

Construction Grammar and Code-Mixing

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1. Why a construction grammar approach to code-mixing?

In this paper I want to undertake the first step in developing a constructionist¹ approach to one of the most interesting phenomena in the study of language, namely code-mixing². The long lasting search for an explanation to the phenomenon of code-mixing has produced a plethora of models, constraints and hypotheses. Hundreds of articles and books have been written on the subject. There might, therefore, be doubt as to why we would need yet another approach to this field full of puzzling evidence. However, there are at least two reasons why it is nonetheless worth addressing the subject once more: one is mainly grounded in the still nascent theory of construction grammar; the other can be found in the discourse on bilingual speech and code-mixing itself.

Construction grammar has developed over the last 30 years in the works of Fillmore and Kay, Langacker, Goldberg, Croft and many others and has been successfully adopted in various linguistic fields, such as language acquisition, interactional linguistics and historical linguistics. Still, it is a relatively new understanding of language which looks forward to further testing its basic assumptions. It is difficult to come up with any better object for testing a new grammatical theory than the description of bilingual speech. Moreover, construction grammar differs in a number of important assumptions from other theories and their underlying assumptions, which have served as theoretical ground for most of the code-mixing models so far (cf. Gardner-Chloros and Edwards 2004). These differences do not only concern strictly grammatical questions. Indeed, construction grammar does not describe language mainly as a linguistic system in a classical structuralist understanding, but tries to evolve into a theory of linguistic knowledge in general, including its acquisition, representation and processing (Stefanowitsch 2011: 15). It is this aspiration that makes construction grammar a good candidate for a more comprehensive approach to the multifaceted phenomena we encounter in bilingual speech.

The second reason has to do with the ongoing research on code-mixing itself. The literature on this issue concentrates mainly on two questions:

how do speakers combine items from different languages and *where* do they do it. The latter focuses on grammatical conditions of code-mixing, various sets of which have been proposed by Poplack (1980), DiSciullo, Muysken and Singh (1986), Myers-Scotton (1997) and MacSwan (2001), to name only a few. Naturally, grammar is the focus of all these works, most of which are “concentrated on finding universally applicable, predictive grammatical constraints” (Gardner-Chloros and Edwards 2004: 104). Surprisingly, in contact linguistics there has been little discussion on the appropriateness of the grammatical framework applied or the underlying assumptions about the functioning of language apart from approaches within the generative framework. Reflections on theoretical issues sometimes end in the somewhat disenchanted statement that code-mixing seems to follow no rules whatsoever or should be analysed only within its own rules. Both silence about assumptions and resignation are unsatisfactory insofar as a grammatical theory should be applicable to all varieties of natural language without any changes to its architecture. A search for grammatical constraints on code-mixing therefore has to start with selecting and describing the adopted grammatical model. This includes answering the question as to what exactly the elements of grammar are. Here, construction grammar offers answers that differ significantly from other theories.

The second question is *how* bilinguals combine elements from different languages (cf. e.g. Muysken 2005: 1). Although it is not so obvious from predominantly linguistic works, where both the *how* and the *where* question essentially coincide, this is a question which focuses on language processing. This is why most psycholinguistic models of bilingual language processing, such as Green's Inhibitory Control model (Green 1998) or the Bilingual Production Model (de Bot 1992), Kecskes' Dual Language Model (Kecskes 2006) and Myers-Scotton's Matrix Language Frame Model (e.g. Myers-Scotton and Jake 2010) deal to a great extent with the selection of linguistic elements. They try to explain how a speaker can juxtapose two items from different languages during language processing. Again there is little discussion about the underlying assumption, namely *what* these items actually are. Often, the term ‘switching’ still refers to the transition from one language or code to another and so do the models. But speakers do not produce languages or codes, they produce linguistic units. Although there might be instances of conscious language switches, for example in order to make use of the language's sociolinguistic markedness, in most cases they are not made deliberately. Even if speakers are conscious about their language choice “it is crucial to emphasise that in the

production process they select not languages, [...] but words [...]. So it is not languages that compete for selection, but words” (Kecskes 2009: 7). Again the crucial question is *what* exactly speakers select for production, if it is not a language.

As this short discussion about the *where* and *how* questions in code-mixing research shows, it is crucial to determine exactly what we understand by linguistic elements. This question is a theoretical one and can hardly be answered by looking at data alone. As expected in a constructionist framework, I claim that constructions are the basic linguistic elements (cf. Croft 2001: 5): Basically, constructions are the only linguistic elements that have to be taken into account when talking about storage and processing of language.

In the following I will outline the theory behind construction grammar and constructions and show how these assumptions can be useful in studying code-mixing. I will firstly discuss the general accordance of constructionist assumptions and the requirement for a bilingual language model followed by specific accounts of bilingual issues, such as the notion of language and language indexation. Then I will outline a constructionist model of code-mixing which I will discuss in more detail focusing on bilingual constructions and the implications of the conceptualization of constructions as complex signs.

2. Construction Grammar

Construction Grammar is a cluster of closely related approaches to linguistic structure (for an overview cf. e.g. Croft 2007; Goldberg 2006: 213 ff.). Although there are some important differences between the individual accounts, some central assumptions are shared by most researchers (summarized here following Stefanowitsch 2011). First of all, there is the assumption that all grammatical knowledge is acquired, represented and processed in the form of constructions. These constructions are, secondly, conventionalized pairings of form and meaning, whereby the form can be completely captured by referring to what may be called ‘surface structure’. Thirdly, the semantics of constructions includes all encyclopaedic knowledge and knowledge about the constructions’ usage that is necessary to appropriately apply them in communication. This approach to code-mixing also includes the assumption that language has to be acquired through usage (Tomasello 2003; Langacker 2009). This means that language and grammar are nothing other than generalizations over usage and that the

only way to assign meaning to a linguistic form or vice versa is to conventionalize this usage in the speech community and to entrench it in the cognitive system of a single speaker. This is said to hold for all linguistic levels, including abstract linguistic entities like paradigms and categories.

Constructions themselves are very close to what is traditionally called a sign. They differ from signs in that they are composite structures (Langacker 2005: 108) which can include smaller constructions or signs in their structure. While some constructionists additionally assume that constructions need to be non-compositional (Goldberg 1995: 4), I adhere to the usage-based position that every form-meaning pairing can “become” a construction if it is used frequently enough. Constructions exist on almost every linguistic level, which means that eventually all linguistic levels can be regarded as being part of a construction. Their form can be both complex and schematic. The complexity ranges from simple lexical morphemes to whole idioms or argument structures and even further. Complex constructions can be more or less schematic, which means that there are slots in the constructions that may be filled by other constructions that are less complex. That is to say, constructions can be nested one into another. The degree of schematicity is low for words or idioms, where the whole of the surface is phonologically predefined by the construction, and high for argument structures or passive constructions. Slots are semantically or pragmatically defined, but mostly lack a formal specification. Regarding their meaning, constructions can be specific or abstract. So, while idioms can be relatively complex, they are not schematic and have a specific meaning. Argument structure constructions as described by Goldberg (1995) are also complex, but highly schematic and abstract in meaning. Construction grammar in principle holds that differences in form tend to reflect differences in meaning and vice versa (cf. Goldberg 1995: 67). However, cross-constructional generalizations can lead to identity of either form or meaning (Stefanowitsch 2011: 18).

Constructions are not universal but have to be conventionalized in the speech community; the inventory of constructions is unique for each language. While it is obvious that the surface form of a construction is different in individual languages and therefore not directly comparable, there are usually also differences in meaning or usage. That is, even if we might identify ditransitive constructions in, say, English and Russian, they are by no means the same construction. Croft even assumes that not only constructions, but all linguistic categories are basically language dependent and can be described only within a language or even only within a single construction (Croft 2001: 170). This would imply that languages are in fact

incomparable. While this may seem to be frustrating at first glance, it reflects the puzzling and sometimes contradictory evidence we find in bilingual language use very well. From this point of view, it becomes clear that code-mixing cannot have universal constraints, but depends at the very least on the language pair in question.

3. Construction Grammar and Code-Mixing

Construction grammar offers some promising features for the explanation of bilingual language use without the need of being adapted and even without the need to address code-mixing in any particular way³. In the following, some solutions will be discussed that construction grammar can provide to desiderata for a linguistic theory of code-mixing that have been suggested in the code-mixing literature (cf. e.g. Sebba 2010).

Construction grammar is a multi-level approach. Treffers-Daller complained that “there is no term to cover the wide variety of phonological, morphological, syntactic, semantic, and conceptual features, lexical items, phrases, clauses, multiword chunks [...] that can be transferred from one language to another” (Treffers-Daller 2010: 59). The aim of construction grammar is exactly this: to cover all levels of language with one consistent theory and using only one term: construction. Albeit, up to now construction grammar has not provided approaches to everything that can be covered by a linguistic theory, and the analysis of bilingual speech will considerably aid to reach this goal.

Construction grammar avoids the standard language bias (Auer 2006). This holds for a usage-based approach, which is maintained in this outline. Strictly speaking, a “code” or “language” can be defined only by virtue of a frequency-based description of the linguistic means a speech community uses. This makes it possible to account for a code that consists of dialectal, bilingual or emerging elements and to avoid the widely criticised approach to code-switching as the clash of two completely separate grammatical standard systems (Auer 2006: 2). In the end, a usage-based approach, which does not require universal rules, may be able to overcome the matrix language discussion which is partly connected to the question of the separability of “languages” (see below). If a code is described solely on the grounds of the language use of a bilingual community, it may even happen that code-mixing is described by itself, namely when code-mixing is used regularly and certain mixed utterances or expressions become conventionalized. In fact, speakers themselves also rely solely on the community's

conventions without reference to standard languages. In this way, analytical flexibility, as demanded by Sebba (2010: 56), is guaranteed: there is no universal *a priori* prediction about the structure of code-mixing.

Construction grammar may help to explain code-mixing by adding another potential motivation for a speaker to switch languages. Since constructions on every level bear some semantic load that is likely to differ between languages, these deviations can help to explain why a speaker chooses, say, an argument structure construction or passive construction from one language and not the other. For example, the alternational type of code-switching is defined without referring to the motivation for the alternate use of linguistic units (Muysken 2005: 96 ff.). A constructionist approach suggests that there may be a straightforward reason for a particular language choice. That is, the properties of constructions may help “determine what switching actually *does* occur” (Sebba 2010: 55, italics original).

In the remainder of the paper, I want to outline more assets of a usage-based constructionist approach to bilingual language processing. These concern the problematic label ‘language’ (chapter 4), the process of code-mixing (chapter 5), the recognition of bilingual constructions (chapter 6), and the integration of the adjacent field of interlinguistic transfer (chapter 7).

4. The notion of “language”

In order to be able to apply construction grammar to code-switching, some additional clarifications are necessary. They have not yet been discussed within the theoretical framework of construction grammar but are kept in full accordance with its usage-based principles. The most important one is the question of language marking. There is an abundance of literature on the subject of how a speaker is able to either select a word form from the correct language during production or to assign a heard acoustic form to a language during reception. Many approaches presume that there is a kind of marking on every word that makes this process work. This mark is called label, index or tag (Myers-Scotton 2007: 299; Green 1998: 71; Muysken 2005: 71). In the BIA model family a common language node is assumed (e.g. Dijkstra and van Heuven: 1998) that connects all words from one language. But some doubt has been expressed about the existence of such tags. Li (1998) argues that such a label should not allow for any errors in differentiating words from two languages, which, according to

empirical evidence, is not true. Paradis questions whether a label like ‘language’ can really be part of the linguistic knowledge of uninformed speakers (Paradis 2004: 204). There have also been some attempts to show that the lexicon can easily do without explicit tagging (Li & Farkas 2002; Meijer and Fox Tree: 2003). Paradis argues that there is, in fact, no difference between the brain of a unilingual and that of a bilingual, since unilinguals also have to be able to distinguish between several linguistic entities like dialects, sociolects and pragmatic rules (Paradis 1997: 332). Rather, language affiliation is metalinguistic knowledge, which by its very nature cannot play any role during language processing. Even though it does not seem to be reasonable to assume that every dialect or register a speaker commands should be marked by its own label, it is clear that speakers can easily control these varieties, without having problems selecting the right lemmas. Paradis concludes that words from different languages “are distinguished by phonemic and subphonemic cues in the same way as minimal pairs within the same language” (Paradis 2004: 205) and that no specific marking is necessary.

The approach by Paradis holding that there is no need for language tags (Paradis 2004: 203) is adopted here. It seems logical from the point of view of a usage-based approach that language, just like constructions, is forged together exclusively through the sheer frequency with which all linguistic elements from one language are used together. One could go even further and say that individual languages are the largest constructions we have. If it is feasible to construe everything from morphemes to types of text as conventionalized pairings of form and meaning (or function), then the form-pole of a language is simply the inventory of all its constructions. Since constructions specify linguistic elements only up to the phonological level there is presumably also a set of phonetic forms that are typically used to realize these phonemes. Hence, even if a speaker commands the whole construction of a language, he will be labelled as speaking with a foreign accent when he (deliberately or not) fails to choose the right subphonemic features. At the same time it has been shown that speakers are quite good at judging a speaker’s L1 based on subphonemic features (Vieru et al. 2011), so phonetics is arguably a cue to ‘language’.

The downside of specifying language solely based on its form is that words or other elements that have the same or a highly similar form in two languages are not assignable. Triggered code-switching, namely the facilitation of a code-switch by, for example, interlingual homophones (de Bot et al. 2009), may be an effect of this ambiguity.

But metalinguistic knowledge should not be underestimated either. Children learn from the very beginning which words are appropriate to say to someone. This is basically the same as with other pragmatical norms. The choice of appropriate language or code is nothing other than knowing how to speak to someone in a certain situation, even if a language has no name or remains as of yet unnamed. But in most modern bilingual societies, language is an openly discussed issue. Bilingual speakers often reflect on their own output and negotiate the language affiliation of words (see Wasserscheidt 2010: 222). This reflection is, of course, not scientific, but certainly helps to shape a more or less clear picture of the borders of each language, even if this border does not coincide with established boundaries of individual languages. This daily negotiation of identities of languages cannot remain without marks in the meaning of the constructions. So, in addition to belonging to a network forming a language lemmas also may contain direct information about the language they belong to – not as tags, but as one of their (addressee-based) discourse-pragmatic features.

5. Code-mixing with constructions

As should have become clear from the previous remarks, a constructionist approach to code-mixing offers a straightforward answer to the crucial question of *what* code-mixers really mix, namely constructions. The question that arises now is how constructions from different languages can be brought together. At first sight, there are two possible scenarios for combining constructions from different languages. Either they are simply juxtaposed. Or a construction from language B is in some way inserted (nested) into the slots of a construction from language A.

One form of a juxtaposition of two independent constructions is certainly intersentential code-switching. However arbitrary the separation of a speech event and the definition of a sentence may be, the separation supposedly always contains the border of two constructions.

The insertion of constructions into other constructions that are either (more) complex or (more) schematic is obviously very close to what Muysken calls ‘insertion’. He defines an inserted constituent as “a sister to X [that] cannot be licensed by X” (Muysken 2005: 95) and this very much resembles the conception of the form of an open slot in a construction.

What makes a constructionist approach work is the presumed nature of constructions. Constructions are by definition conventionalized and entrenched form-meaning-pairings. The processes of conventionalization and

entrenchment in turn are the product of constructions being frequently perceived and produced as complete units. As a matter of fact, there is no meaning without form and no form without meaning. Hence I hypothesize that constructions have to be processed as unseparated entities during language usage. The status of complex constructions in the mental lexicon may be spurious, but during communication speakers cannot split them halfway and have to instead produce the whole construction. Otherwise, they would lose their intended meaning. The particularities of language processing should be basically the same as for words, including, of course, slips of the tongue or other processing errors.

The consequence of this assumption and the language specific nature of constructions in general is that a construction, once it is selected, must be produced entirely in one language. This does not, of course, include slots but only those elements that are in some way (phonologically) specified as the form of the construction. What exactly the form of a construction is still remains to be precisely defined. I will come back to this question below. For the moment it is important to note that these phonologically specified elements of a construction may indeed form some kind of matrix that can be filled with elements from any language. In fact, the very definition of schematic constructions is that of a matrix (or schema), as used by Myers-Scotton (e.g. 2007). Thus, example (1) illustrates a construction, where both dative *-ga* and ablative *-din* are specified and the slots before these components are filled with phonologically integrated elements. This way, the notion of a “matrix language” receives a natural explanation without the need to refer to language at all. The information that the construction is Kazakh and the embedded elements are Russian is facultative. Not languages, but constructions serve as a matrix. In the light of the aforementioned problems with indexing lemmas for language, it is not necessary (though possible) that “the ML [Matrix Language] is selected at the conceptual level” (Myers-Scotton and Jake 2010: 340) since constructions are already language specific and can be selected and processed almost in the same way as speech production models describe the production of single words.

- (1) Mašin özimiz *arendi-ga* alimiz *sel'hoztechniki-din* däyu
 Car self rent -DAT take builder's.yard -ABL say
 'They say they'll rent a car from the builder's yard on their own.'
 (Kazakh-Russian, Muhamedowa 2006: 68)

In line with the Matrix Language Frame Model, I assume that “a given constituent type in any language has a uniform abstract structure and the requirements of well-formedness for this constituent type must be observed whenever the constituent appears” (Myers-Scotton and Jake 2010: 337). This can be easily reformulated in a constructionist fashion: a given construction in any language has a unique form whose requirements must be observed whenever the construction appears. Thus, I hypothesize that constructions are not mixable, at least not more than online processing can mix up linguistic elements anyway.

A “frame construction” can be filled with other elements, most of them being complex signs themselves. The class of elements that can be inserted into a slot is restricted semantically or pragmatically and, to some extent, phonologically. Here, the notion of congruence is crucial. As already mentioned, there cannot be full congruence between linguistic units from two languages in a constructionist approach, even regarding their categorial status. Congruence has to be constructed either by individual speakers or is itself a matter of conventionalization (Sebba 2010). It still has to be evaluated whether current approaches to constructional meaning like frame semantics (see Boas 2010 for a contrastive approach) or collostructional analysis (e.g. Gries and Stefanowitsch 2010) can help to advance the notion of congruence in a constructionist fashion (see also Sickinger 2012).

The two possibilities of combining constructions from different languages via juxtaposition or insertion imply that the form poles of constructions are really incomparable across languages. But there may well be constructions that are identical in two languages. Good candidates are constructions whose elements are marked exactly the same way, for example via word order or a very similar phonological structure (homophones). Other possible examples are constructions that are so highly schematic that they do not contain any concrete form at all. Muysken actually lists some of them in a “preliminary typology of alternation constructions” (Muysken 2005: 102). The list includes clefting, fronting, as well as right- and left-dislocation, all of which employ constructions that do not have a form pole of their own and therefore may have a cognate in another language involved that is just as schematic. Also, diachronically speakers may have lost the capability to distinguish between the formal and/or semantic features two constructions have in their languages, which may lead to “congruent lexicalization” (Muysken). If these constructions also bear a more or less similar meaning, then the language of origin is not inferable from the percept and hence we cannot distinguish between alternation and insertion. That is, the construction can come from any language or from both at a

time and does not serve as a linguistically specified frame. Rather, they possibly serve as a kind of trigger for code-mixing itself.

In a constructionist framework, it is not government that regulates the language of the construction. Although heads such as verbs do play a prominent role even in construction grammar, they do not, however, bear any kind of language index that could determine the language affiliation of other elements of the construction. They can be inserted into a constructional frame just like other elements are inserted. Compare, for instance, the infinitive clauses in German and Russian. While Russian only contains the construction V + INF (*pobrobuju uechat* 'I.try drive.away'), in German the verb can be either followed by an infinitive (*ich will wegfahren* 'I want drive.away': V + INF) or an infinitive clause (*ich versuche wegzufahren* 'I try to drive.away': V + zu + INF). A German-Russian bilingual now has two constructions, one that is somehow equivalent in Russian and German (V + INF) and the German *zu* infinitive. In a code-mixed utterance, it would be totally normal to encounter at least two different patterns: *pobrobuju weggehen* 'I.want go' and *pobrobuju wegzugehen* 'I.want to go'. So while the inflected verb is Russian in both utterances, the construction is Russian in the first and German in the second example. A similar example is discussed by Muysken regarding the marking of human objects in Spanish-English code-mixing. Spanish requires the marker *a* between the verb and the human object in sentences like (2), whereas English does not. While Muysken predicts the pattern to depend on the language of the verb, his own count reveals that indeed *a* is often (in 3 out of 6 occurrences) used after English verbs (Muysken 2005: 38). This shows that it is not the verb that selects the syntactic frame.

- (2) *Veo a la mujer.*
 **Veo la mujer*
 'I see the woman.' (Spanish, Muysken 2005: 38)

This shows that code-mixing, just as any other linguistic phenomenon, is basically a statistical one. This means that no linguistic theory about code-mixing should be based solely on the evaluation of single code-mixes but has to include corpus analyses as well. The theory itself can be developed with the help of single examples, but the formulated assumptions should always take into account that the observed rules may at best be mere tendencies. While for unilingual speech it is clear that speakers, however seldom, do produce errors, code-mixing research has no means to determine what an error would look like. But it is to be expected that bilin-

guals also make errors, especially as they have to cope with at least two codes at the same time, the structures of which being rarely easily compatible. In fact, it is not feasible to argue for or against a proposed model by discussing single utterances, as long as it is not shown that they represent the language use in the community in question.

This short outline of a constructionist approach to code-mixing is, of course, still too simple. In order to provide a useful explanation of the diversity of bilingual phenomena some more elaboration is needed. However, this elaboration must not claim processes or structures that are not already part of the theoretical framework construction grammar offers. The study of bilingual language use may well help to gather new insight into the functioning of constructions and to clarify spurious questions. In the following chapter I want to discuss some concrete examples.

6. Bilingual Constructions

It is clear from the material that has been gathered to study code-mixing that bilinguals sometimes use constructions that are not part of the inventory of any language spoken in the community. Many of them are used by bilinguals in order to overcome difficulties in integrating foreign elements into a language. For example, the Turkish community in the Netherlands uses constructions with the Turkish verb *yapmak* 'to do' in order to integrate e.g. Dutch verbs (for similar examples cf. Pfaff 1991; Kallmeyer and Keim 2003):

- (3) *op kamers wonen yap-acağ-ım*
 on rooms live do-FUT -1SG
 'I'm going to live on my own.' (Turkish-Dutch, Backus 2010: 229)

The combination of a verb meaning something like 'to do' with foreign elements is a strategy used also in other languages, according to Chan (2010: 190 f.). In the Turkish communities in the Netherlands and Germany this use also extends to the constructions [N *yapmak*] or [N *machen*], respectively. Bilingual speakers produce utterances like *ilkokul yapmak* 'elementary school do' in Turkish with the meaning 'to finish elementary school' (Backus, Doğruöz, Heine 2011: 743) or the already famous *Ich mach dich Messer* 'I do you knife' with the intended meaning 'I'll stab you with the knife' (Wiese 2006) in German. Since these combinations are used quite often, they can be regarded as conventionalized or in the stage

of conventionalization. Moreover, their meaning is not inferable from the form; hence they are constructions on their own right. Their status as conventionalized constructions will become visible only through a corpus-based analysis.

Other constructions are maybe not the direct outcome of language contact but still differ from the standard language. In my corpus⁴, I found sentences from Serbian bilinguals in Hungary where they omit the otherwise obligatory auxiliary in the perfect tense:

- (4) Onda od tog doba **došl-a** iz *ovod* -e
 Then from that time **came-3SG.FEM** from *kindergarten*-GEN
 napolje, i onda ovo.
 outside, and then that.
 ‘At this time she came out of *kindergarten*, and then this.’
 (Serbian-Hungarian, own corpus)

If one compares the two translations of this sentence into standard Serbian and standard Hungarian (3), one can see that the speaker not only tries to reduplicate the structure of the Hungarian verb (*ki-kerül* ‘out-come’) but also omits the auxiliary. The correct perfect form of the verb *doći* ‘to come’ would be *je došla* with the auxiliary *je*. The whole utterance shows varied intertwining of Hungarian and Serbian constructions, including the insertion of the Hungarian noun *ovoda* ‘kindergarten’. So it seems natural to account for the omission of the auxiliary *je* in terms of Hungarian influence on Serbian. One interpretation is that the speaker took over the Hungarian perfect-tense construction that does not have auxiliaries.

- (5) *Serbian*
je *napusti-l-a* *vrtić*
 AUX left-PF-SG.FEM kindergarten.ACC
Code-Mix
doš-l-a *iz* *ovod-e* *napolje*
 come-PF-SG.FEM from kindergarten-GEN outside
Hungarian
ki-kerül-t *az* *ovodá-ból*
 out-come-PF.3SG ART kindergarten-ABL

However, in the corpus as a whole the omission of the auxiliary is very frequent. In a subpart of the corpus that contains two long discussions with altogether nine speakers, in 186 out of 339 occurrences of the perfect tense

construction (i.e. 54.9%) the auxiliary has been omitted. This is already notable and seems to confirm the assumption that there is a Hungarian source – not only ad hoc, but in general. A closer look, however, shows that it is mainly the 3rd person auxiliary that is left out: here the omission ratio amounts to 70% (177 out of 254). For all other forms of the paradigm, speakers formed the perfect tense without the auxiliary in only 11% of all cases (9 out of 76).

As a consequence, the perfect tense paradigm has to be changed for the Serbian of the Serbian minority in Hungary as follows (here for the feminine perfect paradigm of the verb *doći* ‘to come’):

1Sg.	sam došla	1Pl.	smo došle
2Sg.	si došla	2Pl.	ste došle
3Sg.	je došla	3Pl.	su došle

Another possible explanation could be that the paradigm changes due to the influence of the Hungarian perfect paradigm (exemplified here with the verb *lenni* ‘to be’), where the 3rd person singular is the least marked:

1Sg.	volt-am	1Pl.	volt-unk
2Sg.	volt-ál	2Pl.	volt-atok
3Sg.	volt	3Pl.	volt-ak

It is feasible that the Serbs rearrange the Serbian paradigm to fit the model of the Hungarian one and make the 3rd person singular form the least marked. But Savić reports the same tendency of auxiliary omission in the Serbian diaspora in the U.S. (Savić 1995: 487). Her explanation is that an “already operating gapping rule has triggered a levelling process in the Serbian grammar of these bilinguals” (ibid.). Indeed, Serbian allows for the omission of 3rd person auxiliaries in some cases, namely when the verb is a reflexive or when it follows the conjunctions *i* ‘and’ or *a* ‘but, and’. The linguistic environment for the development of both Serbian codes, however, is quite different, so an explanation would be too speculative at this moment. A usage-based approach that relies on corpus analysis does not have to push made-up hypotheses about the mechanisms of interference or convergence. It only takes account of the fact that the evaluation of bilingual language use must rely on those norms that are conventionalized in the speech community, and the auxiliary omission in the case of the 3rd person singular perfect tense is clearly a convention in the Serbian community in Hungary.

7. Constructions as Complex Signs

In many cases of code-mixing, a straightforward application of the stated hypothesis that every construction has to be produced in the language it belongs to is not feasible. For instance, speakers often use structures in language A that seem to be a more or less literal translation from structures that belong to language B. This kind of contact phenomenon is called transference, loan translation or calque. I argue that loan translations play a much more important role in code-mixing than has been assumed to date. First let us look at loan translations from a constructionist point of view. Backus and Dorleijn (2010) and Backus (2010) provide an interesting approach that relates code-mixing with loan translation and other contact phenomena. I very much agree with their general statement that all contact phenomena are related and may belong to one continuum; I also think that construction grammar can provide even more insight into the underlying mechanisms. Consider one example Backus and Dorleijn provide: the loan translation *piano oynamak* ‘to play the piano’. The correct Turkish version of this expression would be *piyano çalmak* (literally “piano to.sound”), while the Dutch one is *piano spelen* (Backus and Dorleijn 2010: 77).

(6) Turkish:	<i>piyano çalmak</i>
Dutch Turkish:	<i>piano oynamak</i>
Dutch:	<i>piano spelen</i>

The explanation the authors offer is that “only the meaning, and not the overt morphemes, is from Language B, as for example the use of the word for ‘to play’ (*oynamak*)” (ibid.). This means that the Dutch verb *spelen* ‘to play’ has been translated to Turkish *oynamak* ‘to.play’. However, *oynamak* is indeed a translation equivalent to *spelen*, so there would be nothing wrong with it. Only in combination with *pi(y)ano* it is the case that *oynamak* sounds odd. Indeed, *piano spelen* is obviously an instantiation of a particular construction. The first element of the construction can obviously be replaced by anything that refers to an instrument. So the construction may have the form [X SPELEN]. The meaning of the construction, however, is not the combination of [‘instrument’ + SPELEN ‘to play’]. Instead, the concept behind this construction is ‘to produce music with an instrument or to be able to master an instrument’. This concept can be expressed in various ways: in Turkish it is a similar (transitive) construction but with a verb signifying ‘to sound’. In Hungarian a verbalizing suffix is used: *zongorá-zni* (literally ‘to piano’). So in fact, the combination [‘instrument’

+ SPELEN ‘to play’] is the *structure* of the construction as a result of a language-specific construal, not its meaning.

This structure is what Langacker (2005) calls a ‘composite structure’, an idea which has been restated by Verhagen when describing constructions as complex signs: “Thus, a construction can itself also be considered a complex sign, the form-part consisting of elements that are generalizations over actual sound-meaning pairings, i.e. morphemes and paradigms” (Verhagen 2009: 146). The important point in this approach is that constructions are not seen as direct pairings of form and meaning only, but that constructions themselves are combinations of signs (composites) and that this combination in turn serves as signifier for the construction itself. Complex constructions are built partially from single signs which through their co-occurrence prompt a conventionalised interpretation that is referred to as the constructional meaning. A similar approach is Croft’s conceptualisation of a construction as “a pairing of complex syntactic structure and a complex semantic structure” (Croft 2001: 204).

For our example, this means that the construction [X SPELEN] consists of two elements: a paradigm, whose elements all belong to the semantic class ‘instrument’, and the lemma ‘SPELEN’, which itself is a construction, combining a lexical morpheme and a morphological paradigm. These two elements are the signifiers of the constructional meaning ‘to produce music with or to master an instrument’. They form what Verhagen calls an “intermediate structure” that triggers a corresponding interpretation. Langacker refers to the same relation as phonological and semantic integration of the component morphemes into the composite structure (Langacker 2005: 108). A simplified notation of this construction (where both elements are treated as single signs and not as constructions themselves) is given in Figure 1:

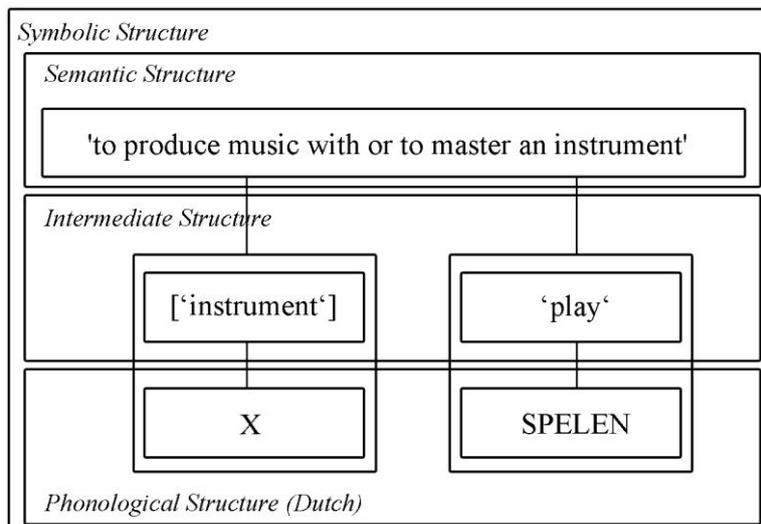


Figure 1: The complex constructional sign of [X SPELEN]

Let us now return to the explanation Backus and Dorleijn offered for how this loan translation works. The authors claim that “only the meaning, and not the overt morphemes, is from Language B” (Backus and Dorleijn 2010: 77). It is not wrong to assume that the overt morphemes are from Language A (in this case, Dutch). But it is not clear what Backus and Dorleijn are referring to as “meaning”. Since constructions are complex signs, we have at least two levels of meaning: The meaning of the construction and the meaning of the component signs of the construction. If the speaker wanted to translate the whole construction with the meaning ‘to produce music with or to master an instrument’ into Turkish, he would correctly produce *piyano çalmak*, since this is the translational equivalent of the construction. Instead, the speaker translated *spelen* into Turkish without paying attention to the constructional environment. That is, he replaced the independent sign [spelen – ‘to play’] with its most appropriate Turkish counterpart – *oyynamak*.

However, the simple combination of an instrument with the Turkish verb *oyynamak* spoken to a unilingual Turkish speaker would not lead to successful communication, since the unilingual participant would not be able to decode the combination by virtue of his linguistic knowledge. Although the construction is relatively transparent to us, a unilingual could interpret it in a completely different way, just as a combination like *to sound the piano* would hardly be understood in the way a Turkish speaker

may have intended. That is, the loan translation in question is only decodable if a speaker knows the Dutch construction. In fact, it *is* the Dutch construction. Thus, in order to produce a loan translation, a speaker uses a construction from Language B including its meaning and its signifiers but translates (some of) the signifiers into Language A (Figure 2). That is, the speaker imitates the Dutch construction.

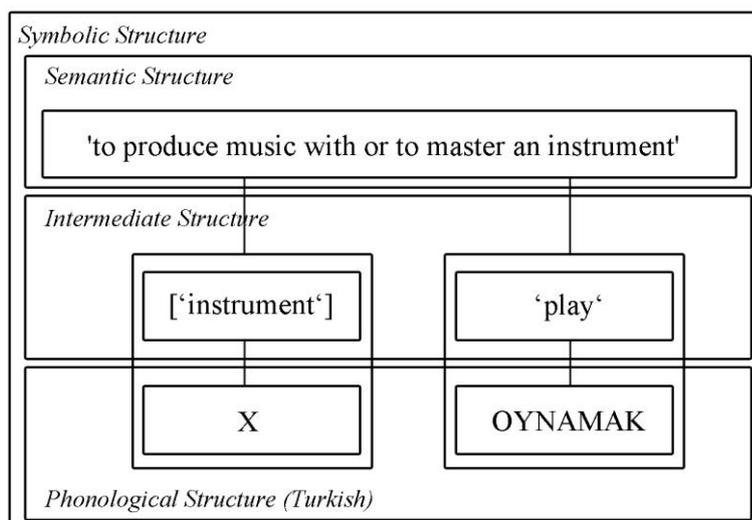


Figure 2: *The complex structure of the Turkish loan construction*

As a consequence, it is inappropriate to say that only the meaning has been taken over, since meaning cannot come without form. This also holds true the other way round. Backus and Dorleijn state that in interference/transference “only the formal structure comes from Language B” (Backus and Dorleijn 2010: 78). Paradoxically, they add “as in loan translation”, although they defined loan-translation to be the transfer of the meaning alone. This paradox (or rather confusion) is, in my opinion, the logical consequence of splitting form and meaning even though one cannot exist without the other. Obviously, it does not make sense to use structures in Language A that do not have a meaning in the language. Rather, form-meaning-pairings are inseparable; otherwise they lose their communicative function. Since meaning is not directly translatable, the only way to transfer the communicative function of constructions is to rebuild their structure by searching for equivalents to their components in language A. This is why I would suggest calling this process ‘imitation’, in analogy to human imitation which denotes the copying of behaviour with corresponding ac-

tions in order to achieve a specific goal. Likewise, bilinguals use the linguistic means of language A to copy a composite structure from language B in order to achieve its constructional meaning. Loan translation as a cultural technique can thus be related to imitative learning.

Loan translation and code-mixing are typically dealt with as separate phenomena. But they belong together in a systematic way and are often used hand in hand. Namely, the strategy of imitating constructions can also occur in instances of code-mixing. The following example of Russian-English code-switching from Broersma et al. exemplifies this:

- (7) No, he is an American citizen, which is going there weird, *potomu*
because
chto I have to bring my Ukrainian passport *so mnoj, kogda my*
with me, when we
edem tuda v Dominican Republic.
drive there in
(English-Russian, Broersma et al. 2009: 115)

This example is discussed in Broersma et al. in the light of trigger words, that is to say interlingual homophones, which might tempt the speaker to switch the language. In this case, the word *passport* functions as a trigger, since it is pronounced similarly in Russian and in English. But my interest is what is going on structurally in this part of the utterance. If we compare the bilingual sequence with its unilingual equivalents, we see that the structure is basically English. Only the last sequence *so mnoj* ‘with me’ is in Russian.

- (5a) Russian
mne nado vzjat' s soboj svoj ukrajinskij passport
Me must take with myself my.REFL ukrainian passport
Code-Mix
I have to bring my Ukrainian passport *so mnoj*
English
I have to bring my Ukrainian passport with me

While it is easy to recognize a code-switch in this case, a closer look reveals that the Russian elements are actually a loan translation. The structure of the Russian construction equivalent of the verbal complex *bring with me* (*vzjat' s soboj* ‘take with oneself’) obligatorily includes the reflexive form of the instrumental pronoun *soboj* and hence cannot be the origin of the

Russian sequence *so mnoj*, which is non-reflexive. The English construction, however, makes use of the non-reflexive pronoun. The hypothesis that constructions are (by tendency) always produced as a whole is therefore not falsified by this example. Rather, the English construction is produced with all its components (bring + with + PRON), with the exception that one part (with + PRON) has been translated into Russian.

A construction grammar approach thus seems to be able to account for a simultaneous occurrence of loan translation and code-mixing. As there are arguably a lot more cases like the one discussed (Backus and Dorleijn 2010: 91), an integration of the imitating strategy of loan translation into code-mixing research would certainly yield explanations to code-mixing events that have not yet been accounted for.

To sum up, in order to use the communicative means of two languages at the same time, speakers can either combine both languages or imitate one of the languages or both at a time. What is important in all cases discussed is that constructions are never corrupted, nor are only individual parts of a construction produced. Rather, constructions are used as a whole with their semantic structure, their intermediate structure and a corresponding phonological form.

8. Conclusion

In this paper I outlined a constructional approach to code-mixing with an outlook to bilingual speech in general. The major advantage of an approach utilizing the means of construction grammar is that it comes with some important built-in solutions that foster a compelling explanation of bilingual phenomena. First of all, construction grammar covers all linguistic levels which have been subject to a great diversity of accounts so far. It offers language specific but psychologically plausible and hence generalizable solutions to linguistic structure. The consistent linkage of form and meaning opens the door to explaining not only *where* code-mixing occurs, but also *when* it occurs.

Beyond these advantages, a usage-based approach which takes constructions to be the core elements of language can cope with a lot of phenomena that are still subject to debate in the ongoing research. Most importantly maybe, it does away with the need to assume the existence of a matrix language. Instead, language specific clausal constructions offer a natural frame for the insertion of elements from other languages. Language itself does not need to rely on standard notions of language, but can be

determined on the basis of the speech community's language use. This way, bilingual constructions and the functioning of code-mixing as a kind of third grammar can be accounted for.

While the structural implications of a constructionist approach to code-mixing have been, at best, adumbrated, I have demonstrated that an understanding of constructions as complex signs is able to explain not only code-mixing, but also adjacent phenomena like loan translations. Moreover, I have shown that loan-translation can co-occur with code-mixing, a fact which has not been paid enough attention to.

Another promising feature of construction grammar that still has to be developed is that, beyond the structural constraints, constructions potentially offer a direct link to pragmatically and socially driven accounts of code-mixing, which are to date only loosely connected to models focusing on structure.

Notes

1. An anonymous reviewer suggested calling the approach usage-based. I completely agree that the version of construction grammar I am promoting here is basically the grammatical component of Usage Based Linguistics. In this article, however, the focus is on constructions, so that I decided to stick to this term.
2. I use the term code-mixing for all instances where overt (phonological) items from two languages appear in one utterance.
3. One of the anonymous reviewers commented that the article does not make clear the advantages of adopting construction grammar to code-mixing. While I must admit, that the reasoning and the empirical part are still cursory, I hope to have made clear at least the potential that construction grammar has in order to cope with a lot of questions within bilingualism research.
4. The corpus is emerging and covers material from the Serbian minority in Hungary. Several subparts are still being processed on different levels, so I cannot offer a full-fledged analysis of the data so far.

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