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EXPLAINING LEXICAL ATTRITION AND BORROWING IN TERMS OF MARKEDNESS THEORY

The present paper aims to investigate the applicability of markedness theory as suggested by Lyons (1996) and Chomsky (Cook 1996) to research into borrowing transfer. In an attempt to assess the theory's explanatory potential, it discusses the problems faced by researchers who use the concept of markedness to account for cases of L2-L1 transfer in the lexical domain. Since the criteria laid down by the theory often refer to independent phenomena and lack precision to boot, the resultant analysis of findings tends to show bias, which seriously undermines its reliability.

Introduction

The primary objective of this paper is to investigate the phenomena of borrowing transfer and L2-induced attrition in the lexical domain. Throughout the investigation, the emphasis will be on the factors that contribute to the occurrence of lexical transfer and loss, as well as on the underlying principles that determine their shape and form. Moreover, an attempt will be made to explain the mechanics of transfer in terms of markedness theory as suggested by Lyons (1996) and Chomsky (Cook 1996). This, in turn, will provide an opportunity to assess the overall applicability of this theory to cases of cross-linguistic interaction.

Since the term *cross-linguistic interaction (influence)* has come to denote the effect that the bilingual's languages have on each other (Sharwood Smith and Kellerman 1986), what needs explaining is the notion of *borrowing transfer*, which is often labeled borrowing (Hatch 1995), and whose occurrence may be symptomatic of L1 loss or attrition (Andersen 1982; Altenberg 1991). While borrowing transfer does not always manifest itself as visible language atrophy (Sharwood Smith 1983), it tends to be defined as "the influence a second language has on a previously acquired language which is typically one's native language" (Odlin 1989: 12). This in practical terms means that it constitutes a form of linguistic intrusion into the systems of the L1. Odlin (1989: 13) also claims that borrowing transfer normally begins at

the lexical level, which has been confirmed by numerous studies of L1 attrition (cf. Altenberg 1991). Among its manifestations in bilingual discourse are loanwords, loanblends and loanshifts (Grosjean 1982). According to Haugen (1969, cited in Grosjean 1982), both loanwords and loanblends are foreign items which have been imported in part (loanblends) or whole (loanwords) from the other language (L2) and adapted phonetically and morphologically to the recipient language. For example, *gumbaum* in Australian German is made up of the English word *gum* and the German word *baum* (tree), while *settler* has been adopted as a whole.

The second type of borrowing, i.e. the loanshift, displays mainly the semantic influence of the L2. The two subcategories that the term covers are semantic extensions and calques. The former involve the semantic expansion of words in the language being spoken. As a result, a word receives an additional meaning, i.e. that of another word in the other language, often despite the fact that the words concerned have unrelated senses. Grosjean (1982) believes that this type of L2 interference is likely to occur when words in the two languages resemble each other phonetically. Indeed, phonetic and morphological similarity between L1 and L2 items appears to be the main condition for lexical transfer to occur (Odlin 1989). Accordingly, speakers of both French and English may produce sentences such as **But where my father went it was not an **experience***, where the word concerned is given one of the meanings of the French word *experience*, that of *experiment* (Grosjean 1982: 303). Semantic extension can also occur when there is no apparent morphological/phonetic similarity between words or phrases that seem to be semantically equivalent (Odlin 1989). This is attested to by the extension of the English *cold* (infection) to the Portuguese *frio* (cold spell) which is mentioned by Grosjean (1982).¹ Calques, by contrast, are literal translations from the L2 into the L1 where they are incorrect. They tend to occur at the level of compounds, idioms and fixed expressions, and testify to the fact that in their case the influence of the other language is solely semantic and not phonetic.

In this category one could also include half-calques which differ from the above in that they correspond partly to the phrasings in the two languages. For instance, the Polish *dać koniec* bears partial resemblance to the source expression in English *put an end to something*.

Arguments that borrowing is a natural component of bilingual discourse and as such should not be perceived as symptomatic of attrition have dominated discussions of the subject for the past decade or so. However, it cannot escape notice that borrowing has been found in L1 attrition data (Silva-Corvalan 1991), which suggests that it merits consideration rather than dismissal as *mere cross-linguistic influence*. What is more, in the light of Ammerlaan's (1996) contention that presumably attrited forms may be difficult to classify unambiguously due to a large number of interfering L2-related factors, it seems both logical and necessary to research to-

¹ Grosjean (1982) quotes Portuguese English bilinguals who often produce phrases such as *tengo frio* when referring to the common cold.

tal bilingual performance, i.e. cross-linguistic influence in its entirety in all relevant contexts.

No analysis of linguistic behaviour can be complete without a mention of the psycholinguistic principles that lie behind language and its functioning. The need for an interdisciplinary perspective on cross-linguistic interaction and lexical attrition becomes even more apparent in view of the fact that Schmitt (2000) equates attrition with forgetting and thus refuses to discuss it in solely linguistic terms. Indeed, Schmitt's approach makes it possible to discuss the phenomena in question in terms of cutting links between forms (lexemes) and meanings (lemmas) while establishing new ones (Hatch 1995). Accordingly, one may also assume that the bilingual is in possession of two (partially) integrated/separated yet competing language systems, and that lexical transfer, as well as attrition may result from a temporary or permanent loss of meaning-form connections, at least at the production level. The fact that attriters generally retain their comprehension skills while manifesting various performance deficiencies in the attrited language (Grosjean 1982; Ammerlaan 1996) is of relevance and suggests that what is affected by attrition is mainly procedural knowledge, which is responsible for message generation and articulation (Singleton 2000). Unfortunately, too little is known about the structure of the bilingual's lexicon(s) to accept the above assumptions as convincing explanations of lexical transfer/attrition and of their *modus operandi*. Besides, the fact that borrowing also involves conceptualizations (see calques) hints at the possibility that it may be determined by cognitive factors such as semantic transparency, as well as economy of thought and expression.

Theoretical background

Since the late seventies, the theoretical frameworks for the analysis of cross-linguistic influence in both L2 acquisition and L1 attrition have been those of Chomsky's markedness theory (Seliger and Vago 1991; Ellis 1995) and typological universals (Zobl 1989). The overall preference for unmarked or less marked forms over (more) marked ones, as well as resistance to transferring marked forms in general are regarded as the driving force behind cross-linguistic interaction and have been documented in numerous publications (cf. Eckman 1977; Gass and Selinker 1983; Arabski 1985; Larsen-Freeman 1991). What comes as a surprise is the tendency to apply the principles of markedness, regardless of how it is defined, indiscriminately to all language subsystems (cf. Ellis 1985, 1995; Seliger and Vago 1991; Altenberg 1991). An approach like this, undoubtedly, emphasizes the all-inclusive character of the theory in question (Greenberg 1976) and indicates that the same principles can be applied to the analysis of transfer in all areas of language. However, researchers dealing with this particular field of linguistics are likely to face considerable difficulty in view of the fact that very few authors specify the exact criteria against which the presumed markedness of structures/items could be assessed. The UG-based definitions differentiate between rules that are part of the core and are therefore un-

marked, and those that belong to the periphery, which contains marked rules. Typologically defined markedness, by contrast, refers to features that are specific to a particular language or can be found in relatively few languages. In short, those that are present in most languages are unmarked. It is obvious that such broadly defined criteria are of little value in actual research. What is more, investigations into linguistic typology conducted to date have focused mainly on phonological and grammatical features (Ellis 1995), as well as on morphosyntactic distinctions (Greenberg 1976).

Of some use to studies of markedness in lexico-semantics may be Croft's (1990) classification of determinants of markedness in language. Two of these determinants, in fact, coincide with Lyons's (1996) criteria for markedness in lexis, which may be construed as evidence of their universal character. The list runs as follows:

1. Structure (formal markedness): this refers to the presence or absence of a feature or some particular element of form. Consequently, forms that contain this element, e.g. a suffix, are formally marked in contrast with forms which lack it (cf. Jakobson 1957, Greenberg 1976).

2. Behaviour: this has to do with whether or not a particular element is more versatile, i.e. occurs in a larger number of contexts, than another one. In other words, the marked item tends to be more restricted in its distribution. According to Lyons (1996), this criterion is independent of formal markedness. Connected with it is semantic marking which was not included in Croft's distinction. A semantically marked lexeme is one that is more specific in meaning than the corresponding semantically unmarked lexeme (Lyons 1996: 307). Moreover, semantically marked items are also distributionally marked on account of their more specific sense.

3. Frequency: the unmarked item is likely to occur more frequently than the marked one (Ellis 1995; Lyons 1996). Indeed, in the words of Greenberg (1976: 33), "the category which shows consistently greater text frequency" is unmarked.

A different approach was adopted by Kellerman (1983: 117) who focused on native speaker perceptions of markedness in the mother tongue. In his view, structures which are "perceived as infrequent, irregular, semantically or structurally opaque, or in any way exceptional" could be called psycho-linguistically marked or language-specific as opposed to the language-neutral ones, which are regular, transparent and obviously unmarked. A more precise definition was formulated as a result of the *breken* study (Kellerman 1979), which helped to establish that the unmarked (core) meanings, are in fact, prototypical in the sense that they are associated with nonlinguistic mental schemata that all language users are equipped with. On a more practical level, this means that the prototypical meaning is "that which a dictionary gives as the primary meaning of the item" (Ellis 1995: 326).

In the light of the findings presented above, it becomes clear that any attempt to assess markedness and thus account for the effects of borrowing transfer in the area of lexis requires detailed analysis of different levels of linguistic functioning. It remains to be seen, however, whether the concept under discussion has explanatory value that is confirmed by actual language behaviour of bilingual subjects.

The study

Following Ammerlaan's (1996) recommendation that research into attrition should implement the methodology applied in studies of cross-linguistic influence, the language samples analyzed in this paper were collected by means of two elicitation tasks. The first was an untimed translation test, consisting of translation into Polish of 26 English sentences containing fixed phrases, idioms, collocational pairs of words and single vocabulary items. The test was aimed at assessing the extent of cross-linguistic influence in a situation in which the subjects were confronted with information in the L2 and had to translate it into the L1 as precisely as possible. The second objective was to make certain that the subjects were familiar with the expressions used in the test as this was a prerequisite for the next task. The rationale for using translation was that it requires both the decoding of the stimulus sentence and the encoding of the translation. As a result, the subject's performance on the task approximates natural speech production.

Task 2 was in principle an untimed acceptability judgement test. It contained 26 literal translations of the sentences used in the previous test. Consequently, it consisted of sentences that were potentially incorrect by Polish standards. The subjects' task was to evaluate their acceptability, as well as correct those that they found to be incorrect and/or unacceptable.

The study was conducted on a sample of 30 students in their fourth year of study at the English Department of the University of Silesia in Katowice, Poland. The subjects were all proficient bilinguals whose knowledge of English was attested to by the results of the end-of-year examination in general English.

Data analysis

As explained in the introduction, this section focuses on selected examples of English lexical borrowings in Polish. These are analyzed in terms of the markedness criteria presented thus far. The analysis is undertaken in the hope that its results will shed light on the factors at work in the process concerned, as well as on the overall usefulness of the category of markedness in research of this kind.

The borrowings discussed here occurred in both the translation and acceptability judgement tasks. This, in turn, implies that they are representative of expressions which are open to influence from another language, as well as being vulnerable to attrition (Silva-Corvalan 1991).

Among the most frequently used calques from English were *oko igły* [the eye of the needle; Polish: *ucho(ear) igły*] and *biały jak kreda, ściana, prześcieradło* [as white as chalk, a wall or a sheet; Polish: *blady (pale) jak prześcieradło, ściana*]. The results of their analysis are presented in Table 1.

Table 1. Analysis of the eye of the needle / ucho igły

Eye (<i>oko</i>)	ear (<i>ucho</i>)
Formal marking Absence of bound morphology: <i>Unmarked</i>	Formal marking Absence of bound morphology: <i>Unmarked</i>
Frequency Easily established due to the availability of corpora such as the British National Corpus; Eye – more frequent than ear; oko – more frequent than ucho : <i>Unmarked</i>	Frequency Easily established due to the availability of corpora such as the Word Frequency Dictionary of the Polish Language (Słownik Frekwencyjny Języka Polskiego): <i>Marked in relation to eye(oko)</i>
Specificity in meaning: Eye A meronym of <i>head</i> or <i>body</i> and a co-meronym of ear, which makes both items similar in terms of markedness. Besides, both are polysemic with a number of central and marginal senses (Radford 1999) Meanings: 1. an organ used for seeing 2. the power of seeing : sharp eyes 3. the ability to make good judgement, e.g. have a good eye for a bargain 4. the calm center of a storm , e.g. the eye of a hurricane 5. a thing like an eye: the eye of a needle (the hole for the thread to go through) 6. a hook and eye (a fastening with a hook and loop) 7. the eye of a potato (a point from which a shoot will grow) 8. an eye on a peacock's tail 9. an electronic eye Oko 1. an organ of seeing 2. the power of seeing: sokole oko (hawk-eyed) 3. an electronic eye: lampa elektronowa 4. the calm center of a storm: oko cyklonu 5. something that resembles an eye: oka w rosole (drops of fat in chicken soup) 6. oko na pawim ogonie (an eye on a peacock's tail) 7. oka sieci (a mesh)	Specificity in meaning: Ear Likewise Meanings: 1. an organ of hearing 2. keen recognition of sounds: a good ear 3. sympathetic attention, e.g. She gained the ear of the managing director and voiced her opposition Ucho 1. an organ of hearing 2. musical ability: muzykalne ucho 3. a sense of hearing 4. nothing: ucho od śledzia 5. ear coverings, e.g. a cap with flaps (czapka z uszami) 6. an ear-shaped handle: dzban z uchem 7. a hitch: ucho holownicze 8. a hole for passing a rope through: ucho igły
Distribution Dependent on the range of central and marginal meanings listed above.	

This juxtaposition illustrates the scope of cross-linguistic analysis that a bilingual resorting to borrowing transfer embarks on at a conscious and subconscious level. On closer inspection it becomes apparent that the comparison of items has to be conducted both horizontally, i.e. between items in a single language (ucho/oko or ear/eye), vertically, i.e. between equivalents in the languages in a contact situation (ucho/ear) and perhaps even diagonally, i.e. between contrasting lexemes in the two languages, i.e. ucho/eye. What a researcher conducting the analysis does not know, however, is which of these planes plays a decisive role in transfer and how to go about determining the exact degree of markedness. One way to resolve this problem is to adopt Cook's (1996: 73) definition and classify all of the marginal, i.e. irregular and opaque meanings as marked. After all, all marked lexical phrases constitute "a departure from the usual 'neutral' form in one way or another; just as the black sheep is marked, [and] the white sheep unmarked because sheep are expected to be white". By the same token, all of the expressions whose primary or denotative meaning is different from their functional sense can be considered as marked in relation to items which retain their primary meaning. In this case, however, both items are highly polysemous, which in practical terms means that they are both marked. One could also count all the central (primary) and marginal meanings of the lexemes in question and classify as unmarked the one with a higher number of meanings. Such a conclusion could be reached on the grounds that the lexeme concerned is less specific and more versatile because it occurs in a larger number of contexts. This would suggest that *ear* is the more marked counterpart as it has fewer meanings in English. The question that arises at this point is whether distribution in English should be considered as the decisive determinant of markedness. Probably the most convincing approach arises from Kellerman's research into psycholinguistic prototypes and semantic correspondences. Namely, although the primary meanings of both lexemes are of little help, the analysis of the marginal meanings reveals that the use of *eye/oko* as a form of round opening or hole is common to both languages and, as such, seems to correspond to a cognitive universal and/or schema. This, in turn, explains why the bilingual subjects in this study opted for the more semantically transparent and cognitively universal option, i.e. the calque *eye*. Indeed, in the light of Lyons's (1996) contention that formal marking and distributional restriction are independent phenomena, one might expect contradictory results in assessments of markedness². In such cases, according to Silva-Corvalan (1991: 154), cognitive considerations will take precedence as bilinguals strive to achieve a cognitively lighter and more transparent load. Her contention seems to be confirmed by the analysis of *as white as chalk* (*blady jak ściana*). Since formal marking and frequency apply to it in exactly the same way as to the *eye/ear* comparison, the discussion that follows will focus solely on the specificity in meaning and distributional criteria.

² Greenberg (1976) shows that frequency counts confirm predictions of markedness made on the basis of structural properties.

The calques that appeared in the data corpus with considerable frequency were *biały jak kreda*, *ściana*, *prześcieradło* (as white as chalk, a wall, a sheet), the last two of which are correct in Polish usage. The two words of interest to this analysis (see Table 2) are *biały* (white) and *blady* (pale).

Table 2. Analysis of white (*biały*) and pale (*blady*)

biały (white) specificity in meaning: -quasi-hyponym of pale	blady (pale) specificity in meaning: superordinate to white
Biały 1. the colour of milk: białe zęby (white teeth) 2. of a race of man: biały człowiek (white man) 3. time of day: biały dzień (broad daylight) 4. other: białe noce (white nights), białe wino (white wine), biała kawa (white coffee), biały wiersz (white verse)	Blady 1. unwell: blady jak ściana 2. lacking intensity in colour: blade niebo (a pale sky), blada herbata (pale tea) 3. obscure: blade pojęcie (*a pale idea)
White 1. of the very palest colour 2. of a race that has pale skin 3. pale as a result of emotion: white with fury 4. pale yellow in colour: white wine 5. of tea/coffee-with milk added: white coffee 6. white knight: a person expected to bring success to a team 7. white elephant: a burdensome gift 8. white collar: a person performing non-manual work	Pale 1. having little colour: pale with anger 2. unwell: look pale 3. not bright or dark: a pale sky, pale blue 4. of light-not strong: the pale light of dawn 5. pale ale: weak beer 6. pale imitation: poor imitation
Distribution: dependent on the meanings listed above	

A detailed analysis of the semantic and distributional criteria reveals that the semantic relationship between the primary senses (Kellerman 1983) of the words in question is that of quasi-hyponymy with *pale* being superordinate to *white*, which automatically makes it more general in sense and hence unmarked in relation to *white* (Lyons 1996). This seems to hold true for both languages. However, *white* as well as its Polish counterpart *biały* are more versatile and occur in a larger number of contexts. The immediate conclusion is that on distributional grounds *white* in un-

marked in relation to *pale*, which contradicts the judgements made on a semantic basis. In addition, apart from being tied up in hyponymy, in English *pale* and *white* share a marginal meaning, that of lacking colour as a result of illness or emotion (cf. white, pale with anger). Such a correlation does not occur in Polish where sentences such as *był biały ze zmęczenia* (white with fatigue) are incorrect. This raises the question of why bilingual subjects felt inclined to borrow a word with a dubious status. The answer may also be provided by Kellerman's notion of psycholinguistic prototypes. Namely, it appears that the setting offered by English corresponds to a more universal cognitive schema where *white* and *pale* coincide. Besides, one cannot rule out the possibility that the subjects' perception of markedness and hence transferability is affected by context and transfer in the domain of comprehension. Since chalk tends to be white rather than pale, the choice of the former seemed only natural and did not obscure the meaning of the statement it appeared in. This conclusion, in turn, indicates that the perception of markedness may be dynamic and context – driven rather than absolute and independent of situational constraints. Moreover, it lends support to the claim that semantic transparency is the main determinant of transfer in language contact situations and that the concept of markedness in its present form cannot solve the questions posed by transfer but only contribute to their solution (Spolsky 1989:128).

A phenomenon that cannot be accounted for solely in terms of classical markedness is meaning extension whereby a word in the recipient language (L1) receives an additional meaning, i.e. that of a similar-looking item in the L2. The necessary condition for meaning extension is not semantic similarity, as it occurs between words that often have unrelated senses, but phonetic equivalence (Grosjean 1982). This study provided a few examples of semantic extensions, the most interesting being the use of *traktować kogoś salatką warzywną (poczestować)* on analogy to its English equivalent 'treat somebody to green salad'. There is no doubt that in this particular case the observed extension of meaning was encouraged by semantic factors because one of the archaic meanings of *traktować* was that of offering food to others as a way of showing hospitality. Although it has disappeared from modern Polish, one can argue it is reintroduced into the L1 of Polish-English bilinguals under the influence of the English language. The reason why semantic extension deserves a mention is that it seems to adhere to the *two-in-one principle*, which is evidence of the bilingual's attempt to economize on form in favour of meaning. In addition, one cannot help but notice that it is essentially a form of homonymy, which according to Croft (1993) is economically motivated. To put it another way, homonymy is believed to represent paradigmatic economy, i.e. minimizing the number of morphemes by giving them several meanings (Croft 1993). When applied to the bilingual context, economic motivation makes it possible for the bilingual to achieve a more efficient cognitive load by making the lexemes in question more versatile, i.e. applicable to a larger number of contexts. This explanation, however, lies outside the scope of markedness theory as discussed in this paper.

Conclusions

All things considered, there is ample evidence to suggest that markedness in its present form cannot be used as a blanket term to account for cross-linguistic interaction in all its guises. This is why Kean (1986: 89, cited in Spolsky 1989: 128) calls for considerable caution and points out that "at no point in time will a simple comparison of marked/unmarked in the native language and marked/unmarked in the target language suffice to characterize the learner's options". Moreover, the lack of clearly defined criteria, which makes the concept vague and fuzzy (Ellis 1995), has led to enormous discrepancies in research results where the same phenomena are classified as unmarked by one researcher and marked by another (Ellis 1986). It should come as no surprise then that Kellerman (1984, cited in Ellis 1986) warns against a *cavalier attitude* to markedness while Sharwood-Smith admits that researchers often resort to ad hoc definitions of markedness to suit their empirical findings (1983, cited in Seliger and Vago 1991: 191).

An alternative, if not complementary, solution to the problems posed by the issue of semantic borrowing transfer is to look into semantic correspondences, as well as cognitive prototypes, and use them as the basis for predictions about cross-linguistic interaction. Since it is evident (Odlin 1989) that semantic transparency aided by transfer in the area of comprehension affects transferability of expressions, with the more transparent, i.e. easier to understand items being more transferable, there is no reason why one should not believe that overall simplicity and ease of comprehension play a decisive role in semantic borrowing transfer in general. What is more, since the process concerned seems to be facilitated by corresponding cognitive schemata, one cannot rule out the possibility that it is governed by universal cognitive factors. Indeed, the fact that the innovations observed in bilingual speech are also commonly found among monolinguals (Odlin 1989) is a case in point and further evidence of the universality of the processes under discussion.

In spite of the criticism that the concept of markedness has attracted over the years, there are linguists who, apart from expressing (moderate) enthusiasm for the theory, propose changes in its framework. For example, drawing on the results of the *breken* study, Kellerman (1983) suggests that native-speaker judgements³ could be used as a basis for assessing the degree of markedness in a particular language. Indeed, given that the perception of markedness may be context-driven and dependent on language distance (Kellerman 1983), which is subject to impressionistic estimation and "ultimately in the eye of the beholder" (Odlin 1989: 142), this could prove a useful source of data about what is (un)likely to be transferred. What makes this suggestion even more attractive is that if coupled with the analysis of L1 attri-

³ Another alternative is to use word association tests as it has been noticed that the stimulus word tends to elicit words of the same category. Thus, unmarked stimuli elicit solely unmarked responses while marked stimulus words produce marked responses but to a lesser extent (Greenberg 1976).

tion data it could provide a holistic view of the patterns and mechanics of cross-linguistic influence at a linguistic and cognitive level. On the other hand, however, it is necessary to express concern about the reliability of findings obtained in this way as they are likely to be both subjective and incoherent. The immediate conclusion must be that without stringent criteria for assessing markedness, researchers can only begin to address the issue and hope it is a step in the right direction.

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