influence is of central importance in the learner's acquisition of a whole range of subdomains of the target system (as opposed to one small intensively investigated subdomain), but also that what we have traditionally called transfer is unlikely to be a unitary phenomenon. According to one's theoretical preferences, there may be two or more kinds of transfer. In other words, the mechanisms underlying crosslinguistic influence will vary according to the linguistic domain under investigation, and according to the particular psycholinguistic model adopted. The first observation may be summarized as the 'modularity' question: for example, it is obvious that syntactic CLI may require at least some explanatory principles that are quite different from those operating in phonological CLI (compare the contributions by Kean and Wenk, for instance). As far as the choice of model is concerned, a given psycholinguistic approach may suggest that problems involving changes in underlying knowledge need to be treated quite differently from problems involving real-time processing mechanisms (see the contributions by Faerch and Kasper, Kohn, Sajavaara, Sharwood Smith): another approach might make no such distinction or it may make different kinds of distinction, based perhaps on Labovian sociolinguistic notions of 'style shifting' such as those underlying Tarone's 'Capability Continuum' (Tarone, 1982), where CLI will occur when the learner's interlanguage vernacular is invaded by both L1 and L2 systems, when the learner is able to concentrate on form as well as (or perhaps at the expense of) expression. New perspectives from theoretical linguistics (such as Government and Binding Theory) once again hold promise for the study of interlanguage syntax, but at the time of writing a really convincing body of data has yet to be collected warranting more than passing attention. Part of the problem is that it is sometimes difficult to distinguish claims based on these new perspectives from others that have had longer currency in second language research. As Kean, in this volume, points out, 'what is required is a class of examples which demonstrate the necessity for appealing to markedness theory to explain transfer; the markedness theory must do some work'. Certainly, in most of the work to date (e.g. White, 1984 on the pro-drop parameter; Mazurkewich, 1984 on dative alternation; Flynn, 1984 on principal branching direction), theoretical sophistication outweighs experimental rigour (see e.g. Kellerman, 1985). It is to be hoped that this state of affairs will be rectified.

So, in a sense, two different messages emerge from the papers in this volume: the first is a plea for modularity, i.e. a differentiated approach to the various areas of language, given the apparent and hitherto underestimated degree of complexity of crosslinguistic influence; and the second is a plea for a broader view of crosslinguistic

influence in which research into language contact can be related to investigations into second language acquisition. These two requirements are not incompatible and the second may be seen as a corrective to the first.

All in all, the collection presents a variety of views and areas of interest. It may therefore serve as a convenient overview of this particular domain of investigation at least with regard to the theoretical problems associated with identifying and explaining how the native and target languages interact in second language acquisition and performance, that is, the nature of crosslinguistic influence.

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The Competence/Control Model, Crosslinguistic Influence and the Creation of New Grammars¹

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Introduction

There are many ways of approaching crosslinguistic influence (CLI). In the following discussion I will outline an approach which should provide researchers with a means of conducting theoretical and experimental research into CLI in such a manner as to avoid both the Scylla of sophisticated experimentation based on uninteresting hypotheses and the Charybdis of elaborate theorizing without proper experimental support. Although the approach to be discussed makes investigation a tougher proposition, it is argued here that there is no serious alternative. The discussion will focus on certain key concepts that are relevant both to theoretical linguistics and to the study of acquisition and that need to be involved more directly in second language research. In particular I shall attempt to show that a proper understanding of how grammar is acquired, or indeed forgotten, cannot be achieved without an explicit commitment to a framework in which knowledge and the real-time processing of that knowledge are clearly distinguished. To illustrate this I will refer to a number of topics discussed in the literature, namely **developmental sequences** (Dulay *et al.*, 1982), **relexification** (Sharwood Smith, 1979), **fossilization** (Selinker and Lamendella, 1978), **preposition-stranding** (White, 1984), **principle branching direction** (Flynn, 1984) and finally **gap-finding** (Zabrocki, 1982). I shall not attempt to provide much in the way of further factual evidence for or against the claims made by the relevant authors; rather, I will suggest ways of interpreting or reinterpreting the data according to the approach to be outlined in the following sections.

As the field of second language acquisition has become less fixated on applied concerns and more open to influence from other theoretical disciplines, there have been two inevitable complications. Firstly, concepts such as CLI seem to have quite different manifestations according to the area of language use under investigation: the moment we cease to speak in terms of the most literal kind of transfer one can imagine (following behaviourist habit formation theory), we have to acknowledge the fact that the particular character of different linguistic subsystems, e.g. lexical systems, pragmatic systems etc., will impose constraints on any monolithic view of CLI. Secondly, the adoption of useful theoretical concepts from sister disciplines to elucidate these differences will introduce an additional amount of (not necessarily harmful) complication. Take the notion of 'markedness', for example. This is hardly a coherent concept within linguistics so that, when used outside linguistics, further complexity and confusion may arise. As will be clear from Kellerman's work on lexical CLI and from Kean's discussion of markedness in acquisition (see for example Kellerman, this volume, and Kean, this volume), acquisitional predictions based on markedness need to be reassessed for each subsystem under discussion. A learner