

CONTACT-INDUCED CHANGES – CLASSIFICATION AND PROCESSES

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Abstract

Traditionally, contact-induced changes in languages have been classified into two broad categories: those due to “borrowing” and those due to “interference” by an L1 or other primary language on an L2 in the course of second language acquisition (SLA). Other terms used for “interference” include “substratum influence” and “transfer”. Labels like these, unfortunately, have been used to refer both to the outcomes of language contact and to the “mechanisms” or processes that lead to such results. This imprecision in the use of key terms poses serious problems for our understanding of what is actually involved in the two types of cross-linguistic influence. Moreover, it has led to pervasive inaccuracy in our assignment of changes to one or the other category. The aim of this paper is to re-assess the conventional wisdom on the distinction between borrowing and “interference” and to clarify the processes as well as the outcomes characteristic of each. My approach is based on van Coetsem’s (1988) distinction between the mechanisms of borrowing under RL agentivity and imposition under SL agentivity, with their shared but differently implemented processes of imitation and adaptation. Crucially, this approach recognizes that the same agents may employ either kind of agentivity, and hence different psycholinguistic processes, in the same contact situation. It is the failure to recognize this that has sometimes led to inaccuracy in accounts of the nature and origins of contact-induced changes, as

well as to conflicting classifications of the outcomes of contact. The present paper proposes a more rigorous and consistent classification, based on the kinds of agentivity involved.

1 Introduction

Traditionally, contact-induced changes in languages have been classified into two broad categories: those due to “borrowing” and those due to “interference” by an L1 or other primary language on an L2 in the course of second language acquisition (SLA), particularly language shift. The second type of change, interference via shift, has also been referred to as substratum influence, especially in the context of creole formation, and as transfer, in the context of SLA. Labels like these, unfortunately, have been used to refer both to the outcomes of language contact and to the “mechanisms” or processes that lead to such results. Statements like the following, from Thomason and Kaufman (1988: 69), are typical of what we find in the literature:

If we know that contact was intimate enough to make shift as well as borrowing possible, then there is no reason to suppose that one process operated to the exclusion of the other, barring established social or numerical asymmetry that would enable us to rule out one of the mechanisms.

Here, “borrowing” and “shift” are treated as “mechanisms” or “processes” without any clear explanation of what these terms mean. This imprecision in the use of key terms poses serious problems for our understanding of what is actually involved in the two types of cross-linguistic influence. Moreover, it has led to pervasive inaccuracy in our assignment of changes to one or the other category.

The aim of this paper is to re-assess the conventional wisdom on the distinction between borrowing and interference and to clarify the processes as well as the outcomes characteristic of each. Students of language contact have sometimes pointed to the indeterminacy of these terms. For example, Haugen (1950:213) points out that “borrowing as here defined is strictly a process and not a state, yet most of the terms used in discussing it are ordinarily descriptive of its results rather than of the process itself”. He further notes that the classifications of borrowings into loanwords, loan translations, and the like “are merely tags that various writers have applied to the observed results of borrowing” (ibid.). Hammarberg (1997:162) makes a similar point about the different ways in which the term “transfer” has been used and interpreted, namely

(a) at the level of *strategy*, with regard to the learner’s plan of action to solve a particular problem; (b) at the level of *execution*, with regard to the event or process of carrying out the strategy; and (c) at the level of *solution*, with regard to the product (as manifested in the learner’s L2 performance) of the applied strategy.

Classifications of the outcomes of language contact are of course useful and necessary. But their focus on results often obscures the nature of the mechanisms and

psycholinguistic processes that lie behind them. By reifying terms like “borrowing” and “transfer” we have tended to commit ourselves to pre-determined classifications of contact phenomena, and even to misapply the labels in some cases. Moreover, in doing so, we have tended to overlook some of the similarities in process between the two types of cross-linguistic influence—similarities that sometimes make the boundary between the two fuzzier than might first appear.

Perhaps the most comprehensive (and least appreciated) attempt to sort out the terminological mess in discussions of contact phenomena was made by van Coetsem (1988). He makes a broad distinction between borrowing and what he calls imposition, and defines them in terms of two transfer types, which he labels recipient language (RL) agentivity and source language (SL) agentivity. It will become clear below how these two transfer types are related to the actual mechanisms or processes involved in contact-induced change. Note that transfer in this context is used in a neutral sense, to refer to any kind of cross-linguistic influence, not just L1 influence in SLA.

In this approach, borrowing and imposition are epiphenomena or cover terms for the actual mechanisms involved in the two types of cross-linguistic influence. Each involves a particular kind of agentivity on the part of speakers, as well as a particular direction of change. In borrowing, materials from an external source language are imported into an RL via the agency of speakers for whom the latter is the dominant or primary language, i.e., RL agentivity. In imposition (which corresponds to what SLA researchers call transfer) the source language is the dominant (usually the first) language of the speaker, from which materials are transferred into an RL in which the speaker is less proficient, i.e., SL agentivity. Each type of cross-linguistic influence is associated with particular psycholinguistic processes via which materials are transferred from one language to another. As will become clearer, we need to distinguish the agents of change from the kinds of agentivity they employ in introducing changes. This is so because the same agents may employ either kind of agentivity, and hence different psycholinguistic processes, in the same contact situation. As our discussion will make clear, failure to recognize this has sometimes led to inaccuracy in accounts of the nature and origins of contact-induced changes. Let us now turn our attention to these.

2 Agentivity in borrowing

Thomason and Kaufman (1988:37) define borrowing as “the incorporation of foreign features into a group’s native language by speakers of that language: the native language is maintained but is changed by the addition of the incorporated features”. This appears to coincide broadly with van Coetsem’s (1988:3) definition in terms of RL agentivity:

If the recipient language speaker is the agent, as in the case of an English speaker using French words while speaking English, the transfer of material (and this naturally includes structure) from the source language to the recipient language is *borrowing (recipient language agentivity)*. (italics in original)

In the light of this, several aspects of Thomason and Kaufman's definition appear somewhat vague. In the first place, the term "dominant" or "primary" language seems more suitable than "native" language, since the latter is often in doubt (for example, in some cases of bilingualism among children) or often yields to another primary language in the course of socialization (Weinreich 1953:14). In addition, Thomason and Kaufman's definition does not make it clear whether the agents of borrowing are monolinguals or bilinguals, though elsewhere they mention the latter as possible agents. In fact, as van Coetsem (1988:10) points out, both RL monolinguals and RL-dominant bilinguals can be agents of borrowing. More seriously, it is insufficient to define borrowing only in terms of the agents and direction of change, important though these are. What matters, crucially, is the type of agentivity or transfer mode that is involved. Henceforth I will use the term "RL-dominant" to refer to both RL-monolinguals and RL-dominant bilinguals. Similarly, the term "SL-dominant" will refer to both monolingual and bilingual speakers for whom the source language is the primary language. There are, of course, different degrees of dominance and bilingualism, which may have consequences for the kind of contact-induced change that occurs (see below).

Finally, we must not confuse language dominance with language maintenance. Many languages are maintained over long periods of time, even when large numbers of their speakers have adopted another language as their primary language. Such speakers may be agents of significant structural changes in the maintained language. I argue that such cases generally involve SL agentivity, by which speakers of the dominant language impose its features on their version of the maintained ancestral language. The resulting changes may eventually be adopted by other speakers for whom the maintained language is still dominant (as Thomason and Kaufman point out). Hence we find a combination of the two transfer types in such situations. Crucially, though, the original means by which the changes are first introduced is SL agentivity. Thus it is dubious at best to ascribe such changes to (a "process" of) borrowing.

Distinguishing borrowing from imposition in this way allows us to identify and compare more precisely the mechanisms or processes that lead to each outcome. Haugen (1953:383) points out the difficulty associated with the latter:

Unfortunately, we are unable to watch the mental processes directly, and can only guess at them by observing their results and comparing those results with what the speakers themselves report about their own mental experiences.

Haugen suggests that every lexical borrowing involves two such processes: importation and substitution. The former is typically partial, since it isn't necessary "to take over a word with all its sounds, forms and meanings intact" (ibid.). Instead, borrowing language speakers tend to "substitute some of the habits of their own language for those in the source language" (ibid.). Van Coetsem suggests instead a distinction between "imitation" (roughly corresponding to Haugen's "importation") and "adaptation" (corresponding to "substitution"). The latter involves the use of L1 habits in modifying features imported from an sl. Henceforth, I follow van Coetsem's terminology, which appears more trans-

parent and applicable. This is not to claim, of course, that these terms represent the actual mental processes that speakers employ.

The twin mechanisms explain much about the types of lexical contact phenomena that have been classified as borrowings. A simple classification is shown in Table 1, adapted from Haugen (1950, 1953).

LEXICAL CONTACT PHENOMENA	EXAMPLES
A. Lexical borrowings	
1. Loan words	
a. "Pure" loanwords	French <i>rendezvous</i> in English.
b. Loan blends	Pennsylvania German. <i>bassig</i> (E. <i>boss</i> + G. <i>-ig</i>)
2. Loan shifts (loan meanings).	
a. Semantic extensions	American Portuguese <i>frio</i> 'cold infection' (on model of Eng. <i>cold</i>).
b. Loan translations	Germ. <i>Wolkenkratzer</i> (cf. Eng. <i>skyscraper</i>)
B. Creations	
1. Purely native creations	Pima 'wrinkled buttocks' for 'elephant'
2. Hybrid creations	Yaqui <i>lios-nóoka</i> (Lit. 'god-speak') 'pray'
3. Creations using only foreign morphemes.	Japanese <i>wan-man-ka</i> 'bus with no conductor' English <i>one + man + car</i> .

Table 1. A simplified classification of lexical borrowings.

The lexical phenomena shown in Table 1 are not exact imitations, but rather the products of various creative processes applied to SL forms or patterns. Some of them, for instance, loanwords and loan blends, illustrate the processes of importation and adaptation that are associated with prototypical lexical borrowing under RL agentivity. In this transfer type, as van Coetsem shows, imitation comes first, and then adaptation alters the imported item so that it conforms fully to RL phonology, morphology, and syntax. In other words, lexical borrowing typically adds new lexical items to the RL without affecting its structure. Most of the categories of lexical borrowing shown in Table 1 conform to this pattern.

However, other lexical contact phenomena such as loan translations appear to involve the transfer of structural patterns from the SL to the RL. Heath (1984:367) refers to this as "pattern transfer" and distinguishes it from borrowing. The question then is whether phenomena like calquing are true borrowings, in the sense in which van Coetsem uses the term. In other words, is imitation of a foreign structural pattern similar in kind to imitation of a foreign lexical item? What kinds of structure can be imitated (or borrowed) under RL agentivity? There seems to be consensus that patterns of the type involved in calquing, as well as derivational morphology, can be imitated in this way. This kind of borrowing, though, is primarily lexical in nature, though it involves the transfer of structural patterns (see discussion below). But what limits are there on borrowing of this type?

The larger issue here is whether, and by what criteria, the transfer of structural patterns from an SL to an RL can always legitimately be viewed as borrowing.

3 The issue of structural borrowing

It has long been a matter of debate whether, and under what conditions, languages can borrow structural features. The answers to these questions are vital to our understanding of contact-induced structural change, as well as to our classification of its products. Thomason and Kaufman argue that there is a scale of borrowing, with slight lexical borrowing at one extreme and extensive grammatical replacement at the other, with varying degrees of structural borrowing in between. This clearly implies that structure can be borrowed in its own right, and in significant degrees.

In fact, it is arguable that many instances of so-called structural borrowing are not the result of direct importation or imitation of the kind associated here with lexical borrowing. As we will see, certain structural innovations in an RL appear to be mediated by lexical borrowing, and are therefore not clear cases of “pure” structural borrowing. In other cases where direct borrowing of structural elements occurs, as it seems to in some situations, it typically involves free morphemes such as prepositions and conjunctions. Bound morphemes appear to be borrowed only in cases where they substitute for RL morphemes that are semantically and structurally congruent with them. Moreover, such borrowing requires a high degree of bilingualism among individual speakers.

The question then is whether other structural features, for example, word order, morphosyntactic categories, argument structures, and the like, can be transferred through the mechanism of borrowing. Before we consider this, let us examine structural innovations that do appear to involve true borrowing.

3.1 Cases of structural borrowing

There is ample evidence that heavy lexical borrowing can introduce new structural features into a language. A well-known example is the extensive borrowing of French lexicon into Middle English in the fourteenth to fifteenth centuries. The introduction of French loans with initial [v ð z] led to the phonemicizing of OE allophonic variants such as [f] and [v], [θ] and [ð], and [s] and [z]. The respective pairs of fricatives were originally allophones, voiced in intervocalic position, but voiceless elsewhere—e.g., [wi:f] ‘woman’ vs. [wi:vas] ‘women’. The introduction of French words like *veal*, *zeal*, etc. led to the development of contrasts, e.g., between *feel* and *veal*, *seal* and *zeal*, leading to a phonemic opposition between the voiced and voiceless fricatives. Similarly, lexical borrowing led to the phonemicizing of /č/ vs /ǰ/ and [š] vs [ž]. On the whole, however, phonological changes were few, confined to the pairs above. No new sounds were introduced into English. Moreover, the tendency toward phonemicization of certain allophonic pairs may have existed even before French influence intervened. For example, Kurath (1956) argues that the loss of geminate consonants in words like [pyfan] (< pyffan) may have created a contrast between intervocalic [f] and the [v] in words like [dri:van] ‘drive’. Also, internal developments such as the loss or reduction of endings and lexical borrow-

ing from Old Norse may have contributed to these changes. At any rate, English phonology changed rather little under direct French influence. Yet neither English phonology nor morphology changed much under French influence. Sounds like [f] and [v] already existed in Middle English as non-distinctive allophones, so only minor adjustment was involved.

Lexical borrowing from French also had some influence on English morphology, particularly on derivational processes. It introduced several derivational affixes such as the prefixes in *dis-connect*, *de-flee*, *en-rich*, *em-bolden*, etc. Similarly, items like *cert-ify*, *charit-able*, *declar-acioun*, *statu-ette*, etc., yielded various suffixes, some of which became relatively productive as early as the Middle English period itself. For instance, the adjective-forming suffix *-able* was soon employed with native stems to yield words like *speakeable*, *knowable*, etc. (Dalton-Puffer 1996). In general, however, relatively few of the many French affixes that had been imported became productive, and the vast majority of French loans underwent adaptation to English morphological processes.

The important point, for our purposes, is that both the phonological and morphological innovations were introduced indirectly through lexical borrowing. Middle English speakers clearly did not isolate morphemes like *-able* in the relevant French words and import them independently of the stems to which they were attached. Thomason and Kaufman (1988:106) discuss a similar situation in Kormakiti Arabic, where lexical borrowing was the source of various structural innovations. While such innovations are clearly borrowings, they were not directly imported in either of these cases. In fact, there seems to be much support for the traditional view that direct structural borrowing is subject to very strong constraints, as has long been argued by linguists such as Meillet, Sapir, and others.

As noted above, direct borrowing of structural elements can occur only when the languages involved are typologically very similar, allowing for the substitution of an RL morpheme by a close counterpart in the SL. We leave aside, for the moment, the direct borrowing of function words, especially conjunctions and prepositions, which appears to occur quite frequently. For example, many indigenous languages in the Americas have borrowed conjunctions like *pero* 'but' and *como* 'as, like' from Spanish. This kind of borrowing is more akin to lexical than to structural borrowing, and like the former, it tends to have little or no impact on the structure of the RL.

A well-known case of structural borrowing is the contact between Ritharngu and Ngandi, two Aboriginal languages spoken in Arnhem Land, Australia (Heath 1981). The Ritharngu (Ri) group is the larger one, and speakers of Ngandi (Ng) are gradually shifting to Ri, so much so that their language is on the path to extinction, being now restricted to a few fluent speakers. This asymmetrical relationship has favored massive lexical borrowing across the two languages, but more so by Ng, which has also adopted several bound morphemes from Ri. Many of these structural borrowings were facilitated either by heavy lexical borrowing or by a close typological fit between the languages in the relevant subparts of their grammars. Once more, however, the overall structure of Ng has not been seriously affected.

This contrasts with the marked structural influence that Ng has had on Ri, as speakers of the former shift to the latter. This influence can be found in phonology (e.g., the distribution of glottal stops); in morphology (e.g., the transfer of enclitic pronouns marking subjects and objects); in morphosyntax (e.g., the emergence of new TMA categories); and in syntax (e.g., the strategy of creating relative clauses by attaching a subordinating suffix to a clause). (See Heath 1978:126ff.) These innovations are clear instances of impositions, in that Ng speakers partially adapted Ri to their own native grammar. The contact between these two languages demonstrates clearly the distinction between borrowing under RL agentivity and imposition under SL agentivity. It also demonstrates that structural borrowing is subject to much stricter constraints than structural imposition, and has much less impact on the grammar of the RL than the latter.

If it is true that direct borrowing (imitation) of structural features is so constrained, how can we explain the sometimes extensive changes that have occurred in maintained languages under influence from external source languages? The answer lies in two factors, the degree of bilingualism involved and the extent to which bilinguals are dominant in one or the other language. It is well known that situations in which a maintained language has undergone significant contact-induced change invariably involve extensive bilingualism. In these cases, the distinction we referred to earlier between the agents of change and the types of agentivity becomes especially important, since it helps us better understand the mechanisms by which structural change has occurred. In fact, both kinds of agentivity may be involved in such situations and can be implemented by the same agents.

3.2 Intertwined languages

When the agents of change are RL dominant, the changes they introduce from the SL are more likely to involve mostly lexical borrowing under RL agentivity. This process can be carried to an extreme, resulting in the creation of mixed or intertwined languages such as Media Lengua, Michif, and others to be discussed below. In simple terms, Media Lengua is a blend of Quechua grammar and Spanish-derived stems (mostly nouns, verbs, and adjectives) to which Quechua grammatical affixes are added. Borrowings from Spanish also include function or closed-class items like prepositions, conjunctions, and personal pronouns. But all of these, like the stems referred to above, have been adapted to Quechua morphology and syntax. (See Muysken 1981 and 1997 for details.) The following example from Muysken (1981:68) will serve as illustration (Spanish items are in italics):

(1) ML: *No* *sabi*-ni-chu Xwan *bini*-skda-da
 NEG know-1SG-NEG John come-NOM-ACC
 ‘I don’t know that John has come’

Q: Mana *yacha*-ni-chu Xwan *shamu*-shka-da
 NEG know-1SG-NEG John come-NOM-ACC

Sp: No sé que Juan ha venido
 NEG I-know that John has come

Note that the Spanish forms simply substitute for the Quechua forms without changing the underlying system. In general, the grammatical features imported from Spanish into ML were relatively few, despite the massive incorporation of free forms. Note also that practically no bound morphology was incorporated into ML from Spanish. The few exceptions include the diminutive suffix *-itu* (< *-ito/-ita* as in *muchachito/a* < *muchacho/a* ‘boy/girl’), and the past participle *-do* as in *cansado* ‘tired’ < *cansar* ‘to tire’. Both features also occur in Quechua, where they are clearly borrowings, and it is clear that the derivational suffixes were not incorporated directly, but only as parts of words borrowed as wholes, as we saw in the case of Middle English.

In short, the patterns of incorporation of free forms into a maintained structural frame, and the adaptation of such forms to Quechua grammar (including phonology) are exactly what we would expect in cases of (mostly lexical) borrowing under RL agentivity. These characteristics are clear evidence that ML was created by Quechua-dominant bilinguals. The strategies we find here are also found in cases of “classic” code-switching of the type that involves insertion of embedded-language content morphemes into the morphosyntactic frame of a matrix language (Myers-Scotton 2002:105). Heath (1978) and others have also compared this type of code-switching with borrowing.

ML is a good example of contact situations in which a maintained ancestral language is the dominant language as well as the recipient language. But what about situations in which the grammatical structure of the resulting contact language comes, not from the ancestral language, but from an external SL? Such situations are of two types. The first involves intertwined languages very similar to Media Lengua, such as Anglo-Romani and Ma’a. The second involves ancestral languages that have undergone massive structural change under external influence, for instance, Asia Minor Greek. I argue that the mechanisms and processes by which Ma’a and Anglo-Romani emerged were the same as those that gave rise to Media Lengua. In other words, they are all akin to cases of borrowing under RL agentivity. On the other hand, I argue that languages like Asia Minor Greek arose primarily through processes of imposition via SL agentivity. Let us consider each case in turn.

4 The case of Anglo-Romani and similar intertwined languages

Scholars have offered different explanations with regard to how intertwined languages were formed, and in some cases the same scholars have taken contradictory positions on the same language. For instance, Anglo-Romani has been characterized as a case of shift to English with consequent incorporation of lexicon from Romani. On the other hand, it has been claimed that Ma’a arose via a process of gradual grammatical replacement, that is, structural borrowing. The same has been argued for languages like Asia Minor Greek, whose grammars have changed dramatically under sustained external influence. Let us consider each of these types of situation in the light of the distinctions between borrowing and imposition discussed above.

Anglo-Romani is spoken by Roma or Gypsy groups in the British Isles. Its grammatical frame is English, but most of its lexicon comes from Romani, the ancestral language. In this respect, it is the converse of *Media Lengua*. Thomason and Kaufman (1988) offer somewhat conflicting claims concerning the origin of the former language. At one point, they argue that “a case like Anglo-Romani apparently represents actual language shift with maintenance of Romani vocabulary” (1988:49). This would imply that English was the matrix language into which Romani lexicon was incorporated, though they do not say this explicitly. Elsewhere, however, they characterize the language as a case of “complete grammatical replacement” due to “extensive borrowing” (1988:103). This presumably means extensive structural borrowing from English into Romani. It is not clear how to reconcile these two statements, or how to interpret their description of the actual processes involved in the creation of Anglo-Romani. For instance, they describe the language as the result of “two entirely distinct historical processes [sic]: inherited vocabulary, borrowed grammar” (ibid.). It’s not clear what kind of processes they have in mind here, and how they relate to the actual mechanisms by which Anglo-Romani was created. In other words, it is not clear whether they equate historical processes with psycholinguistic ones. Moreover, the implication of their statements seems to be that language shift can be equated with extreme grammatical borrowing, which I argue is dubious at best.

Thomason (1995:23) considers the suggestion, made by Boretzky (1985), that Romani lexicon was incorporated into an English frame. This suggests that Anglo-Romani arose after the Roma had shifted to English, and that English was the dominant language into which lexical items from Romani were incorporated. In our terms, this would be a case of massive lexical borrowing, under RL agentivity, similar in kind to *Media Lengua*, except that the RL in this case is not the ancestral language, but the one shifted to. This appears to be the generally accepted view among scholars, though Thomason still seems to maintain that Anglo-Romani, “is the end product of massive structural borrowing” (1995:24).

Given the mostly unanimous consensus on Anglo-Romani, it is surprising that other intertwined languages that arose under similar circumstances have been explained in quite different ways by some researchers. For instance, Thomason (1995:24) unequivocally attributes the formation of Ma’a and Caló (an intertwined language with Spanish grammar and Romani vocabulary) to “massive structural borrowing”. Thomason and Kaufman (1988:50) place situations like this at the outer limits of their continuum of “borrowing” situations, where extreme structural borrowing has occurred. They draw a sharp distinction between Anglo-Romani and Ma’a, arguing that the former represents “actual language shift with maintenance of Romani vocabulary”, while, in the case of Ma’a, “no shift has occurred, but almost all of the original Cushitic grammar and at least half ... of the Cushitic vocabulary have been replaced by Bantu grammar and lexicon” (1988:49).

Again, it is somewhat confusing that the term they use here to explain the origins of Ma’a, that is, “grammatical replacement”, is the same one they used with respect to Anglo-Romani. “Replacement” can come about in different ways. However, it is quite

clear that in the case of Ma'a they intend this term to mean massive structural borrowing. But to assign such extreme changes in grammar to borrowing flies in the face of all we know about the strong constraints on structural borrowing under RL agentivity. Moreover, given the close similarity in make-up between Anglo-Romani and Ma'a, it seems counterintuitive and uneconomical to ascribe the former to shift accompanied by lexical retention and the latter to lexical retention accompanied by massive structural borrowing. Economy would suggest that Ma'a arose in the same way as Anglo-Romani, that is, after the Ma'a shifted to a Bantu language. Under this scenario, their newly acquired language then served as the matrix language into which they incorporated lexical items from their original ancestral language. In other words, the creation of Ma'a involved the same RL agentivity that we found in the case of Media Lengua and Anglo-Romani. This is similar to the position taken by scholars such as Bakker (1997), Brenzinger (1992), and Sasse (1992). It finds support in the fact that the Ma'a also speak a variety of Bantu (Mbugu) whose grammar is closely similar to that of Pare, the language of the surrounding group (Mous 1994:176). This variety differs from Ma'a (also referred to as "inner Mbugu") only in vocabulary and minor structural features. Adopting the above scenario would mean that we have a unified explanation that allows us to classify these contact languages as a single type, as well as to recognize the similar psycholinguistic processes (as distinct from the historical circumstances) by which they came into being.

5 Ongoing language shift and types of agentivity

The cases we considered in the previous sections all involve situations where the RL is clearly dominant, and RL agentivity is the primary factor in the changes that occur in it. In most cases, the RL is a maintained language, or the group's primary language. But what are we to make of situations, such as Asia Minor Greek, where it is clear that extreme structural changes have occurred in an ancestral language under the influence of a politically dominant external language, while the ancestral language is still maintained?

As noted earlier, the tendency is for scholars to assume that any change in a maintained language must be due to borrowing in the first instance. This, presumably, is why Thomason and Kaufman (1988:215) assign languages like Asia Minor Greek and Wutun to level 5 of their borrowing scale, arguing that they arose via massive grammatical borrowing. But a close examination of the structural features in question casts doubt on this claim. Let us consider the changes that occurred in Asia Minor Greek under Turkish influence.

The Cappadocian variety of Greek in particular was influenced far more heavily than those in areas like Silli and Phárasa, while varieties in Pontus in the west of Turkey displayed even less influence. Turkish influence on Cappadocian Greek was pervasive, encompassing the lexicon, phonology, morphology, and syntax. In phonology, for instance, we find reduction of Greek phonological contrasts via elimination of sounds such as /ð/ and /θ/, sounds not found in Turkish. Vowel harmony on the Turkish pattern is found on Greek suffixes attached to Turkish words, while a number of new phonemes derived from Turkish, e.g., /ö, ü, č, ĵ/ entered the Cappadocian variety. Various Turkish-derived morphophonemic rules also appear in the dialect.

In morphology, we find loss of inflections on adjectives (Turkish lacks these) and the use of partly agglutinative strategies of noun and verb inflection, which again follows the Turkish pattern. Similarly, Turkish-derived innovations are found in the tense/aspect system, and in various aspects of syntax, including word order.

Thomason and Kaufman (1988:218) argue that “if Turks did not shift to Greek, all of the interference must be due to borrowing”. This once more illustrates the tendency to equate changes in maintained languages only with borrowing. Moreover, the implication is that changes must have been introduced by speakers who were monolingual or more proficient in Greek, that is, via RL agentivity. This overlooks the strong probability that bilinguals, especially those that were Turkish-dominant, played a key role in introducing these changes. Here again, then, the distinction between agents and types of agentivity becomes crucial.

The nature of the changes that occurred in Asia Minor Greek would seem to indicate that both types of agentivity acted in concert, with Greek-dominant bilinguals implementing RL agentivity, and Turkish-dominant bilinguals (especially children, perhaps) implementing SL agentivity. And some bilinguals may have implemented both types simultaneously. At any rate, the notion of borrowing, as we have defined it here, seems quite inappropriate to explain most of the deep and pervasive changes that occurred throughout the grammar of Cappadocian Greek. Given the strong constraints that apply to borrowing, especially of structural features, such changes could only have come about through the mechanism of imposition, involving adaptation of Greek to Turkish, rather than the other way around.

This scenario is in keeping with van Coetsem’s (1988:83) observation that “the linguistic dominance relation between the RL and the SL ... determines whether RL or SL agentivity will result from the contact”. It follows that reversals in this dominance relationship will lead to changes in types of agentivity. We see this especially in cases where speakers gradually lose competence in their ancestral language as they become linguistically dominant in a language they acquire later (*ibid.*). An approach like this allows for a unified treatment of languages similar to Asia Minor Greek that have been accounted for in terms of “interference due to shift”. The latter include Ethiopic Semitic, Shina, Irish English, and others that Thomason and Kaufman (1988:128–39) treat as unambiguous cases of shift with substratum influence, or, in our terms, as cases of imposition under SL agentivity. Once more, it seems uneconomical to argue for borrowing in cases like Asia Minor Greek and shift-induced interference in others, when the structural changes involved are so similar. It seems more likely that such similarities must be due to the same mechanisms of change.

We can cite a variety of other cases where bilinguals who have become dominant in a newly-acquired second language promote structural changes in their ancestral language via SL agentivity. For instance, Silva-Corvalán (1994) discusses several changes in Los Angeles (LA) Spanish that can be attributed to influence from English, which is the socially dominant language, and has become, for many speakers, the linguistically dom-

inant language as well. One example is Spanish *atrás* ‘behind’, which has acquired the sense of English *back* (Silva-Corvalán 2000:14), as in the following example:

- (2) Se lo dió p’atrás.
 to-him it she-gave back
 ‘She gave it back to him.’

The counterpart of this in general Spanish way would be as follows:

- (3) Gen Span. se lo volvió
 to-him it she-returned

Dar atrás is clearly a calque on English *give back*, replacing the use of *volver* ‘return’. Changes like these are common, even in the speech of persons quite competent in Spanish. In speakers with reduced competence in Spanish, we find even more extreme cases of calquing on English, such as the following (Silvia-Corvalán 1998:233):

- (4) LA Span. Yo gusto eso.
 I like-1s that
 Gen Span. A mi me gusta eso.
 to me pro please-3s that
 ‘I like that.’

Here, *gustar*, which has a theme or patient subject and an indirect experiencer object in general Spanish, is reanalyzed as a transitive verb with an experiencer subject and an accusative theme, on the model of English *like*.

Similar changes can be observed in Prince Edward Island French, spoken in Eastern Canada. This Acadian variety has been subjected to strong influence from English, mostly involving lexical borrowing (King 2000). For instance, English prepositions and phrasal verbs have been incorporated into the French variety, yielding forms such as *ender up*, *finder out*, etc. It is also common to find various kinds of mixture of French verbs with English prepositions (*faire up* ‘make up’), while French prepositions occur with English-derived verbs (*picker su* ‘pick on’). One consequence of this is that preposition stranding, found in English but not in French, is now a common feature of Prince Edward Island French. King (2000:136) argues that this change is not the result of direct structural borrowing, but rather “lexical borrowing has triggered reanalysis of the PEI French prepositional system”. It seems likely that this reanalysis was the result of imposition, the agents of which were fluent bilinguals who practiced code-switching. English-dominant bilinguals would have been particularly likely to impose this structural change on their French. King notes that several other structural changes have also been introduced into PEI French, presumably by the same mechanism.

6 Interaction of SL and RL agentivity

In most of the situations we have examined, it is common to find interaction, or in van Coetsem's (1988:87) terms, "complementarity", between the two types of agentivity. On the one hand, the same speaker may apply both types to effect changes in the same RL. On the other, different speakers may apply one or the other type to change the same RL. This is especially true in cases of convergence, such as have been described for Sprachbünde. In general, however, the two types of cross-linguistic influence remain distinct, and their products can in most cases be identified.

The flexible roles of bilinguals as agents of change can be demonstrated by other kinds of contact phenomena that have been assigned to other categories such as code-switching. A particularly interesting example is the code-switching behavior of the Japanese/English bilinguals discussed by Nishimura (1986, 1997). These speakers produce mixed utterances whose morphosyntactic frame is either that of English or Japanese. The following example illustrates a case of RL agentivity, where English is the RL, and lexical items are incorporated from Japanese (Nishimura 1986:132–37). Speakers are identified by the abbreviations in parentheses at the end of the sentence. SL items are in parentheses.

- (5) a. The ones we've seen are *bamboo na kodomo*. (MN)
 poor children
 'The ones we've seen are poor children.'
- b. *Kodomatachi* liked it. (SS)
 children
 'Children liked it.'

By contrast, examples like the following illustrate RL agentivity where Japanese is the RL and English the source of lexical borrowings:

- (6) a. *Only small prizes* moratta ne. (MN)
 get-past Part.
 '(We) got only small prizes, you know.'
- b. *All that fish* ga naranden no yo. (SS)
 NOM lie Part.
 'All that fish is lying (there) you know.'

As can be seen, utterances of both types are produced by the same speaker, illustrating their flexible command of code-switching. We assign all of these utterances to RL agentivity, because each has a matrix language that can easily be identified as the (linguistically) dominant language, that is, the one that supplies the morphosyntactic frame (word order, function morphemes, and inflections), into which items from the SL are incorporated.

In addition to these, we find sentences which contain mostly English words, but whose syntactic frame is (partly) Japanese, like the following:

- (7) She-*wa* took her a month to come home *yo*. (MN) (Nishimura 1986:136)
 TOP Part.
 ‘As for her, it took her a month to come home, you know.’
- (8) One algebra question *o* mark-*shite* (Nishimura 1997:97)
 ACC AUX
 ‘(You) mark one algebra question, and ...’

Cases like these are hard to distinguish from cases of SL agentivity, in which an abstract Japanese structure is imposed on English lexical items. They seem to represent the kinds of imposition that can be taken to an extreme in cases of language shift, such as Asia Minor Greek, when dominance relationships between the languages involved are reversed. It is likely that the two types of agentivity and direction of influence illustrated in these examples can be found in cases of convergence generally.

7 Processes and mechanisms in contact-induced change

Our discussion so far has supported the conventional wisdom that there are two primary mechanisms by which one language can directly influence another—borrowing and imposition. There are, of course, other mechanisms involved in contact-induced change, for example, those associated with simplification and internal developments of the sort found in second language acquisition. We will not consider these further here. The two major mechanisms and their associated types of agentivity are universal across contact situations, and most contact phenomena can be subsumed under one or the other. As we have seen, the definitive characteristic of borrowing is that it leads to little, if any, modification of the RL structure. Imported items are integrated phonologically, morphologically, and syntactically, via the process of adaptation. Contact outcomes that fall under this scenario include cases of lexical borrowing, “classic” code-switching, and most bilingual mixed languages.

On the other hand, imposition can significantly affect the structure and general character of the RL, that is, the version of it that is created by learners or SL-dominant bilinguals. Contact situations that fall under this scenario include the formation of creoles and expanded pidgins, as well as situations of convergence, including Sprachbünde and cases of shift involving varying degrees of attrition in an ancestral language.

We can now consider more closely the actual processes associated with the two major mechanisms. As we saw earlier, van Coetsem (1988:8–12) argues that there are two major processes, imitation (Haugen’s “importation”) and adaptation (Haugen’s “substitution”). As van Coetsem (1988:7) explains, imitation produces a deviation from [innovation in—DW] the RL, yielding a borrowing that is often only an approximation to the SL item. Adaptation, on the other hand, “is an adjustment to the native rl which does not modify that language” (1988:9). Both processes are at work in both of the transfer types,

but in borrowing, imitation comes into play before adaptation, while the reverse obtains in impositions (*ibid.*). If there is close imitation of an SL feature in borrowing, it may lead to a deviation from the RL pattern, as when English speakers pronounce Bach as /baχ/, using a phone not found in their L1. Such deviations are rare, and do not typically affect the RL. In the vast majority of cases, imitated SL items are adapted to RL structure, as we have seen.

Adaptation can produce quite similar results in both borrowing and imposition (van Coetsem 1988:12). By way of illustration, let us consider how English-derived words are adapted by Hindi speakers in both RL and SL agentivity. Hock (1991:393) discusses how English stops and fricatives are substituted by perceived equivalents in Hindi when borrowed into the latter. For instance, English aspirated stops (/p, t, k/) are replaced by Hindi unaspirated stops ([p, t, k]), while English fricatives (/f, θ/) are replaced by Hindi aspirated stops ([p^h, t^h]). (See Hock 1991:394 for an explanation of these substitutions.) When speakers of Hindi speak English, they adapt English sounds in precisely the same way; this is a well-known feature of Indian English. The similarity in outcomes may explain the tendency to confuse the two major mechanisms and their associated types of agentivity. In both cases, the agents of change are adapting materials from an external language to fit the structure of their dominant language. In borrowing, they preserve this structure, particularly the more stable domains of grammar, such as phonology, morphology, and most, if not all, aspects of morphosyntax. In imposition, they transfer varying degrees of their L1 structure to an external recipient language. In many cases, the results of these distinct mechanisms do not, by themselves, indicate which mechanism was involved, in the absence of sound socio-historical evidence.

In some cases the effects of imposition gradually disappear as speakers achieve greater proficiency in the RL, that is, the target language (TL). In other cases, however, these effects multiply and are reinforced by social factors, e.g., lack of access to native varieties of the TL, or the cumulative influence of similar source languages (L1s). Many creoles and extended pidgins arose in this way. The kinds of adaptation that take place in these cases have been described in a variety of ways, as “transfer”, “substratum influence”, “relexification”, “reanalysis”, “convergence”, and so on. But such terms are sometimes used without a clear determination of the types of agentivity involved.

For instance, the term “relexification” has been used to describe the reinterpretation or relabeling of superstrate lexical forms in terms of substrate semantic and morpho-syntactic categories, as found in creole formation (Lefebvre 1996, 1998). The same term was used by Muysken (1981) to refer to the importation and adaptation of SL lexical forms into the unchanged structural frame of an RL, as in the formation of *Media Lengua*. In the present approach, the latter is a case of RL agentivity, identical with what goes on in classic code-switching. To apply the same term to creole formation would imply that the latter involved importation of superstrate forms into a substrate structure that was maintained (that is, RL agentivity). If that were true, creoles would be indistinguishable from bilingual mixed languages, or cases of classic code-switching. By contrast, the position adopted here is that the processes by which creoles were formed involved imposition of varying degrees under SL agentivity, as well as other processes

such as reduction, simplification, and internal innovations also found in the more usual cases of second language acquisition. Such processes operated to varying degrees in different creoles, over varying periods of time, yielding outcomes that were quite different. This means, of course, that the term “creole” must be viewed as a convenient label for languages that share a certain socio-historical background, rather than as a typological designation.

8 Abstract lexical structure and contact-induced change

Another way of approaching a classification of contact-induced changes and their outcomes is to recognize that they all involve processes by which different aspects of RL and SL lexical structures are re-combined to form new lexical entries. However, the nature of the recombination can differ in significant ways, yielding very different kinds of contact phenomena. Myers-Scotton’s work on language contact has been particularly instructive about the ways lexical entries may be re-constituted in bilingual contact situations. Her approach is based on psycholinguistic models of language production, which distinguish three levels or stages of the language production process roughly represented here as follows. (See Levelt 1989:9 for a more detailed representation.)

- The Conceptual level: The messages the speaker intends to convey.
(the Conceptualizer)
- The Functional level Lemmas (abstract entries in a speaker’s mental lexicon) are
(the Formulator): accessed. Lemmas activate morpho-syntactic procedures (e.g.,
argument structure and morphological realization patterns)
- The Positional level: Phonological representations and surface structure are
realized.

A lexical entry consists of a word form or phonological shape, which I simply call a lexical item, its various morphological shapes, and a lemma associated with it. The latter contains information about the semantic, morphological, syntactic, and other properties of the item. In monolingual language production, once a lemma is accessed by the Formulator, it activates the morphosyntactic procedures associated with the relevant lexical items. In bilingual language production, differences arise in the way lemmas are accessed and associated with SL and RL lexical items. The reconstituted lexical entries may differ depending on which aspects of the original lexical entries are involved.

This approach allows us to explain, to some extent, the similarities and the differences between adaptation in borrowing and adaptation in imposition. In lexical borrowing, a new phonological form is introduced to an RL, with its own (often modified) semantic content. In most cases, such items assume all of the formal and structural properties (including the phonological structure) of similar RL items. This is the case in most instances of lexical borrowing, as well as in classic code-switching involving single content morphemes, as described earlier. In the latter case, of course, the imported items may substitute for items with similar meaning in the RL, whereas lexical borrowing often introduces items that have no counterparts in the RL. The point is that, in these cases, only the phonological shapes (and some of the semantics) are new to the RL.

This, in fact, is the process that Muysken (1981) described as relexification, which he defined as “the process of vocabulary substitution in which the only information adopted from the target language in the lexical entry is the phonological representation” (1981:61). As we saw earlier, Muysken proposed that Media Lengua arose via this process. Figure 1 illustrates. It is clear that there is no real difference between what happened in Media Lengua and what happens in classic code-switching and other types of lexical borrowing under RL agentivity.

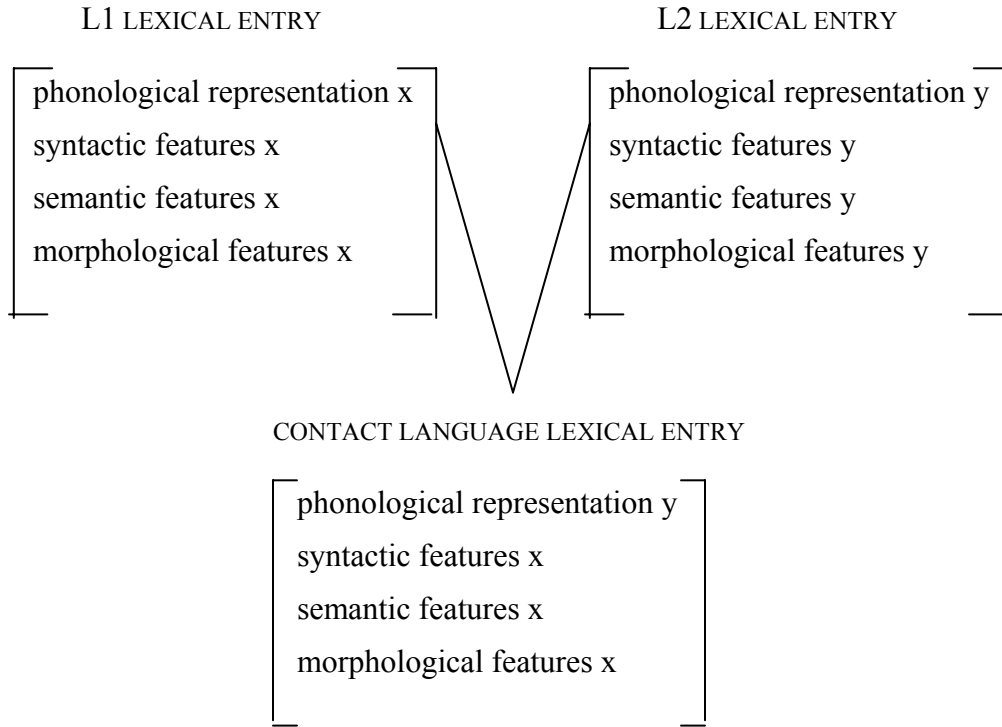


Figure 1. The process of relexification.

In imposition, by contrast, an RL item is adapted so that part of its abstract lexical structure (usually its phonological representation) derives from the SL, and only part, if any, of the rest of its original lexical structure is preserved. Imposition also involves the reconstitution of lexical entries (among other things), in which phonological forms derived from an external RL (usually a target language) are adapted in varying degrees to the properties of perceived equivalents in the L1 (as SL). Unlike lexical borrowing, however, this kind of adaptation allows for various types of combination of RL and SL lexical entries, in ways peculiar to imposition.

The “Abstract Level Model” of codeswitching introduced by Myers-Scotton and Jake (1995) offers a useful way to explain these kinds of contact phenomena, which are quite distinct from classic codeswitching, as well as other kinds of contact phenomena associated with RL agentivity. As Myers-Scotton (2002:19) points out,

In these phenomena, we cannot argue that all the abstract structure is derived from the grammar of one of the participating languages; rather it is clear that more than one language is the source of structure.

The model is based on the assumption that “all lemmas in the mental lexicon include three levels of abstract lexical structure”, namely:

Lexical-conceptual structure;
 Predicate-argument structure;
 Morphological realization patterns. (Myers-Scotton 2002:194)

Myers-Scotton argues that one or more of these levels from a lexical entry in one language can be split and recombined with levels in another language (2002:99). Like the present approach, Myers-Scotton distinguishes the processes involved in lexical borrowing and classic code-switching from those involved in convergence, which she treats as both a process and an outcome (101). She describes the process as “largely a one-way phenomenon ... [that] involves the grammar and lexicon of a source language, generally one that has more socioeconomic prestige, impinging on another language” (2002:172). It is clear she has in mind a process similar to that referred to here as imposition. Moreover, like the present approach, she identifies this “convergence” as “a mechanism in the progressive outcomes of attrition, language shift, language death and creole formation” (101). In all these cases, the abstract lexical structure of items derived from one language can change significantly due to imposition of lexical structure at different levels, from another language. Examples of this would include some of the structural changes described earlier in the English-influenced Spanish of bilinguals in LA, for example, the reinterpretation of *gustar* as a transitive verb with the argument structure of English *like*. This process may become pervasive in certain cases of contact, leading to significant degrees of structural convergence between languages.

Extreme cases of this reconfiguration can be found in creole formation. An example is the reanalysis of English preposition *there* as the locative/existential copula *de*, which in turn was reanalyzed as the Progressive/Imperfective marker in several Caribbean English-lexicon creoles. The model for this was the fact that principal substrate languages such as Gbe employed the same item as both a locative copula and a marker of Progressive aspect. When substrate speakers were confronted with English sentences such as *John there (in the yard)*, they established an interlingual identification between this *there* (pronounced /de/) and their L1 locative/existential copulas, leading to the reanalysis just described (Migge 2002, Winford 2003). This process occurred to varying extents in different creoles, and was carried to an extreme in the more “radical” creoles, such as those in Suriname. The extreme cases of adaptation, in which only a phonological representation derives from the superstrate, are indistinguishable in some respects from the phenomena associated with relexification in the case of Media Lengua. The difference is that neither the morphological realization patterns nor the full argument structure of the substrate languages were preserved, even in the most radical cases. Differences like these have to be accounted for in terms of other processes, such as simplification, leveling, and internal restructuring, which were characteristic of creole formation.

9 Conclusion

This paper has discussed two broad mechanisms by which languages in contact influence each other. Despite differences in approach, there seems to be general consensus on the role and nature of these two mechanisms. However, the variety of terms used to describe the actual mechanisms and their attendant processes has led to some degree of confusion, as witness the conflicting uses of terms like “relexification”, “convergence”, “transfer”, and the like. All of these terms have been used, for instance, to explain the process of creole formation. Unfortunately also, lack of precision and consistency in the use of such terms has led to conflicting classifications of the outcomes of contact. Cases of language shift involving structural assimilation of an RL to an SL, such as Asia Minor Greek, have been described as instances of “structural borrowing” by some, “convergence” by others. Perhaps most importantly of all, we have tended to ignore or overlook the similarities in the processes associated with lexical borrowing, classic code-switching and language intertwining on the one hand, and the similarities in the processes associated with second language acquisition, language shift and attrition, and creole formation on the other. The approach suggested here, based on van Coetsem’s distinction between the mechanisms of borrowing under RL agentivity, and imposition under SL agentivity, with their shared but differently implemented processes of imitation and adaptation, seeks to provide a more consistent framework in which to investigate the outcomes of contact.

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