

THE INFLUENCE OF THE MOTHER TONGUE ON SECOND LANGUAGE VOCABULARY ACQUISITION AND USE

INTRODUCTION

... contrastive analysis, error analysis, etc., are not simply unrelated to linguistic theory in particular, they are dead meat in general. (Gregg 1995: 90, reviewing Cook 1993)

Oh, well ...

In this paper I shall consider the ways in which the mother tongue can support, fail to support or actively hinder someone who is learning or using the vocabulary of a second language. This may happen: 1) when a learner acquires new vocabulary, 2) when he or she tries to recall and use previously-learnt vocabulary, and 3) when he or she tries to construct a complex word or expression that has not already been learnt as a unit.

As a **learning process**, transfer supports the learner's selection and remodelling of input structures as he progresses in the development of his interlanguage knowledge. As a **production process**, transfer is involved in the learner's retrieval of this knowledge and in his efforts to bridge linguistically those gaps in his knowledge which cannot be side-stepped by avoidance. (Kohn 1986: 22)

Before looking at these three areas, it will be useful to consider briefly how languages differ in the ways they encode the world through lexis, and to settle on a definition of crosslinguistic influence.

HOW LANGUAGES DIFFER

It is quite an illusion to think, as even literate people sometimes do, that meanings are the same in all languages, that languages differ only in the forms used for those meanings. (Lado 1957: 77)

The vodka is all right, but the meat is bad. (Alleged computer translation, into Russian and back, of 'the spirit is willing but the flesh is weak.')

The world contains too many things for us to have one word for each; we economise by using words in more than one sense, leaving context to disambiguate.

Unfortunately, different languages parcel up meanings into words in different ways; and so a word in language A may have various equivalents in language B, depending on exactly what is meant. There are several different typical patterns of relationship between words in different languages:

- 1 We may find a relatively exact fit: Swedish *växellåda* = English *gearbox*; French *chamois* = Italian *camoscio*; English *re-proof* = French *réimperméabiliser*. This happens most often where words relate to concepts that are firmly grounded in physical reality. Even here, though, there may be differences of use (*scarpe di camoscio* are *chaussures en daim* or *suede shoes*, not *chaussures en chamois* or *chamois shoes*.)
- 2 Sometimes, although speakers of two languages seem to divide the world up conceptually in the same way, they stick the linguistic labels on in different places.

Conceptual organization and its component concepts are not the same as the meanings for the lexical items of a language. For example, English speakers

typically make do with just one verb in talking about dressing, namely *put on*. This verb serves for all clothing, headgear, socks and shoes, jewelry, glasses, everything. Yet ask a group of English speakers to demonstrate, with gestures, how to put on a shoe, a glove or a sweater, and they will offer clear and consistent actions based on their conceptual knowledge. They know more about dressing, in other words, than the one lexical item *put on* would suggest. And speakers of other languages in fact use a much more elaborate lexicon for talking about dressing. Japanese speakers use one verb for garments on the upper body, another for those on the lower body, yet another for garments on extremities like feet and hands, another for articles that go on the head, and another still for jewelry like earrings or a watch ... At the conceptual level, though, these speakers will represent the same actions as speakers of English. Conceptual knowledge, in other words, is not identical to our knowledge about word meanings. (Clark 1993: 10)

- 3 Unlike gearboxes, chamois and dressing, many aspects of the world have unclear boundaries, and categorisation is more subjective. In such cases, both lexical and conceptual organisation may vary from one language to another. Different languages notoriously divide up the colour spectrum in quite different ways (see for example Taylor 1989: 1–20). English distinguishes streams from rivers, rather unclearly, on the basis of size; French, unlike English or Italian, distinguishes rivers which run into the sea (*fleuves*) from rivers which are tributaries of others (*rivières*). The following diagram (after Arcaini 1968) shows how French, Danish and Swedish refer to what English calls *a tree*, the material *wood*, *a wood* (collection of trees) and *a forest*.

English	French	Danish	Swedish
tree	arbre	træ	träd
wood (material)	bois		trä
wood (small forest)	bois		
forest	forêt	skov	skog

Extreme cases of such semantic relativism are sometimes reported; for instance, one often reads that Eskimos have a vast number of words for different sorts of snow. These claims need to be treated with caution, however – see Pullum's entertaining paper *The great Eskimo vocabulary hoax* (1991: 159–171).

Very often this pattern involves prototypicality: languages may have exact translation equivalents for words when these are used in their central senses, but not when they are used in more marginal or metaphorical ways. English *bite* and French *mordre* correspond closely when they refer to cutting with teeth, but outside this use they go their separate ways: one is *piqué*, not *mordu*, by a mosquito, while *la balle a mordu la ligne* means *the ball just touched the line*. No doubt most languages have a word which corresponds to *read*; but how many of these equivalents can be used not only transitively and intransitively, and to refer to reading aloud as well as silent reading, but also to talk about a machine reading a credit card, or about a person reading a balance sheet, a meter, music, a map, somebody's lips, people's minds or between the lines?

- 4 More problematically, people with dissimilar cultures may classify things (especially abstract concepts) so differently that it becomes very difficult to establish crosslinguistic equivalences at all. Words like *guilt*, *shame*, *remorse*, *apology*, *repentance*, *penance*, for instance, reflect concepts that may not be in anything like a one-to-one correspondence with the ways in which another culture analyses notions of blame and guilt. Here it is not just a matter, so to speak, of putting the labels in different places on the same picture; the picture itself may be so different that it is hard to relate the labels to each other in any meaningful way.
- 5 Differences of conceptual organisation may be reflected in differences in the very way words are assigned to part-of-speech categories. The Japanese equivalents of many English adjectives are effectively nouns or verbs.
- 6 Related languages abound in cognates – e.g. German *Buch*, Danish *bog* and English *book*, or Greek *duo*, Portuguese *dois* and English *two*. Where the meanings have diverged, as is often the case, the formal similarity can be very misleading: French *agenda*, Italian *morbido* and Spanish *embarazada* mean respectively *diary*, *soft* and *pregnant*.
- 7 Even where words in related languages 'mean the same', they may be false friends from the point of view of permissible grammatical context or collocation. French *expliquer*, unlike English *explain*, can be followed by an indirect object without a preposition (*expliquez-moi ...*). English *want* can be followed by an 'object + infinitive' construction, as in *I want her to start tomorrow*; corresponding verbs in most other European languages cannot be used in this way.
- 8 Questions of formality and style are also relevant. English *get* (before a direct object) corresponds quite well to German *kriegen*, which is also casual in tone, but less well to the closest French equivalents (*prendre*, *obtenir*), neither of which is marked as informal. French has a slang word for shoes (*godasses*), for which there is no stylistically congruent counterpart in English. Some non-European languages differ radically from English in their ways of expressing formality through the lexicon, to the extent of virtually having separate word-lists in their 'high' and 'low', or 'respectful' and 'intimate' styles.
- 9 The way vocabulary is organised in discourse may differ from one culture and its language to another. According to Bartelt (1992: 103), for instance, Navajo uses types of repetition for emphasis which would be regarded as inelegant and redundant in English.
- 10 Finally, the very notion of a 'word' is far from constant across languages. The French for *gearbox* is not a single noun, but a three-word phrase; the German word *Erzeugerabfüllung*, common on wine labels, has to be rendered into English as *chateau bottled*, while its Spanish equivalent has four words and its French counterpart six. Comparisons between less closely related languages are even more striking. As Ringbom points out, '... the word has a different status as a linguistic unit in synthetic and analytic languages ... average Finnish words contain more semantic information than English or Swedish words'. So for instance the single Finnish word *autostammekin* corresponds to the English phrase *from our car, too*. (1986: 155, 1987: 20)

CROSSLINGUISTIC INFLUENCE AND EASE OR DIFFICULTY OF LEARNING

interlingual or intralingual?

Recent research has confirmed more and more strongly what language teachers have always known: that the mother tongue has a strong influence on the way a second

language is learnt and used. (e.g. Kellerman 1984, Kellerman and Sharwood Smith 1986, Ringbom 1987, Odlin 1989, Perdue 1993)

There is obviously one critical way in which L2 acquisition cannot be compared with L1: children can experience no 'transfer' or 'interference' from a previously acquired language. All of the reports of the ESF [European Science Foundation] project are rich with documentation of SL [source language] influence ... I have claimed that each native language has trained its speakers to pay different kinds of attention to events and experiences when talking about them. This kind of training is carried out in childhood and is exceptionally resistant to restructuring in ALA [adult language acquisition]. (Perdue 1993, vol II: 245)

The pioneers of contrastive analysis believed that by making crosslinguistic comparisons one could predict learning difficulty.

We assume that the student who comes in contact with a foreign language will find some features of it quite easy and others extremely difficult. Those elements that are similar to his native language will be simple for him, and those elements that are different will be difficult." (Lado 1957: 2)

This view, though productive, was a serious over-simplification: not all crosslinguistic differences cause learning problems, and some things turn out to be more difficult than predicted by contrastive analysis. The notions of crosslinguistic influence and learning difficulty later came to be more clearly distinguished, and learners' errors were seen as falling into two possible categories: 'interlingual' confusions, caused by interference or transfer from the mother tongue, and 'intralingual' confusions, caused by complexities in the second language itself.

A notorious problem with this model, which is still current, is that it is difficult to classify certain kinds of error. If an English-speaking learner of French confuses *fenêtre*, *vitre*, *vitrine* and *vitrail* (words for different types of window), is this an interlingual error (because the learner is misled by the simpler English system for referring to windows), or does it make more sense to call it an intralingual error (because the French lexical system is complicated in this area and English provides nothing useful to transfer)? The same question arises in relation to the omission of English articles – if a learner's mother tongue has no article system, is it realistic to consider his or her failure to use articles in English as an instance of transfer?

There are perhaps two reasons for the confusion. First of all, there is the mistaken view that errors have to be analysed in either-or terms: they must *either* be attributable to the mother tongue, *or* to features of the second language. And secondly, there is a common tendency to see mother-tongue effects, too narrowly, in terms of the 'transfer' of a detectable feature of the mother tongue into the second language.

As Kellerman (1987) has pointed out, researchers tend to reflect their theoretical biases in what they interpret as transfer effects. He notes that Arabski (1979) made the somewhat surprising assertion that the 974 article errors in his Polish-English corpus were not transfer errors on the grounds that, because Polish does not have articles, there is nothing to transfer. Clearly, though, the absence of a structural feature in the L1 may have as much impact on the L2 as the presence of a different feature. (Ellis 1994: 311–312)

relating intrinsic difficulty and crosslinguistic influence

Intrinsic difficulty and crosslinguistic influence are not alternative sources of error. For *all* the elements of a second language, we clearly need to consider:

- 1 how difficult they are in themselves (in terms of factors like transparency, complexity and processing load)

2 what sort of position the mother tongue puts a learner in when he or she approaches them: does it help, hinder, or simply stand aside?

The notion of difficulty in language is elusive. None the less, one can readily think of lexical features that seem intuitively to be intrinsically easy or hard. English and German words for numbers are quite straightforward; French number-words between 70 and 99 are slightly more complicated; one of the Japanese systems of number-words is relatively elaborate. Vietnamese has a very complex system of personal pronouns. English has a daunting array of verbs in the area of 'shine/gleam/sparkle/glitter' etc, but not many different words for tastes. Of the two Czech words *srdce* and *mi*, the first is clearly more difficult to say than the second. An English child will learn to use the words *postman*, *fat* and *run* earlier and more easily than *collateral*, *metaphysical* or *denigrate*.

Independently of the intrinsic ease or difficulty of items, however, a learner's mother tongue can greatly affect the way he or she is able to approach them. For instance:

- The Italian word *attuale* (= *current*, *topical*) is reasonably easy for most learners to grasp; especially easy for speakers of several European languages (*aktual*, *actuel*, *aktuel* etc mean the same); but a confusing false cognate for an English-speaker.
- German numbers, though intrinsically unproblematic, are 'the wrong way round' from an English point of view: English-speaking learners typically mix up pairs like *fünfunddreissig* (35 – literally 'five and thirty') and *dreiundfünfzig* (53 – literally 'three and fifty').
- The English structure *I like X* is structurally and semantically straightforward, but problematic if one is coming at it from Spanish or Italian: *me gusta X* and *mi piace X* have a misleadingly similar word order to the English structure, but require the liked thing rather than the 'liker' as subject.
- Different learners approach the difficult French gender system from different starting points. Italians get enormous help from a mother tongue which assigns gender to nouns much as French does, though there are of course problems with particular words. German has three genders as against the French two, and knowledge of German is of little help in predicting the gender of a French noun; on the other hand, German-speakers are at least psychologically prepared for nouns to have genders, and this may well help them to notice and store the genders of French nouns as they learn them. English- or Turkish-speaking learners of French do not even have this advantage, and find French genders very difficult.
- Serious problems arise where the second language contains whole classes of word which are not shared by the mother tongue. Finnish uses case-endings to express the meanings which are communicated by prepositions in most European languages. Consequently Finnish learners of English have substantial trouble with prepositions as a class: they find them not only difficult to learn, but difficult to notice.

It may be assumed that a Swedish learner does not perceive the category of English prepositions as either particularly salient or non-salient: he simply recognizes them as prepositions and soon knows roughly how they function ... a Finnish learner, on the other hand, perceives the category of prepositions to be clearly non-salient, since they are redundant according to his L1 code. This perception often makes him omit them in production to a surprising extent even after many years of English. (Ringbom 1986: 155)

The article systems of western European languages are similarly non-salient for speakers of languages which do not have articles: it is not unusual, for instance, to

encounter Russians who have a relatively good command of English, but who use articles rarely or not at all.

language distance, transfer and learning

Language distance clearly has some effect on the amount of transfer that can take place between languages, and therefore on the extent to which transfer can support or hinder learning. Related languages often share a great deal of cognate vocabulary, and even where vocabulary is not cognate, there tend to be close translation equivalents: this can give learners an enormous advantage. Where languages have less common ground, word forms will generally be quite different; more information about word meaning and use also has to be acquired from scratch. Studies have demonstrated, for instance, that Swedish- and Spanish-speaking learners of English acquire vocabulary faster and more successfully than Finnish- and Arabic-speakers (see Odlin 1989: 77–80 for details and discussion). Transfer from third languages seems to depend very much on relative language distance (Ringbom 1987: 113–14, 119). Difference of phonological structure also has an effect on vocabulary learning. It has been shown that, as one might expect, those foreign words which conform more or less to the phonetic and orthographic patterns of the mother tongue are the easiest to assimilate (Laufer 1990, Ellis and Beaton 1993). English has a large inventory of phonemes, permits quite elaborate consonant clusters, and reduces unstressed vowels. These features make many English words hard to handle for speakers of languages, like Spanish or Japanese, which have a different type of phonology.

Cultural distance, as well as language distance, can greatly affect ease or difficulty of learning. A Hungarian learner of Spanish, for example, will find that, though there are virtually no cognates (Spanish and Hungarian are unrelated), the new words in general express familiar concepts and are often semantically congruent with mother-tongue roots; so that a good deal of semantic transfer is possible. This will be far less the case for a Hungarian learning Chinese: not only are the words quite different in the two languages, but there is also far less overlap between the concepts that they express.

Types of error are therefore likely to vary somewhat with language distance. Where the first and second language are closely related, there may be fewer errors resulting from the intrinsic difficulty of what has to be learnt, since the mother tongue will provide support in more areas. At the same time, since more can be transferred, there is more scope for the type of interference errors which arise when items in two languages are similar but not identical in form or use. Conversely, where languages are unrelated, more errors are likely to result from the intrinsic difficulty of second-language items, whereas the role of interference will be somewhat reduced.

LEARNING VOCABULARY

I shall always regret your lessons. (C. Ducarme, personal communication)

generalisation

Words (other than proper names) mostly refer to classes of things, events, properties etc, not to individuals. When a baby learns a word, a major part of its task is to find out where the boundaries of the relevant class lie: does *cat* refer to all four-legged creatures, all domestic animals, all felines, all furry things or just the family pet? As small children learn vocabulary, in fact, they are simultaneously learning the world,

as it is categorised and described by the culture into which they have been born. To some extent, children seem to have built-in strategies for fitting categories to words – for instance, they take it for granted that if nouns refer to objects, these will be discrete whole objects (Clark 1993: 49–66). Nonetheless, the process involves a good deal of trial and error, and young children typically overgeneralise or undergeneralise.

Second language learners, too, face the problem of establishing the range of reference of new words and expressions that they meet, and a good deal of exposure may be needed before they have enough experience of the way words are used to be able to do this accurately.

By being familiar with collocations like *a convenient situation* and *a convenient time*, but not with ones like *a convenient person* or *a convenient cat*, [students] will realise, however subconsciously, that the adjective *convenient* is only used with inanimate nouns. (Carter and McCarthy 1988: 75)

However, second language learners have one great advantage over infants: they have already learnt how one culture categorises and labels the world. Whatever the differences among human cultures and their perceptions, there is also massive common ground, so we already know a lot about the scope of much second language vocabulary before we learn it. We can take it for granted, for example, that another language will have ways of talking about dogs, babies, pain, drinking, sleeping, work, heat and cold; if we are told that a particular train is *Zug*, *poyezd* or *treno*, we know the chances are that the foreign word can be applied, more or less, to the whole class of things that we call *train* in English.

A second language learner is likely, then, to short-cut the process of observing a new word's various references and collocations, by mapping the word directly onto the mother tongue. He or she may well learn from experience what kind of words *convenient* collocates with; but this may do little more than confirm and refine a prior identification of *convenient* with *comodo*, *gelegen* or whatever.

We may assume that wherever possible the beginning foreign learner tries to operate with simplified translation equivalences between lexical items ... In the learning of related languages, simplified equivalences work well for the development of a receptive competence, even though these equivalences will have to be modified by later learning. (Ringbom 1986:154)

Often, indeed, the translation equivalence is made explicit at the outset, as when a learner says 'What's the Japanese for ...?', or looks up an unknown word in a bilingual dictionary. Even when this does not happen, though, an immediate association with a mother-tongue word is likely to be set up as soon as possible. (At one time it was considered essential to avoid the mother-tongue in foreign-language teaching, and teachers would go through contortions to explain or demonstrate the meanings of words without translating. What often happened, of course, was that, after the teacher had spent ten minutes miming, say, *curtain* to a class of baffled French students, one of them would break into a relieved smile and say 'Ah, *rideau*'.)

different kinds of equivalence hypothesis

What the beginning Swedish learner [of English] takes to be self-evident is the basic, even trivial fact that an English preposition normally corresponds to some other preposition in Swedish and that the concept of (in)definiteness is expressed by articles. (Ringbom 1986: 154)

The simplest version of the learner's equivalence hypothesis might be stated as follows: 'Foreign words look different from mother-tongue words, but work in the same way (semantically and grammatically)'. Naive though this view is, it is not

uncommon among people who know little about languages, and it is sometimes found even among more experienced learners. (I was at school with a boy who, working for an important Latin examination, was convinced that all he needed to do was to memorise words and their translations from a Latin-English dictionary.)

A more reasonable version of the equivalence hypothesis, then, might be 'Regard everything as the same unless you have a good reason not to'.

The learner tends to assume that the system of L2 is more or less the same as in his L1 until he has discovered that it is not. (Ringbom 1987: 135)

This is probably the way most people approach language learning (though they may not all draw the 'good reason' line in the same place). According to research by Naiman, Frohlich, Todesco and Stern (1978, quoted in Skehan 1989: 76–77), one of the strategies typical of good language learners is to 'refer back to their native language judiciously ... and make effective cross-linguistic comparisons at different stages of language-learning'. Experienced learners, then, are likely to have some sense of the limits of translation equivalence, and to realise, for instance, that idiomatic uses of mother-tongue words are less likely than others to carry over into the second language. Kellerman carried out several interesting experiments (e.g. 1978, 1986) to test learners' intuitions about transferability. He found that, while the Dutch students he tested were prepared to use English *break* and *eye* to translate core meanings of Dutch *breken* and *oog*, more advanced learners were generally reluctant to extend the equivalence into more peripheral, irregular or idiomatic uses. So, for instance, his subjects were happy to translate *Hij brak zijn been* as *He broke his leg*, but doubted whether *break* could be used (as *breken* can) to talk about breaking one's word, strike-breaking or breaking a ceasefire. Kellerman's students turned out to be wrong in these particular cases, because the idiomatic uses chosen for the experiment were ones which do happen to coincide in English and Dutch. However, their caution probably stood them in good stead in general in their approach to English, and would certainly have paid off handsomely if they had been learning languages less closely related to Dutch.

Learners' perceptions of linguistic or cultural distance may also affect their readiness to transfer. As we have seen, there is more scope for successful transfer between closely related languages than between languages which are not related, and most learners seem to develop some sense of where they stand in this respect. Kasper (1992) cites evidence that Danes transfer mother-tongue usages more freely to German than to English. Ringbom, working in Finland, found that monolingual Swedish speakers are far more likely to transfer mother-tongue forms into English than are monolingual Finnish speakers (though Finns who know Swedish may transfer Swedish forms into English).

Apparently Finnish learners are aware that their mother tongue is so different from the target language that they do not normally expect formal similarity between L1 words and L2 words, at least not to an extent that would guide them very often when they make their approximations. (1978: 90)

Readiness to transfer may also be affected by such factors as personality profile, type of education, and personal and cultural attitudes to language.

Some kind of equivalence hypothesis is probably indispensable in second language learning, especially during the early stages. Mother-tongue influence is responsible not only for errors, but also for much of what is correct in an interlanguage. If we did not keep making crosslinguistic correspondences, we might never manage to learn new languages at all. (Imagine having to ask whether each new Spanish house one saw was called *casa*; whether the new word was used by both men and women; whether a different word was needed for centrally-heated houses; whether it was taboo to talk about houses where people had recently died; and so on – instead of just

provisionally deciding that the foreign word was probably used in much the same way as *house* and acting accordingly.) The strategy does not always work, of course – that is why languages are difficult to learn – and it is effective in inverse proportion to language distance, breaking down much more often, as we have seen, with languages unrelated to one's own. But on balance the equivalence hypothesis puts us ahead of the game: it enables us to learn new languages without at the same time returning to infancy and learning to categorise the world all over again.

when the equivalence hypothesis fails: errors and avoidance

The equivalence hypothesis can fail simply because the learner misinterprets a word or expression. There is an apocryphal story about a school class who thought that their French teacher's regular greeting 'Bonjour, mes enfants, asseyez-vous' meant 'Good morning, boys, sorry I'm late'. And one also hears of African trees whose native 'names', meticulously copied down from local informants by nineteenth-century explorers, turn out to mean things like 'It's a tree, you fool' or 'Go home white man'.

Even when the learner correctly interprets the reference of a new word, he or she is unlikely to grasp all of its semantic and structural characteristics immediately, and the correspondence with the mother-tongue 'equivalent' is almost certain to break down somewhere. As we have seen, when words in two languages are not exact equivalents, each may have more than one 'translation', depending on the exact meaning or context. Learners often acquire one of the equivalents before the others, and use this 'primary counterpart' (Arabski 1979) in both appropriate and inappropriate cases. Conversely, where the mother tongue makes lexical distinctions that are not matched in another language, learners may undergeneralise. A French learner of English may use *door* for the door of a room or house (French *porte*), but not apply it to the door of a car (French *portière*).

Errors arising from the inappropriate use of partial translation equivalents are extremely common, and have been extensively catalogued in the literature. Dušková, for instance, in a study (1969) of the errors made by Czech science students, found that '... a major group of lexical errors comprises misuse of words due to the fact that a Czech word has several equivalents in English.' She cites, among other cases, confusions between *do/make* (Czech *dělat*); *way/journey* (*cesta*); *repair/correct* (*spravit*); *include/involve* (*zahrnout*); *page/aspect* (*stránka*); she also reports receptive confusion between pairs of abstracts such as *suppose/suggest* and *involve/include*. Grauberg (1971), investigating the errors made by English-speaking students of German, found that in 35 out of the 102 lexical errors he catalogued the student had 'attributed to the German word *all* the meanings of an English word, and not only the few correct ones'. Blum-Kulka and Levenston report on a study in which Israeli learners used *guilty* to cover a wide variety of related notions.

To admit responsibility for an offense, the native speaker can choose from a range of expressions that vary according to the gravity of the offense, from *I'm guilty* for a capital crime, through *I'm to blame* to *It's my fault* for a mere peccadillo. Some learners used *guilty* in all circumstances, even for denting a car in a parking lot. (1987)

Contributors to Swan and Smith (1987) report numerous vocabulary confusions attributable to mother-tongue influence: for instance *think/hope*, *follow/accompany* (Swahili speakers); *definitely/exactly/completely*, *cut/kill* (Turkish speakers); *interesting/funny*, *careful/dangerous* (Japanese speakers); *why/because*, *also/even* (Italian speakers); *beat/hit/strike/knock*, *office/desk/study* (Greek speakers).

When equivalent words in related languages have different permissible grammatical contexts, this often causes error (e.g. **I want that you help me*; **Please explain me the problem*). More serious problems arise when crosslanguage 'equivalents' do not belong to the same part-of-speech category, as is often the case between mutually distant languages. Punjabi learners of English often treat prepositions as nouns, reanalysing English relational terms as names of locations on the pattern of the mother tongue and producing forms such as **Put the down chair* (Perdue 1993 vol II: 246). Some other examples of this type of error: **in upstairs*, **I live with enjoy*, **It's belong to me* (author's files).

Interference can be from another foreign language. Dušková (1969) gives examples of characteristic German transfer errors in the English of her Czech students (e.g. *become* used for *get*, *also* for *then*, *will* for *want*.) Ringbom (1986, 1987) found errors in the English of Finnish learners that were due to their knowledge of Swedish false cognates. My son's school decided in its wisdom to teach him some Spanish three weeks after starting him on Italian; his Spanish interlanguage subsequently included the unusual greetings *buenas diores* (for 'good day') and *buenas nottes* (for 'good night').

When learners select and over-use one primary counterpart from among the options available in the second language, this is often the word or expression that most resembles the mother-tongue word in some way. Such resemblances can of course be misleading, and numerous errors, both receptive and productive, are caused by 'false friends' in related languages. I once seriously upset a French student by telling him that he had made dramatic progress (French *dramatique* = *disastrous*). Some examples from German learners' writing, cited by Gnutzmann (1973):

- ** take a place* (German *Platz* = *place* or *seat*)
- ** Very often he used to sit on that bank.* (German *Bank* = *bank* or *bench*)
- ** I am lucky that you have invited me.* (German *glücklich* = *lucky* or *happy*)
- *snake* misused for *snail* (German *Schnecke*).

Similar errors occur when learners re-export words which have been borrowed from other languages and changed their meanings, like French *baskets* (= *trainers*) or English *blitz* (German *Blitz* = *lightning*). Lists of English 'false friends' for various mother tongues can be found in numerous sources: see for instance Swan and Smith (1987); *Cambridge International Dictionary of English* (1995); Hill (1982).

Even when the preference for counterparts that resemble mother-tongue forms does not lead to error, it can result in stylistic infelicity, or in the systematic avoidance of common items which are less congruent with the mother-tongue equivalent. English learners of French, for example, tend to translate *Show me* by the structurally parallel form 'Montre-moi', rather than by the more idiomatic but structurally different *Fais voir* (= 'Make see'). English multi-word verbs are often under-used or avoided by foreign learners. French speakers use *enter* where English speakers would more naturally say *come/go in*; Tops *et al* (1987) report that Dutch learners are more likely to say *bear* than *put up with* (Dutch *verdragen*), or *seek* than *look for* (Dutch *zoeken*); Coe (1987) reports similar findings for Spanish and Catalan speakers, and Dagut and Laufer (1985) for Hebrew speakers. Wong (1983), quoted in Kellerman (1984: 120), found that Chinese learners, under the influence of the mother tongue, used large numbers of 'make + complement' structures (e.g. *They might make their friends get very upset*) in preference to lexicalised causatives (... *upset their friends*). Chang (1987), also studying Chinese learners, reports that they commonly avoid certain semantically diffuse English verbs:

'Small verbs' such as *be, bring, come, do, get, give, go, have, make, take, work* are characterised by the range of distinctive meanings each of them possesses and by the ease with which they combine with other words to form special expressions,

many of which are highly idiomatic. These verbs do not have equivalents in Chinese and are very difficult to handle. Students tend to avoid using them. For instance, a Chinese learner is likely to say:

1. *Please continue with your work.*
2. *He finally yielded.*

instead of:

1. *Please get on with your work.*
2. *He finally gave in.*

Japanese learners of English often under-use anaphoric pronouns, preferring to repeat noun phrases in a way which is more acceptable in their mother-tongue than in English. A typical example: *My younger sister is junior high school student. My younger sister's junior high school is prefectural junior high school. That junior high school's provision of school meal is cooked rice and some subsidiary article of diet. My younger sister likes to eat cooked rice every day. But some another student doesn't like. So they take a box lunch. In Japan, box lunch is so popular.* (Ian Thompson, personal communication)

Some words in the second language may not have mother-tongue counterparts at all, and these may be overlooked simply because learners do not expect them to exist, or avoided because they are felt to be difficult to handle. While a German-speaker may, for example, learn the French question-word 'combienième' (literally, 'how-manyeth') by asking for a translation of the German equivalent 'wievielter', an English-speaking learner does not have this route available, and he or she may therefore learn the word late or not at all. Blum-Kulka and Levenston (1983: 124) give an example of what they call 'void avoidance' by learners of Hebrew.

Learners tend to avoid words for which no precise equivalents occur in their mother tongues, especially when the semantic components of such words require them to make distinctions they are not used to making at the level of single words. An example is the verb *šibec* (to insert in a suitable place). This is replaced by *hixnis* (insert) or *sim* (put), or by paraphrase.

And as we have seen, whole classes of words such as articles or prepositions may be avoided if they cannot easily be equated with mother-tongue categories.

USING VOCABULARY

performance errors

Many of the recurrent errors of systemic character, which we might be inclined to describe as errors in competence, reflect no real defect in knowledge, since most learners know the pertinent rule and can readily apply it, but the mechanism of application does not yet work automatically. (Dušková 1969)

There finns a lot of racists in the world. (Swedish *det finns = there are*). (quoted in Ringbom 1987: 149)

'I have done a mistake.' 'Made a mistake, Wolfgang.' 'Oh, dear, I am always doing that mistake.' (author's files)

Knowledge is not enough: people often make repeated mistakes with second-language material which they have learnt correctly. This was not a problem for behaviourist linguistics, which saw older (mother-tongue) habits as interfering with newer (second-language) habits. Early cognitive models of interlanguage had more trouble accommodating behaviour which conflicts with knowledge. Corder, for instance, felt that systematic errors must reflect the learner's current beliefs or

'transitional competence', and seems simply to have rejected the possibility that habitual errors might coexist with accurate knowledge of the relevant rules (e.g. Corder 1967:10). Later conceptualisations involved for instance multiple-competence models (e.g. Tarone 1983, Ellis 1985), or consideration of the ways in which performance constraints can interact with competence (e.g. Bialystok and Sharwood Smith 1985, Bialystok 1994). For a detailed study of variability in interlanguage, see Tarone (1988); for an attempt to clarify some of the issues, see Swan (1987).

Common to many of these views is the notion of difficulty or effort: the learner produces a simplified form, or one closer to or identical with the mother-tongue pattern, because he or she has more fully automated control over it and can assemble it more quickly and easily than the correct target-language equivalent; or (in cognitive terms) because he or she cannot access the target-language form and retrieve it from storage quickly enough to use it for communication, and is driven back on more easily accessible material. While such views are plausible as far as second language syntax is concerned, they seem less satisfying when we consider lexical errors. *Make a mistake* is not obviously more difficult to assemble or retrieve than *do a mistake*; why does the learner, who 'knows' very well that one is correct, produce the other? And difficulty cannot account for 'backward interference', when people make mistakes in their mother tongues under the influence of other languages – mistakes which often seem identical to the transfer errors produced by foreign learners.

L2 influence on L1

It has been recognised for some time that backward interference occurs in the mother-tongue usage of people exposed to other languages: see for instance the discussion and references in James (1983), Johansen (1993) and Backus (1996). Sharwood Smith (1983) instances a Dutch speaker in his own country who, after a long English conversation, greeted a Dutch acquaintance with the words *Hoe ben je?* (literally *How are you?*, but not used in this way in Dutch). On a recent family holiday in France, I noted the following utterances, produced by three native English speakers in conversation with each other:

- *I should have commanded a cider.* (French *commander* = *order*.)
- *In the Dauphiné, high [mountain] huts get alimanted by mule.* (French *alimenter* = *supply*.)
- *I'll unbranch the telly.* (French *débrancher* = *unplug*.)
- *Can I confide these trousers to you?* (French *confier* = *entrust*.)
- *That's very correct on his part.* (French *C'est très correct de sa part* = *That's very punctilious/scrupulous of him*.)
- *I shouldn't care to do it today. But the day after tomorrow – that's another business.* (French *affaire* = *business*; *une autre affaire* = *another matter*.)

Many people who are in frequent contact with foreign languages report the same phenomenon – it is common among expatriates, even those who use their mother tongue regularly.

Whatever causes this kind of effect, it seems reasonable to suppose that it is at least partly identical with the mechanism involved in transfer *from* the mother tongue – all six utterances just quoted could have been produced by a French learner of English. If this is so, however, neither older-established habits nor processing difficulty can completely account for transfer in second language production, since they are clearly not involved in backward interference of the kind we have been discussing. It seems that we need a more detailed understanding of what happens in the brain during bilingual storage and processing.

the bilingual lexicon

We know that words are not held in memory in isolation from each other. Storage of mother-tongue vocabulary involves networks of associations of various kinds, based on membership of semantic, phonological, graphical, syntactic and other classes (Aitchison 1994). Some of these relationships can be explored by word-association tests (Meara 1982, 1984); others are revealed when recall goes wrong and speakers produce slips of the tongue or malapropisms, or have words 'on the tip of the tongue'. Second-language lexicons, too, involve networks of associations, though second-language associative links may be less firmly established (Meara 1984) than mother-tongue links.

In the bilingual lexicon, the network of associations between words in one language is enriched by further associations with words in the other.

It is clear that words in one language, and their translation equivalents in the other (when such exist) are related in the brain in a nonrandom way, much as a word and its synonym in the same language may be connected in an associational network. (Albert and Obler 1978)

How such relationships might be structured is not at all clear, although performance errors resulting from crosslinguistic interference obviously provide clues. As with monolingual associations, words seem to be related on several different linguistic levels which may operate simultaneously in complex ways. (Trying to think of the German for *nitrogen* (*Stickstoff*) recently, I first of all came up with *Klebstoff*, literally *sticky stuff* – the German for *glue*.) Data from error analysis, especially studies of unintentional code-switching, suggest that certain kinds of word may be more closely associated crosslinguistically than others in bilingual storage or processing. In some second language learners, for instance, function words such as conjunctions are particularly liable to importation from the mother tongue and other languages (see for example Vildomec 1963: 170, Poulisse 1993: 177). And Ringbom (1986: 157), studying English examination papers written by Finnish-mother-tongue students, found that function words such as Swedish *och*, *men* and *fast* (*and*, *but* and *though*) were particularly liable to transfer from the learners' third language. For attempts to explain code-switching in terms of bilingual processing models, see for instance de Bot and Schreuder (1993) and Poulisse and Bongaerts (1994).

Laboratory experiments of various kinds (using procedures such as word-translation and repetition tasks involving cross-language semantic priming) have been carried out to clarify the nature of lexical storage and processing in bilinguals. Much of this work has focused on the question of whether words in two languages are linked to a common store of concepts, or whether each lexicon is associated with its own set of conceptual representations. Earlier research seemed to indicate that fluent bilinguals access semantic representations that are shared between languages. However, recent work suggests a more complex situation, with concrete nouns more likely than abstract words to involve shared concepts, and with the level of proficiency, the distance between languages and the nature of the experimental task all affecting the research findings (see Kroll 1993 for a survey).

Research by Meara suggests, interestingly, that different languages may have different preferred techniques for word-storage and handling. If this is so ... then it is possible that learners will continue to use these strategies for handling words in their L2, even if the strategies are not particularly well adapted. This would lead to L2 words being stored with completely inappropriate entries if the L1 and L2 were ill-matched, and could account for much of the difficulty learners find with 'hard' languages such as Chinese and Arabic. (1984: 234)

This might explain the problems English learners have with French genders or Chinese tones, for instance: unlike native speakers, they may fail to store gender or tone information as part of the lexical entry for each relevant new word.

If the observational data from error analysis indicate that function words are particularly closely associated across languages, while findings from laboratory experiments suggest that it is concrete nouns that are most closely linked, we are obviously some distance away from an integrated view of what goes on in the bilingual brain during language use. Various attempts have been made to account for the observed facts in terms of schematic models of language storage and processing, such as that of Levelt (1989) – see for instance Poulisse (1993) and de Bot and Schreuder (1993). While this is not without value, there is a tendency for such box-and-arrow models to appear more explanatory than they are, by relabelling processes as if they were causal entities located in the brain. Saying that the brain contains a 'conceptualiser', a 'formulator' and an 'articulator' may amount to little more than using nouns instead of verbs to restate the fact that we think of things, put them into words and say them. (We do not explain what makes it rain by saying that the sky contains a 'rainer'.)

CONSTRUCTING VOCABULARY

Thank you for your unvaluable course. (F Gonzalez, personal communication)

productive rules

Many lexical items consist of more than one element, arranged in rule-governed ways. The word *unfairness*, for example, reflects two common morphological rules: 'add *un-* to negate an adjective' and 'add *-ness* to form an abstract noun from an adjective'. The compound *toothbrush* follows an equally common rule: 'nouns can often be premodified by other nouns to express function or purpose; premodifying nouns are not usually marked for number'. The over-extension of such rules is a common cause of learner error. Jain (1974: 196) quotes mistaken coinages of agentive nouns like **witnesser* and **pick-pocketer* by Indian learners.

Rules of this kind can often be re-expressed, more or less accurately, in terms of translation equivalence: 'English *un-* = French *in-*' or 'French noun₁ + à + noun₂ = English noun₂noun₁'. To the extent that such rules have psychological reality for a learner, they allow the mother tongue to contribute to the generation of second-language forms, both correct and erroneous. So, for example, an English learner of French may exploit the fact that English adjectives and nouns ending in *-ive* tend to have French cognate counterparts ending in *-if*. (It was this strategy that led a friend of mine, who wanted to buy jam without artificial additives, to ask a French shopkeeper for 'de la confiture sans préservatifs' – jam without condoms.) Færch and Kasper (1986: 50, 58) quote Danish learners as producing, for instance, **employless* (Danish *arbejdsløs*) and **greens things* (Danish *grøntsager* = *vegetables*). Wilson and Wilson (1987) give examples of unidiomatic compounds produced by direct translation from Farsi: **work house* for *factory* (Farsi *kar khane*) and **book house* for *library* (Farsi *ketab khane*). Finnish learners' errors of a similar kind noted by Ringbom (1986: 158) include **home animals* (from the Finnish for *domestic animals*) and **swimming trousers*.

Technical terms are particularly susceptible to borrowing into cognate languages, and learners who are stuck for a technical word may simply import the mother-tongue word directly into the second language in the hope that it will be understood.

Bongaerts, Kellerman and Bentlage (1987) report errors arising from the breakdown of this strategy, such as the unsuccessful use of Dutch *magnetron* to mean *microwave*.

Some learners seem more ready to 'coin' second-language words than others; this may correlate with personality-type, as was suggested earlier might be the case for readiness to transfer idioms. Ridley and Singleton describe an English-speaking learner of German who regularly makes up supposedly cognate German words to plug lexical gaps (for instance **gefastnet* for *stuck*; **gelichen* for *leaked*).

She likes the sound of German, and 'positively enjoys making up words'. She describes it as 'tough luck' if her message is not always understood, saying that she 'can always point at something or get by' when communicating orally. ... Her language teacher describes her as an 'intuitive learner'. In a test designed for an evaluation of an impulsive/reflective approach to nonlinguistic tasks ... there is some evidence to suggest that her cognitive style is the least reflective among the four subjects. (1995:145)

multi-word items

Language use is not only a matter of applying generative rules. Many of the things we say are formulaic – fixed or semi-fixed expressions which are conventionally associated with recurrent situations and meanings, and which may be more or less idiomatic. Paradoxically, therefore, unpredictable utterances can be easier to produce in a foreign language than routine expressions. 'Why is there a dead cat on the floor of your shop?' can be constructed out of simple lexical and grammatical building blocks; 'Thank you, I'm being served' cannot be made in the same way – either you know how to say it or you don't.

There is a great deal of current interest in multi-word lexical items (also called, for instance, 'formulaic expressions', 'lexicalisations', 'lexical phrases', 'phraseology' or 'chunks'). In a much-cited article, Pawley and Syder (1983) describe 'native-like selection' as one of two 'puzzles for linguistic theory': how is it, they wonder, that a native speaker 'selects a sentence that is natural and idiomatic from among the range of grammatically correct paraphrases, many of which are non-native-like or highly marked usages'? How do we know, for instance, that *I'm so glad you could bring Harry!* is idiomatic, while *That you could bring Harry gladdens me so!* is not?

I am not sure why this is a puzzle. If we extend the notion of vocabulary to include formulaic multi-word items (as surely we must), then our knowledge that one formula is preferred over another seems no more mysterious than our knowledge that one sequence of phonemes rather than another realises a single word. The language has conventionalised, for example, *Can I look round?* rather than, say, *May I make a survey?* in the same way as it has conventionalised *optician* rather than *eye-doctor* or *asparagus* rather than **sarapagus* – that is just the way the idea has come to be expressed.

The inventory of formulaic or semi-formulaic multi-word items in a language is likely to stretch into the tens of thousands – there are probably conventionally preferred ways of saying all the things that come up regularly enough in interaction to be recognised as recurrent and predictable. Some such formulations cross linguistic boundaries very easily, behaving as if they were the property of a whole culture – you can 'save somebody's life' in twenty or so languages across Europe and America. Unfortunately for second-language learners, however, this kind of correspondence is the exception rather than the rule, even between related languages. Most such formulae cannot be successfully selected or constructed, either by literal translation from the mother tongue or by generalisation within the second language. There is no way of knowing, without learning the item itself, that the Italian for *Can I look*

round? is *Posso dare un'occhiata in giro?* (literally *May I give a look round?*); or that a good English equivalent of *J'ai votre lettre sous le coude depuis pas mal de temps* (literally *I've had your letter under my elbow for some time*) is *Your letter's been sitting on my desk for ages*; or that the exasperated implication of English *That's all we needed!* is expressed by *Auch das noch!* (= 'that too, in addition') and *Il ne manquait que ça!* (= 'There was only that missing!') in German and French respectively. (But see Carter and McCarthy (1988: 37) for a note on patterns of collocation.)

Learners, of course, need ways of compensating for lack of knowledge – they must manage in one way or another to express themselves when they don't know the appropriate words – but there are few short cuts in this area. Attempts to match the idiomatic quality of mother-tongue formulae usually lead to error, and sometimes to absurd results. Grauberg (1971) found that 16 out of his 102 interference mistakes were caused by the complete transfer of English expressions into German. I tried – once only – to explain in German that a phone connection had failed by producing a literal translation of *I've been cut off*.

IMPLICATIONS FOR TEACHING

Clearly, the more aware learners are of the similarities and differences between their mother tongue and the target language, the easier they will find it to adopt effective learning and production strategies. Informed teaching can help students to formulate realistic hypotheses about the nature and limits of crosslinguistic correspondences, and to become more attentive to important categories in the second language which have no mother-tongue counterpart. In the case of related languages, it may be useful to integrate the systematic study of cognates into teaching programmes, as Meara (1993) suggests; it may also be possible to express some productive morphological rules in terms of translation equivalences. Learners need to realise that formulaic multi-word items cannot usually be literally translated; teaching may train them to identify such items, and to develop realistic paraphrase strategies to compensate for gaps in lexical knowledge where the mother tongue cannot provide support. In this connection, Meara suggests equipping learners with 'a small metalanguage which allows them to cope with typical communication problems by negotiating the words they need to express their meanings' (1993: 289); for examples of teaching material which does this, see Swan and Walter (1990: 35 and 1992: 42).

Appropriate teaching and teacher-training can also help to dispel misunderstandings about the nature of error. It is important for learners and their teachers to realise that knowledge and control are not the same thing, and that continued failure to use learnt material accurately does not necessarily imply carelessness, lack of understanding or unsatisfactory teaching.

SUMMARY

The mother tongue can influence the way second-language vocabulary is learnt, the way it is recalled for use, and the way learners compensate for lack of knowledge by attempting to construct complex lexical items.

- 1 Mapping second-language vocabulary onto the mother tongue is a basic and indispensable learning strategy, but also inevitably leads to error. How much the mother-tongue helps and how much it hinders learning depends, among other

things, on language distance and on the realism of the learner's hypotheses about transferability.

- 2 Recall and use of learnt material – including mother-tongue lexis – can be interfered with by knowledge of another language; little is known at present about the the storage and retrieval mechanisms involved.
 - 3 Compensatory strategies involving translation equivalence can work successfully where morphological or other generative rules are involved; however, the mother tongue is usually of little help where formulaic multi-word items are concerned.
- Appropriate teaching can help learners to develop realistic equivalence hypotheses, appropriate compensatory strategies and an understanding of the nature of error.

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