Universals of structural borrowing

Yaron Matras

Abstract

The chapter is devoted to the questions whether certain categories are more easily borrowed than others, whether there are inherent semantic-pragmatic functions that make some categories more borrowable than others, and what this tells us about the motivations behind borrowing. Rather than view borrowing as a transfer of structure from one system into another, I view it as the removal of an invisible demarcation line that separates subsets within the linguistic repertoire (or the speaker's 'languages'). I take the perspective of language processing by speakers in multilingual settings, and argue that there is a functional advantage to compromising this mental demarcation line. Based on recent sampling of languages in contact, I review a set of borrowing hierarchies and identify a number of motivations that prompt speakers to merge the representation of categories across their bilingual repertoire, leading to identical cross-system representation of those categories, or 'structural borrowing'.

Keywords: contact, contrast, borrowing, discourse, gaps, hierarchies, interaction, language processing, prestige, presupposition

1.   Introduction

The view that there are no absolute constraints on structural borrowing (cf. Campbell 1993) is probably not widely contested. Nonetheless, many authors have proposed that borrowing is not entirely arbitrary, either, and that some factors facilitate, while others may impede the transfer of word-forms, morphemes, and even structural organization patterns from one language to another.

Generalizations have often tended to focus on the status of word classes or grammatical categories. Thomason and Kaufman's (1988) frequently cited borrowing scale is an example of an attempt at a generalization that says, essentially, that some word classes or types of structure are more easily borrowed than others. Ease of borrowing is interpreted as the likelihood that borrowing will occur earlier in the history of contact and

hence that it will require less intensive contact, and that borrowing of the relevant category will therefore be attested more frequently in contact situations cross-linguistically. Thomason and Kaufman do not, however, offer an explanation as to why and how word class affiliation facilitates or inhibits borrowing.

More explicit suggestions of factors that facilitate borrowing have listed structural autonomy and semantic transparency (Moravcsik 1978; Field 2002; Johanson 2002), low paradigmaticity (van Hout and Muysken 1994), operation at the level of a higher or broad unit of speech (discourse > paragraph > sentence > phrase > word; Stolz and Stolz 1996; Ross 2001), and 'pragmatic detachability' or automatized, gesture-like interventions that are subject to more routine and less analytic reflection (Matras 1998). Most of these observations were based on individual case studies. Ross (2001) for example discusses a contact situation involving two languages in Melanesia, Stolz and Stolz (1996) discuss a sample of diverse Meso-american languages in contact with Spanish, and Matras (1998) discusses various dialects of Romani in contact with diverse European languages, as well as a small sample of diverse languages under the historical sphere of influence of Arabic.

The purpose of the present contribution is to review a set of borrowing hierarchies that are based on two samples of a somewhat larger scale. The first is the extended sample of some seventy-five dialects of Romani discussed in Elšík and Matras (2006). With an assumed time-depth separation of up to 500–600 years (see Matras 2002), these dialects represent a similar recipient language, spoken under more-or-less uniform sociolinguistic conditions, in contact with a sample of up to twenty-five different European donor languages, among them Basque, Finnish, Welsh, Hungarian, Greek, Romanian, and Turkish. The second is a comprehensive cross-linguistic survey of grammatical borrowing in the form of individual contributions to a volume by Sakel and Matras (2007), each focusing on a particular language in contact.[1] General tendencies in the sample were evaluated in Matras (2007).

---

1   Tasawaq (M. Kossmann), K'abeena (J. Crass), Likpe (F. Ameka), Katanga Swahili (V. de Rooij), Khuzistani Arabic (M. Shabibi), Domari (Y. Matras), Kurmanji (G. Haig), NE and Western Neo-Aramaic (G. Khan, W. Arnold), Macedonian Turkish (Ş. Tufan), Kildin Sami (M. Rießler), Yiddish (G. Reershemius), Rumungro (V. Elšík), Manange (K. Hildebrandt), Indonesian (U. Tadmor), Biak (W. van den Heuvel), Vietnamese (M. Alves), Jaminjung (E. Schultze-Berndt), Rapanui (S. Fischer), Nahuatl (A. Jensen), Yaqui (Z. Estrada and L. Guerrero), Otomi (E. Hekking and D. Bakker), Purepecha (C. Chamoreau),

The prototypical conditions of contact as represented by these samples include prolonged use of a pair of languages – a donor and a recipient language – in the same society, and at least some degree of bilingualism. In the overwhelming number of cases, speakers of the recipient or borrowing language – the language under investigation – are almost all bilingual and have been bilingual for more than one generation, and bilingualism tends to be unidirectional, that is, speakers of the donor language do not normally or invariably learn the recipient language. In most cases, there is some degree of domain separation between the languages, each language being used by speakers for different purposes in different settings. The diglossic conditions are not uniform, however. Some languages, such as Yiddish and Maltese, have a written tradition and are used in institutions. Others, like Indonesian and Vietnamese, even enjoy the status of principal state languages.

A number of contact settings fall outside the scope of the present investigation. Languages that are formed as a means of communication in response to a contact situation, namely pidgins and Mixed Languages, are not taken into consideration in the sample. This is because the conditions of contact are radically different: there is no stability of language use in particular domains. Instead, pidgins show makeshift communication while Mixed Languages show deliberate language distortion or at least conscious mixing.

While extra-linguistic variables have been taken into account in the evaluation, the principal framework of comparison involved an assessment of the contact behavior of different functional categories. 'Category' represents a functional notion. Categories are understood here to be operational devices that trigger mental processing activities in communicative interaction: Nouns name objects, interjections direct attention to emotive evaluations of the speech situation, connectors establish links between the processing of individual propositions, word order serves as a map to organize information at the utterance level, and so on. Their concrete representation in a given language is through a structural form, which may or may not have cross-linguistic equivalents.

The challenge of describing universals of borrowing is to identify general trends in the sample, which may then serve as predictions for the borrowing behavior in languages in general. A further challenge is to explain

---

Quechua and Guarani (J. Rendón), Hup (P. Epps), Moseten (J. Sakel), as well as Wichi (A. Vidal), Maltese and Chamorro (T. Stolz).

these generalizations. From a functional perspective, explanations must be sought in terms of the relations between the function that defines a category, and the process that is defined as 'borrowing'. Seen through the prism of the individual who is communicating in a multilingual setting, i.e. the point of initiation of any contact-induced language change, borrowing means replication of a form or structure that is normally reserved for communication in language L-X (that is, in the set of interaction contexts that are characterized by the use of set X from within the repertoire of linguistic structures; see Matras 2009), while communicating in language L-Y (that is, in an interaction context that is not identified as part of set X, but as set Y). This characterizes the process of borrowing irrespective of the social circumstances that give rise to bilingualism, that is, whether communication in a second language that is being acquired is influenced by the structures of the first language, or whether communication in the native language is being re-shaped as a result of the influence of a second language. What interests us is that in both cases speakers are in some way or other reluctant or unable to maintain a strict separation line within their overall repertoire of linguistic structures. The phenomena described by Thomason and Kaufman (1988) as "shift-induced interference" (substrate influence) and as "borrowing" in the stricter sense (so-called prestige-related influence) are treated here as essentially one and the same: both derive from a bilingual speaker's motivation to compromise language-separation for a given structure, and to employ that structure irrespective of context-based language choice.

The explanatory model of borrowing that is pursued here seeks to account for the connection between category – the triggering of a particular linguistic-mental processing activity – and the failure to keep apart subsets of the repertoire of linguistic structures when communicating in different settings or contexts. The questions that we ask are these:

1. Are certain categories more easily borrowed than others?
2. What are the inherent functions that make some categories more borrowable?
3. What can we learn from this about the motivations behind borrowing?

A note is in order concerning exceptions to postulated hierarchies. Counterexamples have sometimes been offered in the literature in order to prove that postulated generalizations are wrong. But it would seem counter-productive to ignore tendencies that are followed by a substantial group of languages within a sample, merely because they may not be followed by all languages or because they might be contradicted in one or

two instances. Where there appears to be a motivation behind trends, one that is beyond pure coincidence, then these trends deserve our attention. Quite often, it is the counterexample that can be explained as resulting from a local, language-particular constraint that impedes the realization of common patterns in a particular instance. Our interest is thus in describing and explaining meaningful trends, not in discovering laws that are on a par with the physical laws of nature.

2.   Structural factors that facilitate borrowing

The borrowing hierarchies depicted under (1) have been suggested in the literature (cf. Moravcsik 1978; Field 2002), and are confirmed by our own two samples as well:

(1)   Structural factors facilitating borrowing
  a. nouns > non-nouns, function words
  b. free morphemes > bound morphemes
  c. derivational morphology > inflectional morphology
  d. agglutinating affix > fusional affix

The factors under (1) can be summarized as pertaining to the structural autonomy and the semantic transparency of morphemes. Elements that occupy a higher position on the scale are more likely to occur in speech as autonomous or relatively autonomous entities with a consistent meaning (cf. Johanson 2002). Those that are lower on the scale tend to have a meaning that is more abstract or more contextually bound and are more likely to accompany other parts of speech than to occur on their own.

  Structural autonomy as represented by the higher-ranking values under (1) suggests that the meaning of the item is less dependent on a particular environment. This facilitates the replication of an item in a different structural environment. Semantic and structural autonomy also allow greater pragmatic independence, which in turn facilitates the embedding of higher-ranking items into speech acts independently of the selected language of the interaction.

  The higher borrowing likelihood of nouns is sometimes regarded as a purely structural constraint, triggered by the tendency of verbs toward greater morphological complexity. In fact, nouns are more numerous in the lexicon, due to the need to label a greater number of concepts and physical objects compared to activities, states and events; cross-cultural

contact and the resulting expansion of communicative interaction domains arguably create a greater need to enrich the nominal lexicon.[2]

The predictions made under (1) are confirmed by the samples in several ways. First, higher-ranking items are more likely to occur in the corpus as a whole and in any given language, than lower-ranking items. Second, the hierarchies are implicational, in that the occurrence of a lower-ranking item in any given language implies the occurrence of a higher-ranking item in that same language (i.e. if a language borrows inflectional morphology, it also borrows derivational morphology). Interpreted against the background of the actual mechanism of borrowing as described in the previous section, this provides us with an insight into speakers' confidence to carry-over linguistic structures that are associated primarily with a set X of interaction contexts into interaction contexts of set Y, or in other words: their confidence to employ structures from their linguistic repertoire irrespective of contextual constraints. This confidence grows gradually in accordance with the ease with which a structural form can continue to be associated with its referential meaning even outside its original structural environment and usage context.

3.   Motivations for borrowing

In the previous section I interpreted factors that facilitate borrowing as factors that license bilingual speakers to generalize a particular structure or form across their linguistic repertoire and to use it irrespective of the constraints on selection of structures imposed by the context or setting of the interaction. In this section I discuss several groups of borrowing hierarchies that provide us with insights not just into the factors that facilitate borrowing, but into those that motivate and promote it in the first place.

Recall once again that borrowing is defined here (following Matras 2009) as the generalization of an item within the multilingual linguistic repertoire, and hence the partial or complete removal of interaction-set-based constraints on its occurrence. When addressing the question of motivation for borrowing, we are thus seeking an answer to the question:

---

2   The integration of verbs may itself require additional, specialised morphology, due to the cognitive complexity of the verb as both a label for an activity and as the anchor of the predication in the utterance. Borrowed verbs often require a morphological extension indicating their 'verbness' (cf. Matras 2007a, 2008; see also Wichman and Wohlgemuth 2008; Muysken 2000).

when are bilingual speakers more likely to generalize a single item across the linguistic repertoire in such a fashion, and why?

The *when* part of the question translates into our interest in the behavior of different grammatical categories, and thus it means essentially 'in pursuit of which linguistic-mental processing tasks'. The *why* part suggests that there is, under certain circumstances, a functional advantage to compromising the mental demarcation line that separates subsets within the linguistic repertoire. A trivial example is the case of so-called 'cultural loans': e.g. lexical content-words that denote an object or concept hitherto unfamiliar to the receiving society, terminology related to institutions that are the property of the neighboring culture, and so on. The commonplace interpretation of borrowing here is that such terms fill lexical gaps in the recipient language. But semantic gaps can also be filled by neologisms or meaning extensions. Borrowing of word-forms, we might hypothesize, is motivated by the treatment of the respective entities as unique referents which cannot simply be re-labeled; replication of the original label allows activation of the world of associations that accompanies the term in its original interaction context. The outcome is a single structure that represents the relevant concept in the entire repertoire, irrespective of language or choice or repertoire subset in a particular interaction context.

Grammatical operations pose a greater challenge. While some studies have opted to make use of the term 'gap' to refer to cases where languages in contact possess different structural means for expressing similar relations, it is clear that this particular notion of 'gap' is very different from the former. Here, it is not the absence of the abstract relation or conceptualization – for example contrast or repetition – that motivates borrowing, but a motivation to employ the same or similar structural means throughout the repertoire when expressing these relations. This brings us once again to the question of when and why. Following up on the argument developed in Matras (1998) and expanded in Matras (2009), I suggest that around certain types of operations, the need to constantly select among parallel structures overburdens the speaker and serves as a potential trigger for malfunctions of the processing mechanism that guides the speaker to select the form from the 'correct' (or active) language and to inhibit selection of the form from the 'incorrect' language (cf. Green 1998). Malfunctions thus result in the production of a form with the appropriate meaning, but from the non-appropriate language.

To be sure, not all bilingual speech production errors of this kind are likely to lead to language change. But in settings in which there is a) widespread bilingualism, such that malfunctions do not actually hinder com-

munication, and b) lax normative control over speech, usually owing to the absence of institutionalized language norms and possibly also related to a lower linguistic self-esteem, tolerance, in the first instance, of errors of this kind, and their eventual propagation can lead to the substitution of inherited forms by forms from the contact language – or 'borrowing'. Traditionally, speakers' (cognitive) inability to keep apart structures from their two languages – linguistic interference – has been recognized primarily with respect to influence of L1 on communication in L2, while instances of L2 insertions into L1 have been regarded as code switching or code mixing. I argue here, as in earlier work (Matras 1998, 2000), that there is a type of interference that leads to L2 influence on L1 in the form of non-voluntary L2 insertions, which result from lapses in control over the language selection and inhibition mechanism.

The issue of control over word-form selection is only one of several functional factors that appear to be of relevance in motivating and facilitating borrowing. In the next few sections I review some of these factors, toward an integrated picture of the complexity of motivations that are involved in the process of borrowing.

3.1.   Domain specialization and non-routine tasks

A traditional, perhaps even 'classic' explanation for the motivation behind borrowing is prestige: it is assumed that the use of word-forms from a language that is associated with cultural and technological progress or simply with social and economic power – dubbed the 'dominant' language – serves to signal the speaker's competence in this language, which in turn is associated with upwards social mobility. Speakers will, according to this assumption, integrate word-forms from the dominant language into their speech in the language of the socially weaker group as a token of higher social standing, power, or competence.

The key to understanding this kind of relationship between languages is the diglossic setup or patterns of domain-specialization of languages in the community. A tension potential emerges between the context-specialization of the dominant or donor language and the association of certain activity domains with that language, and routine tasks that support the retention of old, inherited forms in the in-group or recipient language. In this kind of relationship, items that are less subject to routine employment prove more susceptible to new fashions and are more likely to be represented by borrowings that serve as tokens for social accommodation. On other hand, those that are more tightly embedded into routine interaction

are protected by the routine, by the intimacy of their meaning, and apparently also by their frequency of occurrence.

As illustrated by the kinship term systems of both English and Maltese (Figures 1 and 2), concepts representing closest kin are less likely to be borrowed. Those representing somewhat more remote kin tend to be of Romance origin, both languages having been influenced at some stage during their history by contact with a dominant Romance-speaking society.

Figure 1: Close kin and remote kin in English (shaded cells represent borrowed terms).

	grand-(parents)			
aunt	mother		father	uncle
cousin	sister	*EGO*	brother	cousin
niece	daughter	son		nephew
	grand-(children)			

Figure 2: Close kin and remote kin in Maltese (shaded cells represent borrowed terms) (data from Borg and Azzopardi-Alexander 1997: 339–340).

	nanna 'grandmother'		*nannu* 'grandfather'	
zija 'aunt'	*omm* 'mother'		*missier* 'father'	*ziju* 'uncle'
kuġina 'cousin'	*oht* 'sister'	*EGO*	*hu-* 'brother'	*kuġin* 'cousin'
neputija 'niece'	*bint* 'daughter'	*(i)bn-* 'son'		*neputi* 'nephew'
	neputija 'granddaughter'	*neputi* 'grandson'		

A further domain in which hierarchical splits may be connected to the context-related roles of the languages involved is the borrowing of numerals. Many languages borrow numerals strictly in contexts involving economic activity and institutional interaction, where the donor language is the language associated with economic or institutional interaction domains. The Betawi language of Indonesia, for example, borrows a complete set of numerals from Hokkien Chinese, but these are used only when referring to sums of money (Tadmor 2004). Chinese numerals are used in formal contexts in Vietnamese (Alves 2007). Romani speakers generally use numerals from the majority language when citing dates, something that is performed primarily in the context of official institutions.

The diglossic relationship between the languages may also be reflected in the hierarchy of borrowing of individual numerals. Lower numerals are generally protected through their association with routine counting tasks in more familiar and everyday environments, and are less likely to be borrowed. Higher numerals by contrast are more likely to be associated with more complex calculations in more formal transactions, and are more likely to be borrowed, though the numerals 'ten' and 'one hundred' tend to be more stable as salient quantities. The Pharas dialect of Asia Minor Greek borrows the Turkish terms for 'seventy', 'eighty', and 'ninety' (Dawkins 1916: 171). Some languages, such as Moseten, Quichua, and Nahuatl, borrow only numerals above 'ten'. Languages that borrow numerals between 'five' and 'ten' include Swahili, which has *sita, saba, nane*, and *tisa* ('six-nine') from Arabic, and Romani, which has *efta, oxto, enja* ('seven-nine') from Greek; both also borrow numerals above 'twenty'. Other languages that borrow numerals above 'five' are Domari, Tasawaq, Otomi, Guarani, Purepecha, Yaqui, and Kildin Saami.

Borrowing of numerals under 'five' is attested in Jaminjung, which has no native numerals above 'three' (Schultze-Berndt 2007), and in other Australian languages with similar, very basic and arguably non-numerical quantification systems. Chamorro has replaced its entire earlier system of numerals, which was still attested in the early twentieth century, with Spanish loans (Topping 1973: 166–167). Thai uses Chinese numerals above 'two', and Khmer uses Thai numerals (of Chinese origin).

The most commonly borrowed numerals represent abstract figures. Standard Indonesian borrows the numerals *laksa* 'ten thousand' and *juta* 'million' from Sanskrit, and *milyar* 'billion' and *nol* 'zero' from Dutch (Tadmor 2004, 2007). Tasawaq borrows its lower numerals from Arabic, but its word for 'hundred' from Tuareg (Kossmann 2007); Romani in central Europe shows words for 'thousand' from Romanian (*miji*) and from Hungarian (*ezera*), Vietnamese uses a Chinese word for 'ten thousand' (Alves 2007), English borrows its terms for *zero, million* and *billion*, Turkish has *sıfır* from Arabic for 'zero' and European *milyon* for 'million', and K'abeena has *zeeruta*, from Italian via Amharic, for 'zero' (Crass 2007).

The effect of the adoption of word-forms from a dominant or prestige language in non-routine interaction contexts can be summarized for kinship terms and numerals through the following borrowing hierarchies:

(2)   remote kin > close kin

(3)   numerals in formal contexts > numerals in informal contexts

(4)   higher (and abstract) numerals > lower numerals

It is noteworthy that the 'routine-proximity constraint', as we might refer to it, is not just limited to these categories. A further structural borrowing hierarchy is observed for expressions of local relations (adpositions and local adverbs):

(5)   peripheral local relations > core local relations

Under peripheral relations we find in particular those that are cognitively more complex, as they involve the creation of a conceptual relationship with reference to two or more rather than just one named object ('between'), or to movement rather than situation ('around', 'across'), or to a relation that is qualified (by attitude) rather than just spatial ('against', 'for the benefit of'). Delimitational relations, which are more abstract and which deal with the negative processing of presuppositions concerning sets (e.g. 'without', 'instead of', 'except') all fall under the highly borrowable, conceptually more complex prepositions. In the latter case, a connection can also be established with the feature 'contrast' and the factor 'speaker control', which I deal with in the next section.

Romani dialects tend to borrow prepositions like *pretiv/protiv* (Slavic) 'against', *is* (Slavic) and *fon* (German) 'from', *za* (Slavic) and *bis* (German) 'until', *de* (Romanian) 'since', *bez/brzo* (Slavic), *xoris* (Greek), *utan* (Swedish), and *oni* (German) 'without', *vmesto/namesto* (Slavic) 'instead', *osven, skluchenje, kromje* (Slavic), *in loc də* (Romanian) 'instead', and *ektos* (Greek) 'except for'. Spanish *de* 'from', *por* 'for', and *para* 'for the purpose of' and *entre* 'between' are among the frequently-attested borrowings in South- and Central American languages (see e.g. Stolz 1996), as opposed to, for example, prepositions with more 'core' meanings such as 'at', 'on', 'above', or 'with'. Chamorro has *desde* 'from', *asta* 'until', *sin* 'without', *pot* 'in order to', and *kontra* 'against' (Topping 1973: 126–129) and Maltese borrows *kontri* 'against' and *faċċata* 'opposite' from Italian.

3.2.   Control over form selection in speech production

Above I alluded to the model of bilingual speech production, which considers the bilingual's linguistic competence as constituting one full repertoire of forms and structures rather than two language systems. Individual structures and word-forms are accompanied in the repertoire by the speaker's awareness of constraints on the appropriateness of their usage in individual settings and contexts. These constraints guide the speaker in selecting forms and structures within the repertoire, in separating subsets

within the repertoire following more or less stable situational and contextual triggers, as well as in occasionally mixing subsets, i.e. making use of the repertoire as a whole in certain types of communicative interaction and often for particular communicative purposes (cf. Grosjean's 2001 notion of "bilingual mode").

The speaker is assisted by a mechanism that monitors the extra-linguistic conditions of the interaction and facilitates the selection of appropriate structures and word-forms, and inhibits the selection of others (cf. Green 1998). It is hypothesized here that this mechanism is, like other aspects of speech production and especially of lexical retrieval, sensitive to a set of factors which we might refer to in a pre-theoretical sense as the speaker's 'state of mind'. They include pathological conditions such as fatigue or impairment, but are also sensitive to moments of high tension at the level of the speech interaction and its management. Specifically, the proper functioning of the selection mechanism might be disturbed by the need to divert attention away from it and onto an increased effort to reassure the listener of the speaker's assertive authority.

Such instances typically occur when the speaker anticipates a clash between the speaker's delivery of propositional content, and the listener's expectations or a shared presupposition basis. It is then possible, though in no way inevitable, that the speaker may lose control over the selection and inhibition mechanism. The result will be the selection of a structure or word-form that is functionally adequate as far as its meaning is concerned, but contextually inappropriate as it belongs to a subset of the repertoire that is not normally activated in the set of contexts to which the ongoing interaction belongs. The result is, in other words, a bilingual speech production error.

Note that the notion of 'error' is, of course, a matter of (normative) perception for the speaker and listener. My point is precisely that in some interaction settings, unintentional selections of this kind might ultimately cease to be perceived as errors, and become accepted and even propagated as legitimate and fully functional variants, and might over time even replace any counterpart expressions that had been inherited by the recipient language. However, their initiation is not a result of either the prestige effect, nor does it represent a link between the content and meaning of the expression and the context-specialization of the donor language in the overall diglossic setup, as in the cases discussed in the previous section.

What evidence is there for the link between long-term language change (borrowing) and bilingual speech production errors? The first piece of evidence is the existence of a corpus of documented speech production errors that involve specifically the class of items that can be said to repre-

sent potential clashes between speaker's message and listener expectations (see Matras 1998, 2000, 2009 for a discussion of relevant examples). Among the documented examples are cases where the speaker falls back to an expression in a language that is not even accessible to the listener, illustrating that such slips are not necessarily licensed by a bilingual mode, and are not necessarily produced as tokens of prestige; indeed, they are often counter-strategic and may, if not repaired, lead to a momentary breakdown in the communication.

There is separate evidence from case-studies confirming that the occasional infiltration of items such as discourse markers, modality markers and connectors from a dominant language may, over time, become propagated within the speech community and lead to long-term borrowing (see e.g. Salmons 1990; Brody 1995; Fuller 2001; Del Negro 2005). Once again it is necessary to emphasize that the origin of these borrowings in a dominant language does not mean that the trigger for their first occurrence is inherently connected to any association between the donor language and the meaning conveyed by the borrowed expression. As indicated above, bilingual slips or production errors occur in various directions, among them directions that are dysfunctional from a communicative viewpoint and therefore unlikely to lead to long-term change.

Those instances of production errors that may lead to change are those where the error is both understood and accepted by the interlocutors, and thus allowed to occur over and over again without normative intervention. Such situations typically involve unidirectional bilingualism where the language of a socially less powerful group is the recipient language, and that of a dominant elite the donor language. The diglossic setup is thus vital for the successful propagation of the innovation, not for its initiation.

Finally, evidence concerning the selection malfunction hypothesis comes from the hierarchical arrangement of borrowability in paradigms of certain functional elements:

(6)   contrast > disjunction > addition ('but' > 'or' > 'and'; 'only' > 'too'; concessive > most other subordination markers; 'except', 'without', 'instead of' > most other adpositions)

(7)   discourse markers (including fillers, tags, interjections) > focus particles, phasal adverbs > other function words

The susceptibility of contrast (in the sense defined by Rudolph 1996, i.e. adversative and concessive relations) to borrowing is attested in implicational hierarchies that summarize the borrowing behavior of connectors, focus particles, subordination markers, and adpositions.

Attestations of borrowings supporting these generalizations are numerous. Arabic-derived markers for contrast (*ama/amma/lākin/lakini* etc., all meaning 'but') are found across a vast area from west Africa to the Caucasus and on to Southwest Asia, including in Hausa, Ful, Somali, Swahili, Lezgian, Turkish, Uzbek, Hindi and Punjabi. Many of these languages also use the Arabic-derived disjunction marker *ya*, and some also an Arabic-derived addition marker *u/w* (cf. Matras 1998, 2000). Romani dialects always borrow 'but' from the contemporary or recent contact language (e.g. Slavic *no*, *po* and *ali/ale*, Hungarian *de*, Turkish *ama*, Greek *ala*, German *aber*). Many Romani dialects also borrow 'or' and 'and'. These latter two are borrowed frequently, but are sometimes retained from an older contact language. Ajia Varvara Romani in Athens for instance has *ja* 'oder' from its recent contact language Turkish, but *ala* 'but' from its current contact language Greek; Finnish Romani has *elle* 'or' from Swedish, but *mut* 'but' from Finnish; Manush Romani in France has German *un* 'and' and *otar* 'or', but French-derived *me* 'but', and so on (cf. again Matras 1998 and 2002, as well as Elšík and Matras 2006). Stolz and Stolz (1996, 1997) and Stolz (1996) document the high frequency in Central American and Pacific languages of Spanish-derived *pero* 'but', *o* 'or', *porque* 'because', *bueno* 'well', *ni* 'neither', and *sino* 'but, however', and Stolz (2007) identifies the Italian loans *allora* 'well, and then' *dopo*, *poi* 'and then', *dunque* 'thus, and so', as well as the connectors *però* and *ma* 'but', *o* 'or', and *e* 'and' in Molise Slavic, Italo-Albanian, Italo-Greek, and Maltese.

Of the sample languages covered in the volume by Matras and Sakel (eds. 2007; see evaluation in Matras 2007), a significant number borrow all three coordinating connectors 'but', 'or' and 'and': Domari, Moseten, Nahuatl, Kurmanji, Rapanui, Indonesian, Quechua, Otomi, Guarani, Kildin Saami, and Western Aramaic; languages that borrow only 'but' and 'or' are Tasawaq, Purepecha, Vietnamese, Rumungro, K'abeena, and Likpe. Macedonian Turkish borrows Macedonian *i* 'and' as well as *ili* 'or' and *a* 'or, whereas', but retains Turkish *ama* 'but', which is identical to Macedonian *ama* (cf. Matras 2004). Jaminjung (Schultze-Berndt 2007) uses the borrowed Kriol *ani* 'but/only' alongside its native *bugu*, while only borrowed forms are used for addition and disjunction.

There does not seem to be any dimension of social meaning that is attached to these hierarchies, that is, any reason why the expression of contrast should be linked more tightly with interaction in the donor lan-

guage, than expressions of disjunction or addition. The link is therefore not referential. Nor is there, in the cross-linguistic samples that have been analyzed, any consistent cultural or structural feature that would explain the consistent borrowability of contrastive expressions, not just in one domain of structure (connectors), but also in others. We are therefore left with the impression that contrast itself is a property that motivates borrowing.

The link between contrast and borrowability runs directly via the link between contrast and a clash between speaker- and hearer-sided expectations. In anticipation of the clash, the speaker engages in an increased mental effort to win over the hearer's confidence. It is this increased engagement of the speech production mechanism that (potentially) takes its toll on the ability to effectively manage the selection and inhibition mechanism, increasing the likelihood of selection malfunctions.

Once again, most malfunctions may, in some multilingual settings, remain one-off occurrences, subject to repair by the speaker or to correction by the listener or both, and are prevented from frequent re-occurrence through the presence of normative linguistic values propagated by community institutions. Those malfunctions that are most likely to go unnoticed, non-repaired and uncorrected and to be repeated and ultimately even propagated are those where there is full acceptance of bilingualism, or where a bilingual minority has the prestige to act as catalyst of language change, and where innovation is not hindered by a strong normative, interventionist attitude toward language.

On a par with the semantic-pragmatic feature of contrast, we find the wholesale category of discourse markers, including sequential markers ('and then', 'and so', etc.), fillers, tags, interjections and the like. Their function is intrinsically to monitor and direct the listener's participation in the interaction, usually by processing vulnerable points in the interaction, where the speaker's assertive authority might be at stake (hesitations, argumentation, or other need for reassurance). Discourse markers are similarly subject to bilingual speech production errors (see Matras 2000), and are widespread borrowings especially in situations of unidirectional bilingualism among oral minority languages, but also elsewhere. Their specialized use as interaction-regulating operators with reduced semantic autonomy makes them pragmatically detachable from the body of lexical items that is more easily associated with a particular subset of the linguistic repertoire, thereby overriding semantic transparency as a property that acts to facilitate borrowing and illustrating the primacy of functional motivations over structural factors in the borrowing process.

Lower ranking than discourse markers, but still relatively high on the borrowability scale are focus particles ('even', 'too', 'only', etc.) and phasal adverbs ('still', 'already') (see Matras 1998). These generally contain more explicit semantic content than discourse markers, and are more easily perceived as lexical entries that are attributable to a lexical subset (language system) within the repertoire. Nonetheless, they too process primarily the relations between the speaker's proposition, and the presuppositional domain. A similar intensity-factor is involved in the operations triggered by such expressions as around contrast or disjunction: here too, the speaker is on guard to protect assertive authority against the listener's potential or anticipated reluctance to accept intervention in expectations and the presuppositional domain.

The position of focus particles and phasal adverbs on the scale, following that of discourse markers, is a product of the empirical observation derived from the samples that a language that has borrowed items belonging to this class, will have normally also borrowed discourse markers from its principal or relevant contact language. The scalar vulnerability of these classes of elements to borrowing exposes the void that is represented by terms such as 'uninflected function words' as far as the reality of contact-induced change is concerned. Such wholesale category is sometimes cited as being high on the borrowability scale (see e.g. Thomason and Kaufman 1988), though in reality the group of uninflected function words is not at all uniform, and individual categories behave not in accordance with an overall structural categorization, but rather following their distinct functional, semantic-pragmatic properties as triggers of linguistic-mental processing tasks in discourse.

3.3. Control and the speaker's assertive authority

Mention was made above of categories that are vulnerable to selection malfunctions as a result of the special burden which they impose on the speaker in instances of potential clash between the speaker's presentation of propositional content and the listener's expectations as derived from the presuppositional domain. Such instances in discourse might be regarded for the sake of the argument as high-risk operations, where the speaker risks assertive authority and the cooperative relation with the listener.

To the high risk operations listed above we can add grammatical markers that highlight that the speaker is basing a proposition on a relatively insecure basis of knowledge, thereby relying more strongly on the listen-

er's cooperation and supplementary extension of the presuppositional base to accommodate uncertain assertions. This is reflected in the following borrowability hierarchies:

(8)   indefinites > interrogatives > deixis, anaphora

(9)   modality > aktionsart > future tense > other tense/aspect

(10)   obligation > necessity > possibility > ability > desire

(11)   superlative > comparative

(12)   concessive, conditional, causal, purpose > other subordinators

(13)   factual > non-factual complementizers

Indefinites belong to the explicit presupposition-processing apparatus: the speaker is entrusting the hearer with the procedure of retrieval or imaginary substitution or supplementation of the relevant information within a specified ontological domain. Thus, with an expression like 'anywhere' the speaker is effectively laying down responsibility for specifying relevant information, while with an expression like 'somebody' the specific information is being withheld. Like other high risk operators, indefinites are likely candidates for borrowing, and numerous cases of borrowed indefinite markers as well as word-forms are attested. Turkish for instance has borrowed Persian *hiç* 'no, any', as well as Arabic *şey* 'thing' in *bir şey* 'something', *hiç bir şey* 'nothing', as well as Arabo-Persian *bazi* 'some' and *bazen* 'sometimes'. Maltese employs Italian *kwalunkwe* 'any'. All Romani dialects borrow indefinite markers, and many indefinite word-forms are also borrowed. Borrowed markers include Slavic *(v)sako, ni, bilo*, Romanian-derived *vare*, Turkish-derived *hič, her, bazi*, Hungarian *vala*, and more. Borrowed indefinite word-forms are numerous and include Slavic *ništo* 'something, nothing, anything', Polish *zawsze* 'always', Romanian-derived *mereu* 'always', Hungarian-derived *šoha* 'ever, never' and *mindig* 'always', Greek-derived *čipota* 'nothing' and *kathenas* 'somebody', and many more (cf. Elšík and Matras 2006). Spanish-derived indefinites are common among the indigenous languages of Central and South America, such as Otomi *kada kyen* 'everybody', *en kwalkyer parte* 'anywhere', *nunka* 'never', *syempre* 'always', and many more (Hekking and Bakker 2007), and Guarani borrows the Spanish indefinites *alguno* 'somebody', *toda* 'everybody', and others.

Modality is the conditioning of the speaker's secure knowledge, and thus represents a reduction in the speaker's assertive authority and so a risk factor in the maintenance of stability of the roles of speaker and lis-

tener in the interaction. Modality is followed by *Aktionsart* – the subjective-evaluative perspective on an action/event. Tense and aspect follow, and it is indicative that the tense-aspect category that appears most susceptible to contact-induced structural change is that of Future, where the speaker's epistemic authority is once again at its weakest.

The hierarchy of modality-*aktionsart*-tense/aspect (9) is matched rather closely by the borrowability hierarchy of modal expressions, depicted in (10). The greater the involvement of an external force in determining the modality of the proposition, the weaker the speaker's control over the truth and accuracy of that proposition.

Both Elšík and Matras (2006) and Matras (2007) for the cross-linguistic sample establish the greater borrowability of superlative markers over comparative markers (11). The comparative procedure activates presupposed relevant knowledge about an object of comparison; this activation already puts it on the side of operations in which the speaker has to rely heavily on the listener. The superlative goes a further step beyond, setting the object of reference apart from the presupposed set of relevant objects, creating a demarcation or delimitation line. Superlative relations thus fall within the broad domain of contrast, exemption and restriction, which are particularly contact-susceptible.

Romani dialects recruit comparative and superlative markers among the preposed, unbound or semi-bound markers of their various contact languages, such as Slavic *po*, Romanian *mai*, and Turkish *daha* for the comparative, Slavic *naj*, Hungarian *leg*, Turkish *en* for the superlative. A bound comparative/superlative marker *eder* had been borrowed into Proto-Romani from Iranian, and continues to be used in many dialects. Sinti Romani for example uses it for the comparative – thus *sik* 'fast', *sikedər* 'faster' – and adopts the German superlative, including both its inflection ending and an accompanying preposition: *am sikestə* 'fastest', (dialectal) German *am schnellste(n)*. The Spanish comparative and superlative marker *más* has entered several Central American languages, e.g. Nahuatl, Otomi, Yucatec Maya, Tzutujil, and others, as well as Austronesian languages like Tagalog, Hiligaynon, and Chamorro (Stolz and Stolz 1997). Speakers of Kurmanji, Adyghe, and Aramaic in Turkey often use the Turkish particles *daha* and *en*, which are also attested in Asia Minor Greek. Indonesian borrows a Javanese superlative particle *paling*. Yiddish has *grojs* 'big', *grejser* 'bigger', but *same grojs* 'biggest', using the Russian-derived marker *same*, which is also borrowed as a superlative marker into Kildin Saami. Domari even adopts Arabic word-forms for the comparative and superlative, resulting in a suppletive paradigm of comparison/suppletion for all indigenous adjectives in the language.

Some of the most frequently borrowed subordinating conjunctions express concessive relations, causal relations, purpose, and conditionality (as in the hierarchy depicted under 12). These are once again the domains in which the relations between states of affairs depicted in the proposition are potentially controversial or beyond the speaker's domain of secure knowledge. Finally, factual complementizers appear to be more borrowing-prone than non-factual complementizers (hierarchy 13). At first glance, this appears to contradict our impression from other category domains, where the speaker's weak epistemic authority correlates with greater borrowability. But in fact this very same condition is met in factual complementation: There is a requirement to enforce the integrated interpretation of two separate events, which makes the proposition more difficult to accept, while non-factual complements typically portray a single, integrated event (cf. Givón 1990).

Romani dialects, irrespective of location, generally distinguish the two types of complementizer, as do most languages of the Balkans. The original Romani factual complementizer *kaj* is often replaced, in the respective dialects, by Greek *oti*, by Bulgarian *či*, by Romanian-derived *ke*, by Italian *ke*, and by Hungarian-derived *hodž/hod/hoi*; the non-factual complementizer (inherited *te*) is virtually never replaced. Other languages, too, tend to borrow just the factual complementizer. Khuzistani Arabic borrows Persian *ke* in factual clauses, and Likpe borrows an Ewe marker *bə́* (Ameka 2007).

3.4.   From discourse organization to word-level

A number of hierarchies confirm the greater susceptibility to borrowing of grammatical devices that operate at the discourse level, followed by those at the sentence and clause level, and eventually by those at the phrase and word level, as observed by Stolz and Stolz (1996) and Ross (2001). The high position of discourse operations on the scale represents what Salmons (1990) described as the convergence of communication management strategies:

(14)   discourse markers > focus particles, phasal adverbs > other function words

(15)   prosody > segmental phonology

(16)   greetings and similar formulae > question particles, conditional particles, modality particles > negation and other content particles

Above I already discussed the position of discourse markers in relation to other so-called uninflected function words. The position of prosody remains largely uninvestigated, but with agreement that suprasegmental features are much more volatile in contact situations (cf. Matisoff 2001; Queen 2001). Romani dialects once again provide a useful sample, showing overwhelming tendencies to converge in key prosodic features with their contact languages.[3]

A further discourse-level borrowing phenomenon is the use of greetings. Here too, we find considerable volatility in bilingual contexts. German dialects have the forms *ade, tschü, tschu* and *tschüß* deriving from French *adieu* 'goodbye'. The Arabic greeting *marḥaba* appears in Hausa *maraba* and Turkish *merhaba*, among many others. Colloquial Hebrew has *hi* and *bye* from English, *ahlan* from Arabic, and the combination *yallah bye!* 'bye, then!' from Arabic and English, which in turn is borrowed into Palestinian Arabic. Urdu has Arabic *shukriya* for 'thank you', as does Turkish (*teşekkür*), though middle-class, urban Turkish copies middle-class urban Persian in using French derived *merci*. The reflexive-imperative *hadi* is common throughout the Balkans.

Following on the scale, after greetings – which themselves constitute speech acts – we find speech act markers, such as question and conditional particles, as well as modal particles (cf. borrowing of Turkish question particles into minority languages such as Kurdish, Adyghe, and Romani; or use of Slavic and Turkish conditional particles in various Romani dialects). These are generally more prone to borrowing than particles that modify content or meaning, e.g. negation or temporal particles.

The motivation to borrow discourse operators of these types arises from their gesture-like and automatized use that is sensitive primarily to changes in the overall interaction constellation and so susceptible toward the more intuitive need to monitor and control the interlocutor's participation and attitude to the speaker and the interaction as a whole, rather than form part of the propositional content of utterances that are subject to more analytical planning and control on the part of the hearer. This automatized, intuitive reaction is prone to escaping the speaker's control over the selection and inhibition mechanism that regulates the choice of context-appropriate structures within the linguistic repertoire. Essentially, then, the procedure by which discourse-regulating elements are subjected to production malfunctions is similar to the process that leads to fusion

---

3 Cf. the Manchester Romani Project online phrase documentation for Romani dialects: http://romani.humanities.manchester.ac.uk/.

around high-risk operators, as described above, the point in common being their proneness, for distinct reasons, to escape analytical control.

The discourse-clause-phrase continuum of borrowing is represented at the level of syntactic convergence, as well:

(17)   clause linking > word morphology

(18)   possessive construction > attributive construction

(19)   existential (copula) predication > lexical predication

Linguistic areas or cases of convergence of even just two languages will rarely show convergence at the level of word morphemes unless they also show convergence at the level of clause combining. This holds for groups of languages that show similarities in the system of case representation, such as the languages of Sri Lanka (cf. Bakker 2005), the Balkans, Siberia (Anderson 2005), or Arnhem Land (Heath 1978), or in the system of tense-aspect representation, such as the languages of Anatolia, South Asia, or the Amazon Basin (Aikhenvald 2002): in all cases and in others, these manifestations of morphological convergence are accompanied by similar clause combining strategies.

At a somewhat more subtle level, convergence appears to begin with relations among potentially more autonomous entities than among those that are more closely interdependent. Evidence from a variety of languages such as Domari, Macedonian Turkish, Khuzistani Arabic, and Romani suggests that representation of nominal attribution is more likely to undergo structural convergence than that of adjectival attribution. The existential predication, which invariably represents a linear arrangement of at least two arguments, is more prone to convergence than the potentially less complex lexical predication (cf. Matras 2008).

4.   Conclusions: re-assessing borrowing

Before reviewing the patterns that emerge from the above survey of borrowing universals, let us remind ourselves once more what, precisely, is understood as the psychological mechanism of borrowing. In diachronic-etymological terms, borrowing denotes that the origin of a word-form or construction is from a donor language that has been in contact with the recipient language sometime in its history. It is, in other words, an innovation that owes its trigger to a particular sociolinguistic setting, one in which at least some speakers of the recipient language have had at least some

contact with the donor language (or an interim donor language; cf. borrowing of Arabic words into English via Spanish and French, or via Turkish and French, etc.), and where this sector of speakers was in a position to propagate the replication of the structure in question throughout a significant part of the speech community, whether bilingual or monolingual. This, more or less, amounts to the generally agreed on diachronic characterization.

In order to gain a deeper insight into the actual triggering of the borrowing process, we need to zoom in on the initiation phase itself. Here, we are dealing, prototypically at least, with a bilingual setting, that is, with a setting where speakers interact in a variety of contexts and situations and in which their choice of linguistic structures reflects the requirements and expectations of those contexts and situations. The speakers on whom we are focusing have, in other words, a complex and multi-layered repertoire of linguistic structures, from which they select in order to accommodate to the expectations of distinct audiences in a variety of interaction contexts (relevant factors being addressee, setting, topic, and stylistic contrasts). One might describe this state of affairs as the creation of a mental demarcation boundary within the linguistic repertoire, or even better as the activation of a kind of selection mechanism that controls the selection of appropriate forms and inhibits the selection of others (cf. Green 1998; Paradis 2004).

Borrowings have been referred to as "transfers" or "interferences" (Weinreich 1953), not without reason. They emerge as carry-overs from the set of structures normally reserved for a certain set of interaction contexts, into a different set of interaction contexts. In order to understand what can be borrowed with what degree of relative ease, we must first understand what borrowing entails, and why it occurs. The question we address first is therefore: why should bilinguals act against the expectations regarding appropriate structure selection in a particular interaction context, and disregard the mental demarcation line among repertoire components or neutralize the mechanism that selects only appropriate structures and inhibits those that are not appropriate in the ongoing interaction?

Most explanations of borrowing have highlighted the aspects of gaps and prestige. In direct response to our question "why borrow?" the first – the gap hypothesis – postulates that speakers have essentially no choice in pursuit of certain communicative goals but to cross the mental demarcation lines and disregard context-appropriateness. Such communicative goals include making reference to concepts or objects that are normally present only in some settings but not in others, and consequently lack

well-established reference devices or labels in these settings. These are the notorious cultural loans. The gap hypothesis might be extended to the structural domain to account, for instance, for the extension of the phoneme inventory in response to the need to integrate new words that contain new phonemes.

Note however that borrowing is not the only option in any of these cases. It is possible to integrate loanwords phonologically, rather than extend the phonological system to accommodate them; and it is possible to coin new words for new objects rather than import word-forms from another language. Borrowing thus entails a choice in favor of a strategy that puts the effective use of the linguistic repertoire in its entirety in pursuit of certain communicative goals above the maintenance of demarcation boundaries within the repertoire and the audience-oriented loyalty that such boundaries serve to flag.

It is here that the role of prestige becomes of interest. It is often suggested that speakers prefer to use items (word-forms, constructions) from a language that symbolizes power, dominance, and success in order to capitalize on the symbolic association of their speech with that of a dominant population sector. The most obvious indication that powerful languages attract prestige is the willingness of speakers all around the globe to give up loyalty to the languages of smaller groups, nations, or the family, and to conduct most interactions just in the more prestigious language(s). Nonetheless, the process of borrowing does not, of course, inevitably lead to language shift, and it would be wrong to interpret borrowing as invariably a first stage in the process of language shift. Borrowing is in many ways, in fact, the opposite: a bundle of strategies that ensures that the weaker, recipient language can continue to be used and to flag group-loyalty in spite of the growing reliance on a dominant, donor language for a large number of communicative purposes. Moreover, both the 'gap hypothesis' and the 'prestige hypothesis' fail to explain why speakers should prioritize certain structures for borrowing based on semantic and grammatical parameters rather than on parameters that are related to social and referential meaning. It is therefore necessary to re-assess the role of both referential gaps and social prestige in the process of borrowing.

Let us return to the question of where and why a speaker should choose to generalize a single structure from within the complex linguistic repertoire, rather than to ensure separation of repertoire subsets and thereby act consistently in flagging loyalty to two separate linguistic identities. Phrased somewhat differently, we are looking for the conditions under which the convenience of having just a single mode of expression might override the principle of overt accommodation to the distinct inter-

action context. Gap in this perspective means that the speaker prefers the convenience of a single representation over the creativity that is needed to accommodate to an audience by inventing a new term; and prestige means that, for the sake of having the convenience of using just a single form to represent a concept or grammatical operation, the speaker is exploiting the status of one of the languages in the multilingual setting and expecting the listener to accept the generalization of forms from this language in all interaction contexts.

At this point we can return to the borrowing hierarchies discussed above. By examining values of individual categories and category classes in respect of their borrowing behavior, we have been able to isolate various language-internal properties that facilitate or even promote borrowing. Of those, some have to do with the content of the referent: tight associations between the meaning of a word and a particular context in which it is used may result in associating that word with a particular language that is the preferred language of negotiating activity in that particular context. Borrowing is in such instances a reflection of the diglossic specialization of languages in the multilingual repertoire. We have seen that this feature applies to unique referents as well as to specialized professional and cultural terminology. On the other hand, association with proximate and intimate routines may act as a constraint against borrowing. In all cases, borrowing is facilitated by structural detachability and semantic transparency, but these are not a pre-condition for borrowing.

In general, interaction-level management of the discourse acts as a motivating factor toward the fusion or non-separation of structures in the repertoire and the generalization instead of just one item or set of items for the function in question, regardless of interaction context. It was argued that this non-separation around devices that manage the communicative interaction facilitates effective management, by removing the need to select among structures in instances that require a high concentration effort. At the top of the scale are those devices that process an anticipated clash between the speaker's speech activity and propositional content, and the listener's expectations. But in general we saw that the level of discourse interaction is particularly prone to convergence.

Control and management of the interaction can be said to constitute a more automatized, instinctive or gesture-like operation, and is less subject to analytical control. While interaction-level operators may appear in some linguistic systems as less complex, uninflected, or clause-peripheral, it is essentially their language-processing function that determines their behavior, not their formal shape. It is quite possible that control over interaction-level devices is subject to a different set of operational proce-

dures at the neurophysiological level, as indicated by the behavior of modal particles in the speech of aphasia patients, or by the production of intonation and prosody (cf. Menn and Obler 1990; Friederici 2001; McMahon 2005). We might even speculate further that those components of speech that are designed to grab the hearer's attention and direct the hearer emotionally through the discourse represent a very archaic layer in the architecture of the language faculty itself, one that is more gesture-oriented than analytical. In this respect, borrowing hierarchies might help us gain insights into the more general hierarchical nature of grammar.

I have re-interpreted the notions of 'gap' and 'prestige', which are widespread in the discussion of structural borrowing, and used them to describe the speaker's motivation to generalize just one structure for one function, referent, or grammatical operation in the linguistic repertoire, and the speaker's ability to do so without loss of face and without causing a breakdown in the communication. The borrowing of at least some operations displays a link with the speaker's control over the language production mechanism, and it is here that the question was raised whether this link is in turn a by-product of the evolution of speech and the neurophysiological architecture of grammar. If this were indeed the case, then we might need to face a somewhat embarrassing, and politically very incorrect conclusion, namely that the speech mechanism is set up to cater in the first instance for monolingual speech production. Multilingual speech – the need to select among structures according to their context-appropriateness – is a facility that is controlled by an analytical skill. When this skill breaks down, the speaker ends up reverting to a state of affairs of non-differentiation of linguistic systems, one that is typical of the more simplex repertoires of monolinguals.

References

Aikhenvald, Alexandra Y. and R. M. W. Dixon (eds.)
2001   *Areal Diffuson and Genetic Inheritence: Problems in Comparative Linguistics.* Oxford: Oxford University Press.
Aikhenvald, Alexandra Y.
2002   *Language Contact in Amazonia.* Oxford: Oxford University Press.
Alves, Mark
2007   Sino-Vietnamese grammatical borrowing: An overview. In: Yaron Matras and Jeanette Sakel (eds.), *Grammatical Borrowing in Cross-Linguistic Perspective,* 343–361. Berlin: Mouton de Gruyter.
Ameka, Felix K.
2007   Grammars in contact in the Volta basin (West Africa): On contact-induced grammatical change in Likpe. In: Alexandra Yurievna Aikhenvald and R.M.W. Dixon (eds.), *Grammars in Contact: A Cross-linguistic Typology,* 114–142. (Explorations in Linguistic Typology, Volume 4). Oxford: Oxford University Press.
Ameka, Felix K.
2007   Grammatical borrowing in Likpe (Sɛkpɛlé). In: Yaron Matras and Jeanette Sakel (eds.), *Grammatical Borrowing in Cross-Linguistic Perspective,* 107–122. Berlin: Mouton de Gruyter.
Bakker, Peter
2006   The Sri Lanka Sprachbund: The newcomers Portuguese and Malay. In: Yaron Matras, April Mc-Mahon and Nigel Vincent (eds.), *Linguistic Areas. Convergence in Historical and Typological Perspective,* 135–159. New York: Palgrave Macmillan.
Borg, Alexander and Marie Azzopardi-Alexander
1997   *Maltese.* London: Routledge.
Brody, Jill
1995   Lending the 'Unborrowable': Spanish discourse markers in indigenous American languages. In: Carmen Silva-Corvalán (ed.), *Spanish in Four Continents. Studies in Language Contact and Bilingualism,* 132–147. Washington D.C.: Georgetown University Press.
Campbell, Lyle
1993   On proposed universals of grammatical borrowing. In: H. Aertsen and R.J. Jeffers (eds.), *Historical Linguistics 1989,* 91–109. Amsterdam: Benjamins.
Crass, Joachim
2007   Grammatical borrowing in K'abeena. In: Yaron Matras and Jeanette Sakel (eds.), *Grammatical Borrowing in Cross-Linguistic Perspective,* 91–105. Berlin: Mouton de Gruyter.
Dal Negro, Slivia
2005   Lingue in contatto: Il caso speciale dei segnali discorsivi. In: Giorgio Banti, Antoietta Marra and Edoardo Vineis (eds.), *Atti del 4°*

congresso di studi dell'Associazione Italiana di Linguistica Applicata, 73–88. Perugia: Guerra Edizioni.

Dawkins, Richard MacGillivray
1916   *Modern Greek in Asia Minor*. Cambridge: Cambridge University Press.

Elšík, Viktor and Yaron Matras
2006   *Markedness and Language Change: The Romani Sample*. Berlin: Mouton de Gruyter.

Field, Frederic W.
2002   *Linguistic Borrowing in Bilingual Contexts*. Amsterdam: Benjamins.

Friederici, Angela
2001   Syntactic, prosodic, and semantic processes in the brain: Evidence from event-related neuroimaging. *Journal of Psycholinguistic Research* 30: 237–250.

Fuller, Janet
2001   The principle of pragmatic detachability in borrowing: English-origin discourse markers in Pennsylvania German. *Linguistics* 29: 351–369.

Givón, Talmy
1990   *Syntax: A Functional-Typological Introduction*. Volume II. Amsterdam: Benjamins.

Green, David
1998   Mental control of the bilingual lexico-semantic system. *Bilingualism: Language and Cognition* 1: 67–81.

Grosjean, François
2001   The bilingual's language modes. In: Janet L. Nicol (ed.) *One Mind, two Languages. Bilingual Language Processing*, 1–22. Oxford: Blackwell.

Heath, Jeffrey
1978   *Linguistic Diffusion in Arnhem Land*. Canberra: Australian Institute for Aboriginal Studies.

Hekking, Ewald and Dik Bakker
2007   The case of Otomi: A contribution to grammatical borrowing in cross-linguistic perspective. In: Yaron Matras and Jeanette Sakel (eds.), *Grammatical Borrowing in Cross-Linguistic Perspective*, 435–464. Berlin: Mouton de Gruyter.

Johanson, Lars
2002   *Structural Factors in Turkic Language Contacts*. Richmond: Curzon.

Kossmann, Maarten
2007   Grammatical borrowing in Tasawaq. In: Yaron Matras and Jeanette Sakel (eds.), *Grammatical Borrowing in Cross-Linguistic Perspective*, 75–89. Berlin: Mouton de Gruyter.

Matisoff, James A.
2001   Genetic versus contact relationship: Prosodic diffusibility in South-East Asian languages. In: Alexandra Y. Aikhenvald and R.M. W.

Dixon (eds.), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics,* 291–327. Oxford: Oxford University Press.

Matras, Yaron and Jeanette Sakel
2007   Investigating the mechanisms of pattern-replication in language convergence. *Studies in Language* 31: 829–865.

Matras, Yaron and Jeanette Sakel (eds.)
2007   *Grammatical Borrowing in Cross-linguistic Perspective.* Berlin: Mouton de Gruyter.

Matras, Yaron
1998   Utterance modifiers and universals of grammatical borrowing. *Linguistics* 36: 281–331.

Matras, Yaron
2000   Fusion and the cognitive basis for bilingual discourse markers. *International Journal of Bilingualism.* 4:4: 505–528.

Matras, Yaron
2002   *Romani: A Linguistic Introduction.* Cambridge: Cambridge University Press.

Matras, Yaron
2004   Layers of convergent syntax in Macedonian Turkish. *Mediterranean Language Review* 15: 63–86.

Matras, Yaron
2007   The borrowability of grammatical categories. In: Yaron Matras and Jeanette Sakel (eds.), *Grammatical Borrowing in Cross-Linguistic Perspective*, 31–74. Berlin: Mouton de Gruyter.

Matras, Yaron
2009   *Language Contact.* Cambridge: Cambridge University Press.

Matras, Yaron, April McMahon and Nigel Vincent (eds.)
2005.   *Linguistic Areas. Convergence in Historical and Typological Perspective.* Houndmills: Palgrave.

McMahon, April
2005   Heads I win, tails you lose. In: Philip Carr, Jacques Durand and Colin J. Eden (eds.), *Headhood. Elements, Specification and Contrastivity*, 255–275. Amsterdam: Benjamins.

Menn, Lise and Lorraine K. Obler
1990   Cross-linguistic data and theories of agrammatism. In: Lise Menn and Lorraine K. Obler (eds.), *Agrammatic Aphasia: A Cross-language Narrative Sourcebook*, 1369–1389. Amsterdam: Benjamins.

Moravcsik, Edith
1978   Universals of language contact. In: Joseph H. Greenberg (ed.), *Universals of Human Language,* 94–122. Stanford: Stanford University Press.

Muysken, Pieter
2000   *Bilingual Speech. A Typology of Code-mixing.* Cambridge: Cambridge University Press.

Paradis, Michel
    2004   *A Neurolinguistic Theory of Bilingualism.* Amsterdam: Benjamins.

Queen, Robin M.
    2001   Bilingual intonation patterns: Evidence of language change from Turkish-German bilingual children. *Language in Society* 30: 55–80.

Ross, Malcolm
    2001   Contact-induced change in Oceanic languages in north-west Melanesia. In: Alexandra Y. Aikhenvald and R.M.W. Dixon (eds.), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics,* 134–166. Oxford: Oxford University Press.

Rudolph, Elisabeth
    1996   *Contrast. Adversative and Concessive Relations on Sentence and Text Level.* Berlin: De Gruyter.

Sakel, Jeanette and Yaron Matras
    2007   Modelling contact-induced change in grammar. In: Thomas Stolz, Rosa Salas Palomo and Dik Bakker (eds.), *Aspects of Language Contact. New Theoretical, Methodological and Empirical Findings with Special Focus on Romanisation Processes,* 63–88. Berlin: Mouton de Gruyter.

Salmons, Joseph
    1990   Bilingual discourse marking: Code switching, borrowing, and convergence in some German-American dialects. *Linguistics* 28: 453–480.

Schultze-Berndt, Eva
    2007   Recent grammatical borrowing into an Australian Aboriginal language: The case of Jaminjung and Kriol. In: Yaron Matras and Jeanette Sakel (eds.), *Grammatical Borrowing in Cross-linguistic Perspective,* 363–386. Berlin: Mouton de Gruyter.

Stolz, Christel and Thomas Stolz
    1996   Funktionswortentlehnung in Mesoamerika. Spanisch-amerindischer Sprachkontakt Hispanoindiana II. *Sprachtypologie und Universalienforschung* 49: 86–123.

Stolz, Christel and Thomas Stolz
    1997   Universelle Hispanismen? Von Manila über Lima bis Mexiko und zurück: Muster bei der Entlehnung spanischer Funktionswörter in die indigenen Sprachen Amerikas und Austronesiens. *Orbis* 39: 1–77.

Stolz, Thomas
    1996   Grammatical Hispanisms in Amerindian and Austronesian languages. The other kind of Transpacific isoglosses. *Amerindia* 21: 137–160.

Stolz, Thomas
    2007   Allora. On the recurrence of function-word borrowing in contact situations with Italian as donor language. In: Jochen Rehbein,

Christiane Hohenstein and Lukas Pietsch (eds.), *Connectivity in Grammar and Discourse*, 75–99. Amsterdam: Benjamins.

Tadmor, Uri
 2004   Function loanwords in Malay-Indonesian (and some other Southeast Asian languages). Paper presented at the Loan Word Typology Workshop, Max-Planck-Institute for Evolutionary Anthropology, Leipzig, 1–2 May 2004.

Tadmor, Uri
 2007   Grammatical borrowing in Indonesian. In: Yaron Matras and Jeanette Sakel (eds.), *Grammatical Borrowing in Cross-Linguistic Perspective*, 301–328. Berlin: Mouton de Gruyter.

Thomason, Sarah Grey and Terrence Kaufman
 1988   *Language Contact, Creolization and Genetic Linguistics*. Berkeley: University of California Press.

Topping, Derek M.
 1973   *Chamorro Reference Grammar*. Honolulu: University of Hawaii Press.

Van Hout, Roland and Pieter Muysken
 1994   Modelling lexical borrowability. *Language Variation and Change* 6: 39–62.

Weinreich, Uriel
 1953   *Languages in Contact*. The Hague: Mouton.

Wichmann, Søren and Jan Wohlgemuth
 2008.   Loan verbs in a typological perspective. In: Thomas Stolz, Rosa Salas Palomo and Dik Bakker (eds.), *Aspects of Language Contact. New Theoretical, Methodological and Empirical Findings with Special Focus on Romanisation Processes*, 89–122. Berlin: Mouton de Gruyter.

Linguistic Universals and Language Variation

Edited by
Peter Siemund