Constructions Do Not Cross Languages
On cross-linguistic generalisations of constructions

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Abstract

In research on bilingualism it is often assumed that linguistic structures can be shared across languages. The emphasis on generalisation and categorisation in construction grammar also seems to imply that speakers can develop cross-linguistic representations. This contribution argues that generalisations can occur only on the semantic level. Data from typologically distinct languages shows that generalisations over form are not likely to play a role in language processing. It is further argued that neither syntactical nor grammatical form is needed in order to explain syntactic transfer.

Keywords: bilingualism, transfer, code-switching, imitation, construction grammar, Slavic, Finno-Ugric

1. Introduction[1]

Research on bilinguals in different linguistic subdisciplines has for a long time tried to find an answer to the question whether linguistic knowledge is separate for distinct languages or whether all linguistic knowledge is stored in one place. This is not only a neuroanatomical issue, which has been subject to much research (Paradis 1997; Abutalebi et al. 2001; Hartsuiker et al. 2004; de Bot 2004; French and Jacquet 2004; van Heuven and Dijkstra 2010) and has inspired many models on the organisation of the brain (Heredia and Roberto 1997; Dijkstra and van Heuven 1998; Hartsuiker et al. 2004; Ben Shalom and Poeppel 2008). Whether each language builds its own isolated network, or whether certain information is stored only once for all languages is also a question that bears wide-ranging implications for the analysis of bilingual speech, for example in contact linguistics and the study of

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phenomena such as code-switching or transfer. A related issue is also being discussed in construction grammar. This concerns the degree of abstractness in the generalisations that speakers use for distinct linguistic patterns. While some researchers assume quite abstract constructions (Fillmore 2013; Fried 2015), others stress that the basic linguistic units are less abstract (Langacker 2005: 107–108). This also concerns possible generalisations over form. While some – explicitly or implicitly – assume that generalisations of form across a set of constructions can lead to linguistic units in the form of grammatical categories or grammatical functions (Fried 2015: 22), others reject this idea (Croft 2001: 170) or claim that the basis for these generalisations is in fact semantic categorization (Langacker 2005). It is also important to investigate whether such generalisations are only theoretically possible and plausible, or whether indeed speakers develop and use them in their speech. Research in the field of construction grammar has shown that, most likely, highly abstract generalisations and more substantive constructions exist in parallel. The creative usage of constructional knowledge in examples such as (1) demands the existence of a fairly abstract construction and suggests that it is indeed directly used in order to produce new utterances.

(1) He sneezed the napkin off the table. (Goldberg 1995: 9)

At the same time, statistical and experimental evidence indicates that constructions are also stored on a less abstract level with a lot of item-specific knowledge (Goldberg 2013: 28) and that the linguistic routines and pre-fabs (Langacker 1991: 15; Bybee 2006: 716) on this level are the basis of much of the attested linguistic usage. This, of course, also holds for bi- and multilinguals. Much of the linguistic knowledge bilinguals utilise is presumably language-specific. But since intra-linguistic generalisations and abstract constructions have been shown to be part of a speaker's linguistic knowledge, it seems logical to assume that bilinguals also develop cross-linguistic generalisations. The aim of this paper is to investigate to what degree

it is plausible to assume that bilinguals develop cross-linguistic representations and use them in their speech. Since one of the main interests in contact linguistics is to account for the form of bilingual utterances, which are often 'mixed', I will focus on possible generalisations over form.

In the following sections, I will give a short overview over the issue of generalisation in construction grammar. I then argue that language as explicit marker is not part of constructional knowledge. This implies that bilingual data must be explained by the structure of constructions itself. I then go on to analyse code-switching between Slavic, Finno-Ugric, Turkic and English for evidence of possible cross-linguistic generalisations in terms of syntactical roles, grammatical form or phonological form. In the last section I discuss a new approach to (syntactical) transfer showing that transfer is not evidence against the conclusion that cross-linguistic generalisations likely do not include form.

2. Generalisation

The ability to generalise over a number of perceived forms is recognised as an important cognitive strategy in construction grammar. Generalisation and categorisation of recurrent patterns are the driving forces behind the development of constructions. Constructions, in turn, capture conventional linguistic knowledge which is the result of these cognitive processes (Fried 2015: 7–8). It is, therefore, assumed that generalisations are part of the speakers knowledge. The identification of constructions, however, is a scientific process which can rely only on the analysis of linguistic usage. Whether the motivation of a concrete utterance is a generalised construction or a more substantive one is often a matter of interpretation. This relation between usage and representation is putative insofar as we cannot be sure that (i) "the internal representation in the mind of each speaker contains every generalization inherent in the data" (Kay 1995: 175) and (ii) a generalisation is not only an

abstract representation but is indeed used in order to produce utterances. The latter point is important insofar as speakers need access to detailed information about the pragmatic and semantic peculiarities of a construction as well as its formal specifications in order to produce it (Boas 2008: 132).

Cross-linguistic generalisations are in principle deemed possible in construction grammar. Goldberg states that “crosslinguistic generalizations that do exist are explained by domain-general cognitive processes or by the functions of the constructions involved” (Goldberg 2013: 15–16). However, since generalisations work only on constructions of the same type (Fried 2015: 7–8), it is important to specify, how this “sameness” can be evaluated across languages. If bilinguals develop cross-linguistic constructions, how do they know that the language-specific constructions they are generalising are equivalent? As the citation from Goldberg illustrates, construction grammar may favour an explanation that draws upon functional equivalence. However, in bilingualism research it is common sense to state that it is grammatical structures that can exist across languages or can at least be the same in different languages (Cenoz 2001; Chaudary 1998: 216; Döpke 2000; Marian 2007: 371; Ringbom 2007; Nicoladis 2012: 321). That means that the basis for a possible generalisation is assumed to be some kind of form. A typical case where structural similarity is taken for granted is cross-linguistic accommodation: "[w]hen a bilinguals speaker’s two languages share a common syntactic structure, the speaker will tend to use that common structure rather than any alternative ones which fulfil the same function but do not exist in both languages" (Gardner-Chloros 2008: 56). Another often repeated conviction is that syntactic structures can cross languages (Ammon and Slobin 1979; Kellermann 1995: 126; Hatzidaki et al. 2011). This becomes apparent mainly in studies on interference or transference. Crucially transference is not understood metaphorically, rather it is placed next to substantive

transferences that other scholars call code-switching or nonce borrowing (Clyne 2003; Johanson 1999b). And, indeed, analyses of generalisations in construction grammar also usually take some notion of form as their starting point. Thus while for example Fried's (Fried 2007) account of the Czech reflexive constructions comes to the conclusion that the core of the proposed generalisation is semantic and pragmatic information (Fried 2007: 750), the motivation for the analysis itself is the occurrence of the same form /se/ in all constructions. Since both the semantic-pragmatic and the formal approach to generalisation have their justification it is important to determine which kind of information it is that the speakers themselves use. In the remainder of the paper I want to survey three possible notions of form in the context of abstract constructions: syntactic functions, grammatical categories, and phonological form. I will then assess the probability that bilingual speakers of typologically distinct languages make use of them.

2.1 Language

Crucial for the discussion of constructions across languages is the notion of language itself. To date it is not entirely clear how a speaker is able to activate, select and produce only those items that belong to the language he intends to speak, whilst avoiding elements that are part of the wrong linguistic system (Abutalebi and Green 2007: 242). Many models assume some kind of label or tag which marks every linguistic item for the language it belongs to (Green 1998; Dijkstra and van Heuven 1998; Myers-Scotton 2002). While this might be a straightforward solution, it would rule out every kind of unintentional code-mixing (Li 1998: 92). The assumption of a language-tag, moreover, presupposes that there is indeed such a thing like a language and that two languages can be neatly differentiated even if they are two closely related varieties (dialects). Paradis continues this argument by claiming that "[t]here is no reason to believe that two or more languages should be differently represented in the brain

than two or more sociolinguistic registers" (Paradis 1997: 332). Moreover, there is a lot of empirical evidence that language processing is language-nonselective both during reception and production (Klein et al. 1995; de Bot 2004; French and Jacquet 2004; Costa 2005; Dijkstra 2007; de Groot 2011). Language nonselectiveness in speech production means that all units in the lexicon whose semantic properties are in accordance with the concept the speaker wishes to express are activated regardless of the linguistic system they belong to. Regarding the discussion of possible cross-linguistic generalisations over constructions this means that the speaker is not able to completely inhibit the activation of constructions from another linguistic system with a similar semantic profile. Importantly this should also hold for the components of a cross-linguistic construction.

Nonselectiveness does not mean that a ‘language’ as such does not exist. However, it is plausible to understand language assignment not as a feature attached to single linguistic units, but as a pragmatical construct and a network of co-used elements. Languages as closed and demonstrably distinctly accessible entities (Paradis 2007: 3) can evolve though co-usage or co-activation (Langacker 1987: 59; Pulvermüller 1999). At the same time ‘language’ is a pragmatical unit. Speakers learn to differentiate between various social conditions for the use of a distinct language just as they do for registers of one language. This knowledge plays a role in selecting pragmatically adequate linguistic units and allowing for faster activation and activation spreading within one linguistic network (Roelofs 1997; Dijkstra and van Heuven 1998). However, these mechanisms may not affect cross-linguistic constructions because these usually evolve in contexts where the language choice is not pragmatically restricted and co-usage of units from different linguistic systems is frequent. It is thus preferable to account for bilingual data without the application of explicit language markers. All that is needed in order to explain attested utterances should be encoded within constructions.

2.2 What counts as evidence?

Evidence for cross-linguistic generalisation over form would be some degree of productivity of a cross-linguistic construction. However, this kind of productivity differs from the kind that has been studied in monolingual contexts. Usually, productivity is measured as the ability of a construction's slot to attract new elements (Barðdal 2008; Zeldes 2009). Argument structure constructions are thus productive insofar as they can unify not only with verbs whose valency (Fillmore 2013) or set of participant roles (Goldberg 1995) matches the semantic structure of the construction, but also with other verbs. This can be considered as evidence for the existence of this abstract construction. It also shows that speakers indeed use it in order to produce utterances. However, this kind of productivity can only account for monolingual constructions .

(2) Yarar, min khazär lektsiia *chita-iu*
Ok, I now lecture I.read
'Ok, now I'm giving you a lecture.'
Tatar-Russian (Wertheim forthc.: 174)

Example (2) is interesting insofar as it shows that a constructionist approach can contribute to explaining bilingual data. The utterance and its grammatical configuration obviously does not depend on the Russian transitive verb *čitat'* 'to read'. Most accounts of code-switching would have to identify some kind of matrix language which should, however, depend on the verb and its subcategorisation frame. The fact that this is not the case is a point for a constructionist approach. Since the very idea of argument structure constructions like the transitive construction in example (2) is that the verb slot is not restricted to specific verbs (Goldberg 1995), the insertion of verbs from other languages is no surprise from the point of view of construction grammar. But it does not tell us anything about the existence of cross linguistic-generalisations.

Evidence for cross-linguistic generalisations that include form thus has to relate to the elements that are formally specified by a construction. A cross-linguistic generalisation should permit that the specified elements come from different languages. Of course, evidence of this kind can be found only for those constructions that specify at least two elements. But what exactly are those 'elements'? As noted above, it is possible that generalisations exist on the syntactical level, the morphological level or the phonological level. All three have been used in constructionist works in order to refer to the formal pole of constructions. 'Elements' thus can be either syntactic functions, morphological categories or phonological forms.

2.3 Syntactic Functions

In her descriptions of the formal side of a construction Goldberg usually refers to terms like subject and object (Goldberg 1995: 142) – as do other authors (Bybee 2013; Fried 2015). However, she stresses that these notion are not cross-linguistic entities. Croft (2001) also assumes that constructions have components which have distinct syntactic roles. Like Goldberg he does not assume these roles to be universal (Croft 2001: 59). He makes explicitly clear that he has in mind the formal counterpart of a semantic role or, more precisely, of a cluster of semantic participant roles (Croft 2001: 143). That is, he interprets the notion of object not as a grammatical unit that is determined by syntactic relations to other parts of the construction but as part of the whole construction with a specific role within the construction. Interestingly Croft seems to abandon his strict construction-specific approach when discussing objects. He presents instead a definition of the terms direct object, indirect object, primary object and secondary object that rests on the cross-constructional comparison of the semantic participant roles they encode (Croft 2001: 143 ff.). Langacker criticises both approaches and stresses that there should be no intermediate grammatical structure, since "grammar reduces to something more fundamental – particular configurations of semantic

structures, phonological structures, and symbolic links between them" (Langacker 2005: 105). His objection is aimed mainly at the fact that Croft and Goldberg take syntactic roles to be part of the form of a construction. Langacker doubts the possibility of categorisation on formal grounds. Instead, he suggests that all those terms can be defined through semantic means and proceeds to develop a reduction to a purely conceptual account of the notions of subject and object. His conclusion is that a "subject is a noun phrase whose profile corresponds to the trajector of a profiled relationship, and an object, one whose profile corresponds to a relational landmark" (Langacker 2005: 111).

If notions like subject and object are assumed to be proper elements of the internal structure of a construction, then the notation for the English ditransitive construction found in Goldberg's work and that of others (e.g. (Barðdal 1999; Gurevich 2010; Stefanowitsch and Gries 2003) is to be taken seriously. This is shown in figure 1 for the ditransitive construction, where the semantic pole of the construction is mapped onto syntactic roles on the form pole.

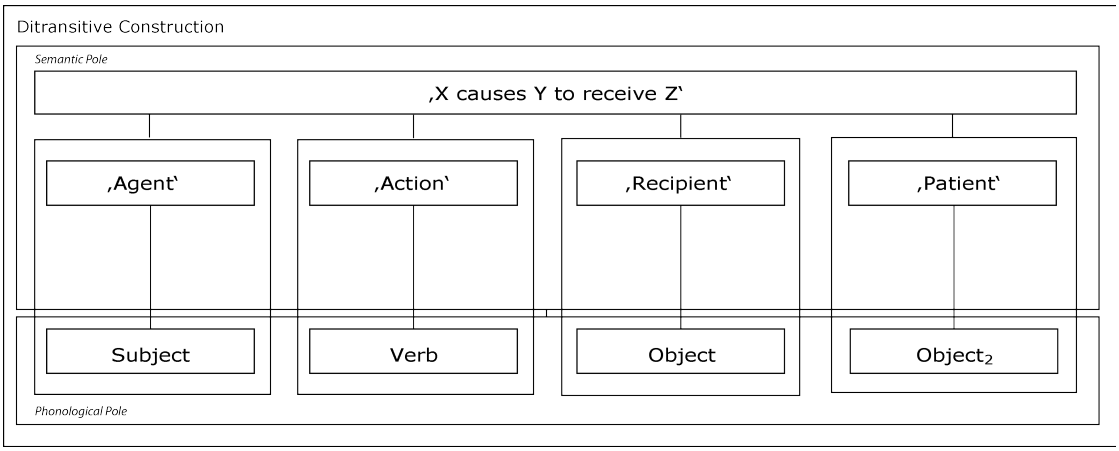

figure 1: ditransitive construction with syntactic roles as form

This would be a satisfactory solution if direct and indirect objects were always marked in the same manner throughout a language. However, this is not the case. In many languages all objects that are coded with a case other than accusative are subsumed under the name indirect object (Müller 2010: 28). But even the notion of the direct object is not so obviously

associated with accusative marking as it may seem. In many Slavic languages, direct objects are usually marked with accusative case (3). However, under negation the accusative case is facultatively replaced by genitive case (4). The direct object is also marked with a (partitive) genitive when it refers to something conceptualised as being part of a bigger unit (5).

(3) Ja dam tebe sahar. (Russian)
I give you.DAT sugar.ACC
'I give you (the) sugar.'

(4) Ja ne dam tebe sahar-a.
I not give you.DAT sugar-GEN
'I don't give you sugar.'

(5) Ja dam tebe sahar-u.
I give you.DAT sugar-PART
'I give you (part of the available) sugar.'

Since all three examples (3), (4) and (5) are nevertheless ditransitive constructions, the schema from figure 1 correctly accounts for their structure. The direct objects do not differ in the way they denote global semantic roles. Furthermore, the variation in the coding of the direct object changes the constructional meaning only with regards to partitivity or negativity, and not with regards to the meaning of 'transfer'. However, it is clear that there is important information missing in figure 1: the different cases are not made explicit by the construction. There is clearly a prototype (the accusative marking), but for speech production the speaker nevertheless has to select one definite case. Thus there might be a generalised representation of the construction with a prototype, but for speech production less abstract constructions are likely to be used. A similar problem occurs when accounting for bilingual utterances. In the course of the speech production process (more precisely during grammatical encoding) the speaker must be able to retrieve information about the case marking morphemes that he needs to select in order to produce the target construction. But if a speaker has developed a cross-linguistic construction, there should be no language-specific information. Hence a speaker

should be able to randomly choose between the realization of the objects in either language. This would produce utterances like in (6) where the direct object *ruhát* is Hungarian and the indirect object *sinu* is Serbian.

(6) ?Mari *sin* *-u* ruhà -t *daruj* *-e.* (Serbian-Hungarian)
Mari son_{sr}-DAT_{sr} $clothes_{hu}$-ACC_{hu} $present_{sr}$-$3SG_{sr}$
$SUBJ_{hu}$ OBJ_{sr} OBJ_{2hu} V_{sr}
'Mari presents her son clothes.'

Obviously, the speaker can produce other forms of mixing as well. But a cross-linguistic construction containing only information about syntactic roles should facilitate such patterns. However, one of the distinctive characteristics of code-switching between typologically distinct languages is that grammatical markers are mostly produced in one language while the lexical constructions they combine with can come from any language (Johanson 1999a; Muysken 2005: 3; Kecskes 2006: 258; Myers-Scotton 2007). This has been shown in many studies (Altarriba and Heredia 2008; Bolonyai 2005; Cantone 2005; Chirsheva 2009; Deuchar 2006; Halmari 1997; Hlavac 2003; Kyuchukov 2006; Savić 1995; Zabrodskaja 2009) and is at the very heart of all models that use some kind of matrix language. Typically an element from language B is inserted into a 'frame' (construction) of language A. In order to determine whether syntactic roles tend to be produced as a whole in language B or whether only a lexical construction is inserted, I analysed 77 examples of transitive constructions given in the literature from the language pairs Ukrainian-English (Budzhak-Jones 1998a, 1998b), Croatian-English (Hlavac 2003, 2011), Serbian-English (Brezjanovic-Shogren 2011; Dimitrijević 2004; Dimitrijević-Savić 2011; Savić 1995; Vlaisavljević 2007), Slovenian-English (Šabec 2011), Finnish-English (Halmari 1997), Hungarian-English (Bolonyai 2005; Kovács 2001), Erzya-Russian (Janurik 2010), Kazakh-Russian (Muhamedowa 2006), Estonian-Russian (Verschik 2004; Zabrodskaja 2006, 2007b, 2007a, 2009), Tatar-Russian (Wertheim forthcoming) and Russian-English (Babyonyshev 2004; Bratman 1999; Chirsheva

2009; Schmitt 2000; Sichyova 2005), showing code-switching between isolating, inflecting and agglutinating languages.

(6) Akkor mindig a *left road*-ot kell *take*-el -ni
Then always the left road-ACC.SG must take-VMZ-INF
'Then you always have to take the left road.'
Hungarian-English (Bolonyai 2005: 325)

(7) Vin tam prodavav *sod* -u, vsjaki taki rody *sod* -y.
He there was.selling soda-ACC.F.SG various such kinds soda-GEN.F.SG
'He was selling soda there, different kinds of soda.'
Ukrainian-English (Budzhak-Jones 1998a: 174)

(8) za njega je planirano da uradi *workshop*-ove
for him is planned that does workshop-ACC.M.PL
'It is planned that he does workshops'
Serbian-English (Dimitrijević 2004: 43)

(9) Me on *driver's training*-i -ä enemmän nyt o- otettu
we have driver's training-SF-PART more now t- taken
'We have now taken more driver's training.'
Finnish-English (Halmari 1997: 134)

(10) a voobšče men *škol*-dï bitirdi-m.
but actually I school-ACC finished
'I actually finished shool.'
Kazakh-Russian (Muhamedowa 2006: 69)

(11) Yesli *mermaid* spasyot *human*-a
if Mermaid saves human-ACC.M.SG
'If Mermaid saves a human.'
Russian-English (Schmitt 2000: 17)

In all these example above, no complete object has been inserted. Instead, a lexical construction from language B has been inserted into a case-marking construction from language A. This pattern is not restricted to the transitive construction, but is characteristic of other constructions as well, as we will see in section 2.5 .

In some cases Slavic languages do not mark the object of a transitive construction. Words ending with a consonant that denote an inanimate object in most Slavic languages remain unmarked in the accusative case. An integration of a word from language B is thus

uncomplicated, if it ends with a consonant. This may facilitate insertion of these words in general. For the issue of cross-linguistic constructions, however, these examples do not provide evidence as to whether the inserted element is an instantiation of a cross-linguistic generalisation or not.

(12) Ona je…voli da je independent, a ne voli *control* ...
She is likes that is independent but not like control
'She is .. likes to be independent, but doesn't like control ...'
Serbian-English (Vlaisavljević 2007: 51)

In other cases an integration is not possible because a word ends with a sound that does not occur in any declension class. In many Slavic languages this concerns words ending in /i/, /u/ or sometimes /e/. The integration of these words is also problematic in monolingual language use, so that the missing integration in the bilingual context is not indicative of a possible influence from cross-linguistic generalisations. Compare the bilingual utterances in (13) and the monolingual utterance (14) with the unintegrated word *Burundi*.

(13) Ja studiram *pharmacy*
I study pharmacy
'I study pharmacy.'
Serbian-English (Savić 1995: 483)

(14) po nekoliko puta odlazio u susjedni *Burundi.*
for several times went into neighbouring Burundi
'He went several times to neighbouring Burundi'
Croatian (Croatian National Corpus)

Clearly unintegrated examples are shown in (15) and (16). They contain an English plural form without markers for case or plurality from Croatian or Russian. Cases like these, however, are less clear than they might seem. In the literature on bilingualism it is often assumed that plural markers have a special status. Myers-Scotton treats the plural morpheme as an early system morpheme (Myers-Scotton and Jake 1995: 39; Myers-Scotton 2002: 82). Backus argues that plural forms might be entrenched as inseparable entities (Backus 2003:

94). One could also argue that the English plural form ends with a consonant, so it is interpreted as belonging to the masculine declension class and thus does not need to be marked:

(15) Puno pročitam *magazine-s* i sve to, ali nemam dosta vremena.
Much read magazine-PL and all this but not.have enough time
'I read many magazines and the like, but I don't have enough time'
Croatian-English (Hlavac 2003: 157)

(16) Teper' nam nuzhno naiti *replacement-s*
Now to.us necessary find replacement-PL
'Now we need to find replacements'
Russian-English (Bratman 1999: 87)

Other cases where the grammatical markers do not correspond to the form expected from the transitive construction of language A (the 'matrix') are problematic because the grammatical marker does not correspond to the expected form from language B either. In the Estonian-Russian example (17) the object is *müüja* 'salesperson'. A speaker of Russian could interpret it as feminine and thus produce the corresponding accusative form *müüj-u*. In an Estonian transitive construction, one would expect partitive case marking on the object. However, an unmarked form is produced which does not point to the existence of a cross-linguistic construction.

(17) Üks hetk, znajete čto, sejčas ja pozovu *müüja*.
one moment know what now I call salesperson
'One moment, you know what, I will fetch the salesperson at once.'
Russian-Estonian (Verschik 2004: 444)

Hesitation as in (18) is also a reason not to consider these cases of unintergrated switches as evidence for cross-linguistic constructions.

(18) Ja noi ostaa [0.11] the- [0.20] e:r [0.21] e:r *thermometer*
and can buy the- thermometer
'And one can buy a thermometer'
Finnish-English (Halmari 1997: 146)

The integrated examples together with those unintegrated examples, where the lack of integration can have reasons other than the existence of a cross-linguistic construction, make up 74 out of 77 examples. And even the remaining 4 are not all clear cases.

(19) Prinesi ét-u *tolmulapp*
Bring- this-ACC.F duster
'Bring this duster.'
Estonian-Russian (Zabrodskaja 2009: 369)

(20) Ti gde kupila takie *shoe-s*?
You where bought such-PL shoe-PL
'Where did you buy this kind of shoes?'
Russian-English (Bratman 1999: 92)

Both utterances (19) and (20) are interesting insofar as they include a demonstrative pronoun with grammatical information. However, the following noun is not marked in relation to this information. In (19) the pronoun points to a feminine noun in accusative case. The inserted noun does not formally correspond to this unless it is interpreted as feminine (maybe parallel to the Russian *trjapka* 'cloth'). In the same vein, the demonstrative *takie* 'such' in (20) refers to a noun in the plural. The English *shoes* is plural, but as noted above, this form would be more likely treated as masculine singular. In Russian monolingual speech the word is usually integrated with a double-plural: *šu-z-y* (shoe-PL-PL). The presence of the demonstratives also does not indicate that whole syntactic roles are produced in one language.

n = 77	Integration	Null-integration	Non-integration
Lcase = L1	25	35	x
unclear	x	7	6
Lcase = L2	x	x	4

table 1: realisation of case markers after other-language items in transitive constructions

Thus, as this data on the transitive construction shows, bilinguals most often insert lexical constructions into the frame which a language-specific argument structure construction offers. The existence of unmarked forms within a paradigm might facilitate switching. But there is clearly no evidence that objects as such are preferentially switched. Even if a generalisation in terms of syntactic roles across languages might exist, it most likely is not used for production.

2.4 Grammatical Categories

Another area where cross-linguistic generalisations over form are possible is connected to grammatical categories. As the examples with the transitive construction show, speakers tend to rely on specific information about case. Thus it may be possible that bilinguals develop a representation that includes information about a specific grammatical category as a formal pole of a construction. Sometimes notations that include information about grammatical categories are also used in construction grammar. Obviously this notation is used in most cases as an abbreviation for specific paradigms. But since this kind of notation figures in many works (Fillmore 1988; Barðdal 1999; Fischer and Stefanowitsch 2008; Fried 2015), one might come to the conclusion that grammatical categories are real entities with the ability to exist across languages. Thus a cross-linguistic notation of the ditransitive construction would look like figure 2. The formal pole does not include the information ‘object’ but rather information about word class of a specific (prototypical) case, thus accounting for the problems with varying case marking as described above. At the same time it lacks the useful generalisation that all sentences in (3) to (5) are instantiations of the ditransitive construction.

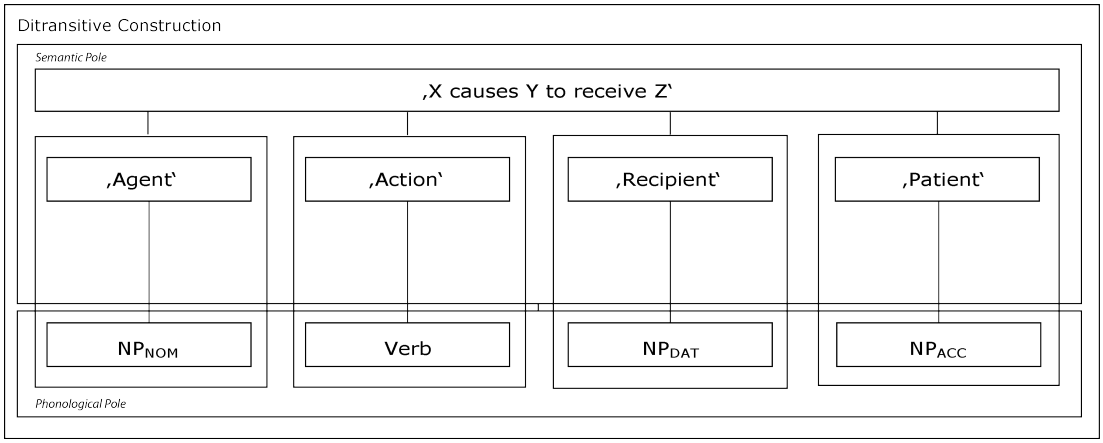

figure 2:ditransitive construction with grammatical categories

It is, however, doubtful that grammatical categories can account for generalisations across languages. Haspelmath categorically denies this: "cross-linguistic categories do not exist. Categories represent language-particular generalizations and cannot be carried over from language to another one" (Haspelmath 2012: 109). Grammatical categories in two languages are not the same just because they received the same Latin denomination. Croft argues at length that categories are not only language-specific, but also construction-specific (Croft 2001: 13–14). And, indeed, even in the small sample of languages analysed here we witness a high degree of variation. The transitive construction discussed above is normally associated with accusative marking on the object. In Estonian, however, the object is prototypically marked with the partitive case (Ehala 2012), but the genitive and nominative marking is also possible depending on various functions like aspectual meaning and boundedness (Ehala 2012: 164). A similar variation is found in Russian, where the object can be encoded with the accusative, genitive or partitive case. There is no one-to-one correspondence between the case choices in the two languages. Thus it would be difficult to find a generalisation that accounts for this variation. Crucially even if there exists a generalisation that includes grammatical categories it would have to specify the precise categories for each language separately. This would basically make the formal pole language-specific.

2.5 Phonological form

Grammatical categories are, of course, only notational simplifications for specific morphological paradigms. Paradigms, however, are lists of phonologically marked elements that occur in the same position or the same function within a construction. They are, as Croft (Croft 2001) points out, construction-specific and cannot be generalised without referring to a construction or at least a function which they code across several constructions. Grammatical categories can thus be replaced by form-meaning pairings. As shown above, it is empirically evident that speakers of typologically distinct languages do not employ generalisations that include on their formal pole syntactic functions or grammatical categories. But it is possible that bilinguals develop semantic generalisations and that the components of a construction with a generalised meaning can be mixed so that phonological elements from any language can be used as the form pole, as long as they belong to an appropriate paradigm. Thus a cross-linguistic ditransitive construction could consist of a generalised and thus language-independent semantic structure and a pattern of phonological paradigms which can come from any language:

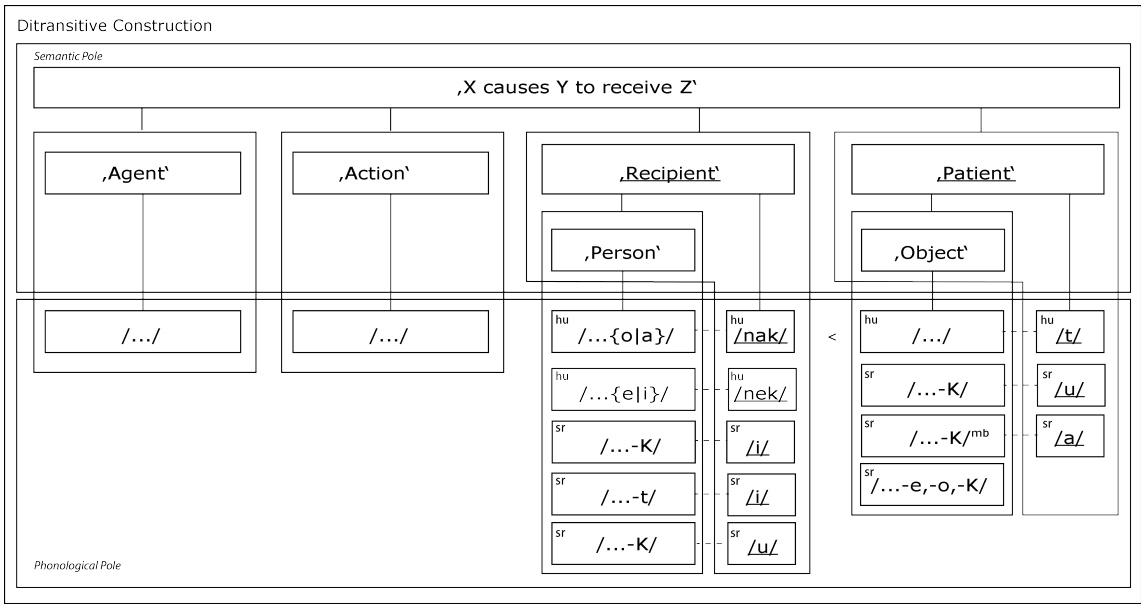

figure 3: ditransitive construction with mixed phonological form

If speakers indeed develop and use cross-linguistic constructions like the one depicted in figure 3[2], this would predict the mixed production of all elements that a construction specifies. In (21) the accusative marker is Serbian and the dative marker is Hungarian. In contrast to assuming syntactic roles this version does not facilitate the switch of whole components, but rather the random language affiliation of the case markers.

(21) ?Mari *sin* -nak ruh-*u* *daruj* -*e.* *(*Serbian-Hungarian)
Mari son_{sr}-DAT_{hu} $clothes_{hu}$-ACC_{sr} $present_{sr}$-$3SG_{sr}$
NOM_{hu} DAT_{hu} ACC_{sr} V_{sr}
'Mari presents her son clothes.'

However, the empirical analysis of code-switching between typologically distinct languages so far has come to the conclusion that mixing is usually not symmetrical as assumed by figure 3. On the contrary many studies have shown that it is mostly one language that is responsible for the grammatical frame of a mixed sentence. Myers-Scotton has promoted the term Matrix Language (ML) for this phenomenon and says that "it is the ML which always 'wins out' in frame control for mixed constituents, supplying system morphemes" (Myers-Scotton 1998: 235). Elements from the embedded language are inserted in the frame provided by the matrix language. The term „base language" has been used in this understanding by Nortier (Nortier 1990) inter alia. Johanson uses the coinage "basic code" (Johanson 1998: 327) for a similar purpose. Even though the strict determinative nature of some matrix-language based approaches seems to not be applicable to all contact situations, almost all linguists agree, that code-switching is in many cases asymmetric insofar as only one language determines the underlying syntactic structure (Muysken 2005: 68; Backus 2010: 229; Chan 2010: 187). The

[2] The phonological representation includes an allusion to vowel harmony for Hungarian, where the occurrence of /o/, /a/ and other vowels demands the form /nak/ and the vowels /e/ and /i/ the form /nek/ in the recipient construction. The Serbian declension classes are indicated in the recipient construction as follows: feminine (phoneme /i/ follows a consonant), feminine on soft stems (phoneme /i/ follows /t/) and masculine/neutrum (phoneme /u/ follows a consonant). Likewise, the Serbian patient construction displays as either /u/ (after consonants in the feminine class), /a/ (animate objects, after consonants) or without overt marking (forms ending on /e/, /o/ or consonant).

prediction that follows from a cross-linguistic generalisation as in figure 3 thus does not seem to coincide with the evidence in contact linguistics. In the following I want to test the prediction on samples from the same literature as in section 2.3 . The prediction is that if a construction specifies at least two elements, then these elements are free to originate from any of the involved languages. This does not mean that the specified elements obligatorily have to be mixed, but there should be a good amount of positive evidence. Since transitive constructions contain only one formally specified element and ditransitive constructions are too rare, I will look at prepositional constructions. The prediction is that the preposition and the case of the noun are realised with phonemes from different languages in a significant number of cases.

I found 50 instances of prepositional constructions in the literature. In 32 cases, the language of the preposition and the language of the case marker are the same.

(22) To ty jdeš do *stor*-u des' iskupytysja.
Then you go to store-GEN.M.SG somewhere shop
'Then you go somewhere to the store to shop.'
Ukrainian-English (Budzhak-Jones 1998a: 165)

(23) Ali radi se o *Ajriš*-ima koju su bili tamničeni zbog ...
But concerns REFL about Irish-PREP.M.PL which AUX were imprisoned because.of ...
'But it is about … the Irish who were imprisoned because of ...'
Croatian-English (Hlavac 2003: 137)

(24) Mustafa ata-m on bes žasïnda protiv *basmačestv*-a ketken
Mustafa grandfather-my ten five year.his against Basmachi.movement fighted
"My grandfather Mustafa at the age of fifteen fought against the Basmachi movement."
Kazakh-Russian (Muhamedowa 2006: 42)

(25) No eto bez *käibemaks*-a.
But this without VAT -GEN.M.SG
'But this is without VAT.'
Estonian-Russian (Zabrodskaja 2009: 369)

(26) Nu v *offseason*-e my kogo nibud' potberyom
Well in offseason-LOC.M.SG we some-body pick.up
'Well, we'll pick up somebody in the offseason.'

Russian-English (Bratman 1999: 87)

The examples in (22), (24) and (25) all combine a preposition with a noun in the genitive as demanded by the construction. In (23) and (26) the preposition governs the prepositive which is produced in the same language as the preposition. In (24) the Russian prepositional construction is even embedded into a Kazakh matrix. As with the transitive, there are some cases of null integration which is due to the unmarkedness of the inanimate accusative case in Slavic.

(27) ja sam uvik htila ići u *nursing* ili nešto tako.
I AUX always wanted go into nursing or something such
'I always wanted to go into nursing or something like that.'
Croatian-English (Hlavac 2011: 3803)

(28) Teper' menja k babuške na Čudskoje ne otpustjat na *jõulud.*
Now me to grandmother on Peipus not let on Christmas
'I shall not be allowed to the Lake Peipus to visit my grandma on Christmas.'
Estonian-Russian (Zabrodskaja 2006: 154)

The English word *nursing* as well as the Estonian word *jõulud* 'Christmas' end with a consonant so that the most likely interpretation is that they have been categorized as masculine nouns. Most of the examples where the marking on the noun does not correspond to the preposition include words that do not fit any declension paradigm as has been the case with the objects of transitive constructions. These are mostly words ending in /i/ or – in Russian – an open /e/, which tend to be indeclinable in the monolinguals codes as well. Thus, Estonian *sulugane* is comparable to the indeclinable Russian words *pire* 'purée' or *šosse* 'avenue'.

(29) išla sam triputa na *holiday* u svoju zemlju ...
went AUX three.times on holiday in my country
'I went three times on holiday to my country ...'
Serbian-English (Dimitrijević-Savić 2011: 2200)

(30) Posmotri na sugulane!
Look at relative

‘Look at the relative!’
Estonian-Russian (Zabrodskaja 2009: 37)

In less than two fifths of the attested prepositional constructions the language of the preposition is not the same as the language of the case marker. In some instances, however, the case marker does not correspond to any expected case marker from the other language either.

(31) požalujsta, tvorog s *maasika*
please quark with strawberry
‘please give me quark with strawberry’
Russian-Estonian (Verschik 2004: 438)

(32) V škole tože ne ljubil. A v *ülikool* opjat ona.
in school also not liked. And in university again her.
‘I didn’t like it at school either. At university we have it again.’
Russian-Estonian (Zabrodskaja 2007b: 133)

In example (31) the Russian preposition *s* demands the instrumental case. Since Estonian has an instrumental case with a roughly similar functional scope, one would expect at least the Estonian instrumental if the motivation for this were a cross-linguistic construction. The Estonian *maasika*, however, remained unmarked. A similar case is found in (32), where the Russian construction specifies the prepositive case and Estonian could contribute the inessive case, but the noun does not receive any marking at all. These so-called bare forms are a frequent phenomenon in bilingualism research (Myers-Scotton 2002: 66; Poplack 2004: 591; Auer 2007: 18). Since bare forms do not correspond to the constructional specifications of any language, interpreting them as the result of a cross-linguistic generalisation is not straightforward. In the sample there are also other cases where the case marker does not correspond to the specifications of either construction.

(33) .. prvo smo živjeli, [a:] .. u on -e migrant hostel-e ...
first AUX lived in these-ACC.F.PL migrant hostel-ACC.F.PL
‘first we lived ah … on those migrants hostels ...’
Croatian-English (Hlavac 2003: 199)

In connection with the verb *živjeti* 'live' one would expect a stative prepositional construction such as [u __$_{PREP}$]. The utterance in (33), however, shows the form [u __$_{ACC}$] which has a dynamic meaning. Since the difference between goal and location is maintained in English as well, these utterances are most likely errors or evidence for attrition.

Within the sample of 50 prepositional construction there are 12 instances where the noun is marked according to the specifications of a prepositional construction from a language distinct from the language of the preposition. However, all of these examples come from communities with contact to English. Consequently, accordance to the English construction basically means that the nouns are unmarked. They are clearly not integrated. Nor is null-integration a possible interpretation. But it remains unclear whether utterances like these are the outcome of a cross-linguistic generalisation or if they are bare forms.

(34) Ja živim u *Sorority House*.
I live in sorority house
'I live in the Sorority House.'
Serbian-English (Savić 1995: 484)

(35) .. ali dobro uvijek isto znati na *kompjuters* radit
but good always also know on computer-PL work
'but it's always good to know to work on computers'
Croatian-English (Hlavac 2003: 208)

(36) k tvo -emu *father*
to your-DAT.M.SG father
'to your father'
Russian-English (Chirsheva 2009: 72)

The prediction on the basis of figure 3 was that at least some of the prepositional constructions include a switch between preposition and case marker. This seems to be fulfilled since 12 out of 50 is a clear percentage. However, the evidence is of limited validity since it contains only unmarked elements. Crucially there are no mixed prepositional constructions

with overt coding from two languages. Maybe the generalisation here is not about the form of a construction but rather about markedness.

n = 50	Lprep = Lcase	Lprep ≠ Lcase
Lcase ≠ L2	32	6
Lcase = L2	x	12

table 2: realisation of prepositions and case markers in prepositional constructions

It is also possible – and even expected from a usage-based approach – that the existence of cross-linguistic generalisations depends on the speech community and the bilingual speaker in question. Höder (2012) for example developed his claim that there are cross-linguistic generalisations among others on written code-switching between Old Swedish and Latin that has been used in close-knit monastic communities while language use changed significantly when used by a wider audience later in history (Höder 2012: footnote 14). In my sample 7 of the 12 examples that may point to cross-linguistic generalisations come from the Serbian/Croatian communities in Australia which show a high degree of language attrition especially in the second generation (Clyne 2003: 144). In accordance with a usage-based approach thus cross-linguistic constructions may occur only under circumstances of intense and maybe asymmetric language contact. This means that cross-linguistic generalisations are not the default case. Rather, most bilingual speakers rely on language-specific constructions. This is, of course, parallel to the usage-based stance that speakers use meso-level constructions rather than highly abstract generalisations (Langacker 2005; Bybee 2006: 716).

Cross-linguistic generalisations in typologically distinct languages are thus most probably only semantic generalisations, whereas generalisation over form is seldom. A cross-linguistic construction thus may look like in figure 4. Note that this is similar to the figure Weinreich (1963: 9) offered for a bilingual compound sign. The difference is, however, that the

construction-specific (or in this context, language-specific) information is not merged into one meaning or one lemma, but that the generalisation exists independently. A cross-linguistic generalisation that focuses on the semantic level is also more plausible from a productional point of view: generalisations thus evolve where semantic structures are frequently co-activated when a specific concept is to be expressed.

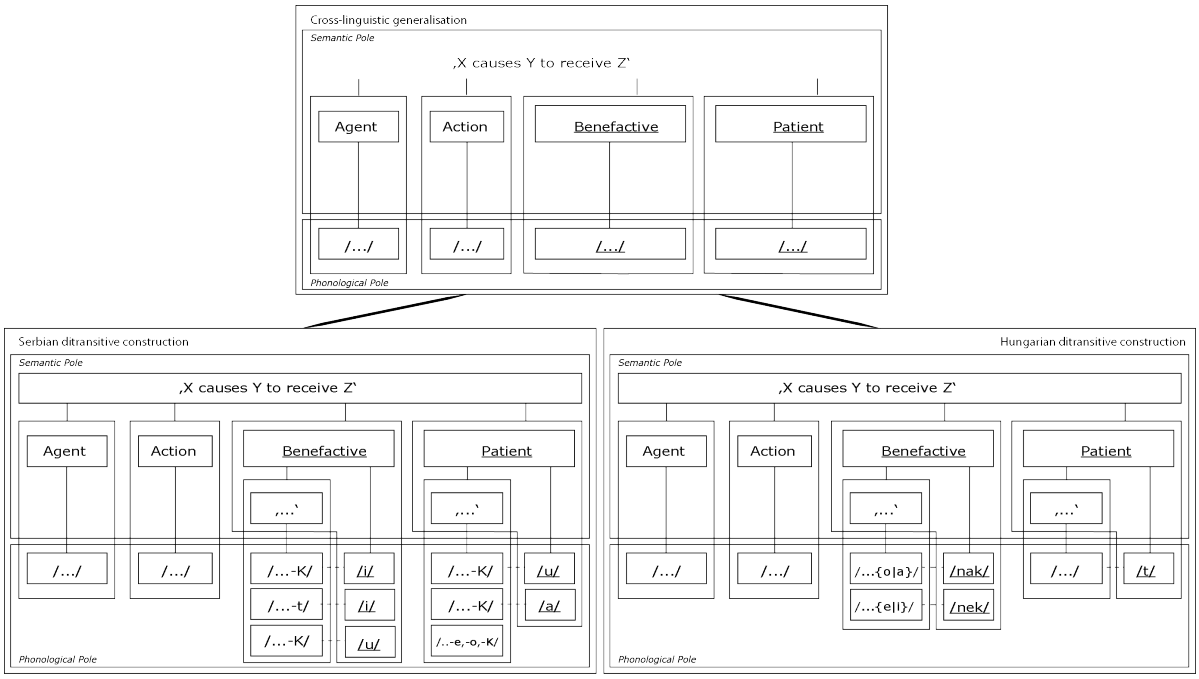

figure 4: language-specific ditransitive constructions and generalisation

In this form a constructionist approach can account for a great deal of code-mixed utterances. Without the intermediate level of grammatical form the phonological units that code the single components of the construction depend directly on the construction itself. This means that a speaker is not likely to change the linguistic affiliation of these forms randomly. Rather, he produces all phonological elements that are specified by the construction. This is exactly what we find in code-switching between typologically distinct languages. In fact, this is nothing other than the Matrix-Language hypothesis. But Myers-Scotton, for example, works with language-tags and assumes that language is selected consciously by the speaker (Myers-

Scotton 1998: 236). In a constructionist approach where phonological forms depend directly on construction without necessary generalisation over form as mediator, producing a construction in a bilingual setting is merely a pragmatical decision for an appropriate linguistic unit followed by the production of all formally specified elements of the complex sign. So while there is no need to make language explicit, avoiding generalisation over form nevertheless guarantees that languages are not confounded within a construction. This is, however, not to say that form-related generalisations do not exist. There are generalisations, but they mostly rely on phonological similarity as in the case of false friends or – possibly – cross-linguistic generalised constructions between closely related languages (Kellermann 1995: 130; Muysken 2005: 16; Höder 2012).

3. Counterevidence Transfer?

If speakers develop cross-linguistic generalisations only within intense contact situations and constructional form is maybe mostly phonological, how is it possible that the process of transfer is such an ever-present phenomenon?

Transfer is usually defined as „use of semantic or syntactic structures from the other language without active switching to that language“ (Marian 2007: 369). Clyne defines a transfer as an instance of transference "where the form, feature or construction has been taken over by the speaker from another language, whatever the motives or explanation for this" (Clyne 2003: 76), whereas for example syntactic transference is described as "the transference of syntactic rules" (Clyne 2003: 77). Referring to syntactic rules is, of course, not an option in a constructionist approach and would contradict the conclusion made regarding cross-linguistic generalisations. Interestingly most researchers assume that the different linguistic levels can be transferred separately. Clyne among others assumes semantic, morphological, syntactic and prosodic transference (Clyne 2003: 76 ff.). Johanson operates with material copies, semantic

copies, combinatorial copies, and frequential copies (Johanson 2002a: 293). This runs counter to the tenet of construction grammar that all linguistic knowledge is stored in conventionalised form-meaning pairings. If the notion of language or code is assumed to mean a separable linguistic system as such and not a mental network in the speaker's mind, then saying that a structure or form is used *ad hoc* in another language implies that the phonological pole can somehow get disconnected from its conventionalised symbolic arrangement with the semantic pole. However, there is then no meaning left which the phonological structure could point to (unless a new conventionalization in the other language takes place). This would produce more or less uninterpretable utterances from the perspective of a language as linguistic system. I argue that an explanation of transfer does not have to give up the conception of the inseparable sign. In the following I briefly want to show how this can be achieved by referring to the complex nature of constructions and a general cognitive strategy known as imitation.

As we have seen, the structure of constructions in bilingual use does not need to contain information that is the result of generalisations over form (though it might). Nevertheless, every construction has a complex structure to the extent that it contains several components. Undoubtedly these components have a semantic role within the semantic structure of the construction (Langacker 1987; Goldberg 1995). Thus the components of an argument structure construction may be conceptualized as realizing specific – possibly generalised – semantic roles. It is commonly assumed that global semantic roles can be captured cross-linguistically by semantic maps. Although semantic maps are still merely a heuristic tool (Haspelmath 2010) and semantic roles are also construction-specific (Goldberg 1995: 110; Croft 2001: 59), it is much more plausible to ascribe some kind of cross-linguistic comparability to meaning than to form (Croft 2001: 61).

The semantic structure of a construction, consisting of the construction's meaning and the semantic roles of the components, is also a conventionalized combination of signifiers (the semantic components) and signified (the constructional meaning) (Verhagen 2009). Crucially the identification of the semantic structure of a construction can occur independently of the phonological realisation. Consider for example the German compound noun *Baumkrone,* which has the meaning 'topmost part of a tree'. The word itself is lexicalized in German, so that the phonological form is directly linked to the constructional meaning. However, the semantic structure still remains analysable as containing the semantic components 'tree' and 'crown'. Furthermore, the abstract construction that licensed the word is unconsciously recognisable as the compound noun construction. It specifies the order of its components so that the first element is to be identified with the semantic component with the role of a modifier and the second element with the semantic role of the modified 'head'. If a speaker has knowledge about the abstract construction as well as access to the semantic components of the compound *Baumkrone*, it is possible for him to refer to the constructional meaning with phonological forms others that /baʊ̯m/ and /kʀoːnə/. For example, a Serbian-German bilingual can produce the non-conventionalised unit *drvokruna,* literally „tree crown", in Serbian. The utterance is not plainly interpretable by a Serbian monolingual as having the meaning 'topmost part of a tree' (which is conventionally connected to the form *krošnja* in Serbian), provided that no guiding context is given. Instead, a different meaning such as 'wooden crown' would be likely to be interpreted. Thus the structure of the word *Baumkrone*, which can be identified as semantic structure, has not simply been transferred to the 'language' Serbian. As noted above, this is to be expected since a symbolic link between the form *drvokruna* and the meaning 'topmost part of a tree' cannot be created on the spot. Note that

the form *drvokruna* is not a morpheme-by-morpheme translation either, but has itself been licensed by an existing Serbian compound-noun construction.

The process that has been used in order to produce *drvokruna* is possible only within the bilingual mind and is better described as imitation. Imitation is a general cognitive process well known from (Girard DL 2008), sociology (Tarde 1900/1980) and learning studies (Bandura 1971; Tomasello 2004: 52; Whiten et al. 2009: 2417). The crucial steps in imitation are (i) identifying the goal of a sequence of actions and (ii) the copying of the perceived action with one's own (bodily) means in order to achieve the same goal. Applied to linguistic units imitation refers to the (i) identification of a construction's meaning and the linguistic means it has been coded in and (ii) reproducing the semantic structure with symbolic assemblies licensed by existing constructions from the other language. Thus whilst identifying that the meaning 'topmost part of a tree' is rendered with the semantic components 'tree' and 'crown' and the compound-noun construction, the bilingual looks for corresponding means in the other language. In this case the semantic components can be captured by the elements *drvo* 'tree' and *kruna* 'crown' and the construction finds its correlate in the Serbian compound-noun construction.

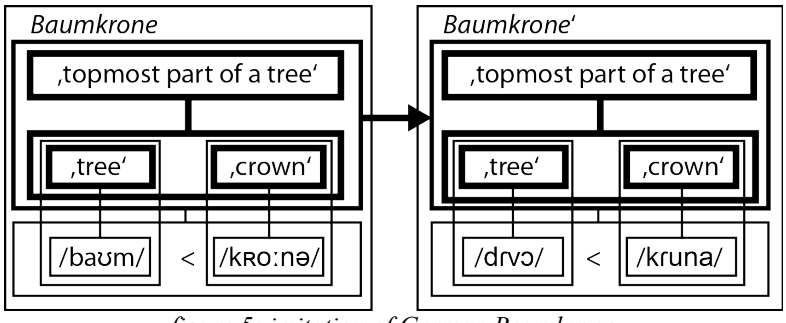

figure 5: imitation of German Baumkrone

Note that no linguistic sign or part of a sign has been transferred from one language to the other: the Serbian phonological forms are only used in order to refer to a conventionalised

German semantic structure. This connection can be inferred by Serbian-German bilinguals, but not by other speakers of Serbian.

I argue that this process can explain so-called syntactic transfer(ence) as well. Consider the following example:

(37) ali ja ću to da radim do (.) dok sam stara […] dok ne mogu više.
but I will that to do till until am old-F.SG until not can.1SG any.more
Standard Serbian: Ali ja ću to da radim dok ne ostarim.
'But I will this till (.) until I'm old [..] until I can't any more.'
Serbian-English (Dimitrijević-Savić 2009: 30)

The interesting part is the sequence *dok sam stara*. Although the utterance as a whole contains hesitation, we nevertheless need to account for the formation of this sequence. Dimitrijević-Savić explains that the sequence *dok sam stara* is an instance of purely syntactic transfer, since „whereas in Serbian the conjunction *dok* 'until' requires the negation of the clause […], the English conjunction 'until' does not" (Dimitrijević-Savić 2009: 29). However, the conjunction *dok* does not itself have the meaning 'until', but only the meaning 'as long as'. As such it does not require the negation of the clause. Quite the contrary is true: while the copular clause in (38) is fully acceptable, example (39) is not an acceptable sentence in Serbian:

(38) Ja radim dok sam mlada.
I work until be.1SG young
'I work as long as I'm young.'

(39) *Ja radim dok ni -sam mlada.
I work until NEG-be.1SG young

Rather, Serbian resorts to a special (rather compositional) construction specifying a negation particle and a perfective action in present tense which yield the meaning 'until' (41). The construction [__$_{prep}$ *dok ne* __$_{perf}$] does not allow the expression of an endpoint state (40). The construction used in (38), by contrast, can integrate states that are not endpoint of a development. The oddness of the sequence *dok sam stara* is thus not a syntactic restriction,

but a semantic mismatch between the intended interpretation ‘until’ and the expression of an endpoint state, which is generally not resolvable in Standard Serbian.

(40) Ja radim dok sam *stara/*mlada
intended reading: until
‘I work until am old / young.’

(41) Ja radim dok ne ostarim.
I work until not get.old.1SG
‘I work until I am old.’

Crucially the English construction [__$_{pred}$ until __$_{pred}$] with the meaning ‘until’ assumes states which can be construed as the endpoint of a development. So, it is very likely that the speaker activates the English construction which fits the communicational goals to combine the meaning of ‘until’ with an endpoint state. The imitation in Serbian is made after establishing correspondence between the English [__$_{pred}$ *until* __$_{pred}$] construction and the Serbian [__$_{pred}$ *dok* __$_{pred}$] -construction. The sequence *dok sam stara* thus can be easily interpreted as imitation without referring to any kind of syntactic rule or generalisation over form.

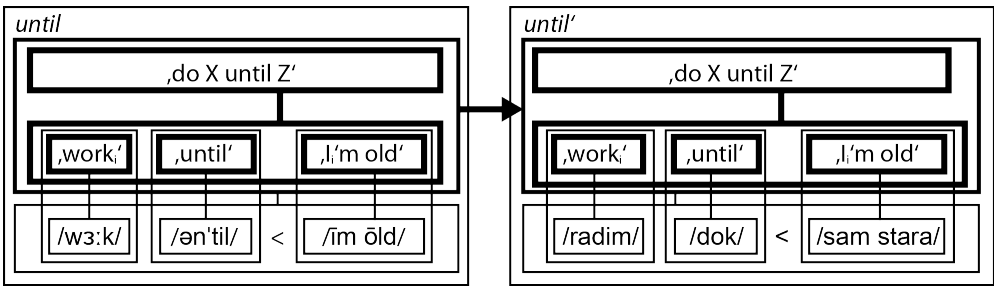

figure 6

Again, the sequence *dok sam stara* is no morpheme-by-morpheme translation of the English equivalent *until I am old*: there is no personal pronoun. Instead, marking for gender on the adjective and the verb is inflected for person and number. This is another argument against syntactic transference: if the syntactic rules of language A would be simply applied to the elements of language B, all grammatical categories that are not specified by these rules in language A but need to be integrated into an acceptable utterance of language B would be

missing. This is not the case, as the discussion around the matrix language shows. Speaking of copying or transference literally is thus not plausible. Instead constructions are imitated, while the form of the imitation has to be licensed by existing constructions in language B. Note that for example Johanson himself sometimes calls the process imitation (Johanson 1992: 230; Johanson 2002b: 261–262), as in fact many researchers do (Meillet 1921: 142; Haugen 1950: 213; Heine and Kuteva 2005: 102). Transfer(ence) is thus no counterevidence to the conclusion that cross-linguistic generalisations do not by default include generalisations over form.

4. Conclusion

The question that is assessed in this paper is whether cross-linguistic generalisations of constructions exist and whether they include generalisation over form as well. It is argued that language affiliation is not plausibly conceptualised or modelled as an explicit tag on linguistic units. Therefore, the degree of generalisation and the internal structure of constructions have to account for the attested bilingual data. I analysed examples from literature focusing on the contact between Slavic and Finno-Ugric languages and English. As the data shows, it is not necessary to assume that generalisations in the form of syntactic functions are used by bilinguals when they code-switch. Likewise, typological evidence as well as major deviations in the grammatical categories used in comparable construction across and within languages suggest that grammatical categories are also not likely the locus of cross-linguistic generalisations. Instead, speakers seem to utilise rather substantive phonological forms. I conclude that cross-linguistic generalisations between typologically distinct languages evolve mainly on the semantic level but do not include form. This means that they do not replace language-specific constructions, but are mere abstractions of them, just as expected from a usage-based point of view. The phonological form of constructs may be influenced by cross-

linguistic generalisations if one language does not code the symbolic links of the construction's components overtly. Since this conclusion holds for typologically distinct languages only, it is not impossible that speakers of typologically similar or genealogically related languages develop cross-linguistic generalisations over similar forms.

I argue that cross-linguistic transfer is no counterevidence to the claim that cross-linguistic generalisations do not include form. Rather, it even is possible to account for allegedly purely syntactic transference with the general cognitive strategy of imitation, which does not need to refer to syntactic roles or grammatical categories, but to communicational goals and the semantic structure of constructions.

From this follows that constructions cannot cross (typologically distinct) languages. Speakers do not likely develop cross-linguistic constructions but merely semantic and pragmatic generalisations. Synchronically, speakers do not transfer constructions or other linguistic units, but imitate the linguistic means of one language with those of another language.

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