Loan verbs in a typological perspective

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0. Introduction

In this paper we provide an overview of structural patterns involved in the transfer of a verb from one language to another. The primary aim is to establish a descriptive framework for such loan verbs. As we shall see, some languages borrow verbs by simply inserting a root-like form of the verb into their own morphologies or otherwise treat the loan verb as a native item. Commonly, however, some special derivation process or a light verb like 'to do' is required to accommodate the loan verb. In addition, in some rare cases a language may borrow entire inflectional paradigms along with the verb. This paper will present a classification of these major strategies and subtypes thereof. An obvious question that arises is whether it is possible to predict which strategy speakers of a given type of language might use when borrowing verbs. Do features of the source and/or target language determine the structural pattern associated with borrowed verbs? Our answer to this question will be highly tentative. We do think that structural features, especially of the target language, are relevant for the outcome of a given borrowing event, but evidence such as the existence of more than one borrowing pattern in one and the same language suggests that the structural outcome cannot be directly predicted from structures of the languages involved. There are clearly additional factors involved, such as degrees of bilingualism or areal tendencies. Even if it is not directly possible to predict which strategy a language will use, we hypothesize that if a *change* in the strategy occurs because of increased language contact the change will move in a specific direction along a loan verb integration hierarchy, which we set up in this paper.

1. Previous research

Few studies have been devoted to the topic of borrowed verbs. Moravcsik (1975) is an early, pioneering work which is still a useful point of departure for discussion. The paper, however, makes the untenable claim that "[a] lexical item whose meaning is verbal can never be included in the set of borrowed properties" (Moravcsik 1978:111). From the context of the paper as a whole this statement may be interpreted as saying that verbs can never be borrowed *as verbs* (it does not say that verbs cannot be borrowed at all, as, for instance, Campbell 1993 has interpreted it to mean). Thus, if a verb is transferred from one language to another it will in the first instance be borrowed and treated as a noun, and will require some sort of verbalization in order to be treated as a verb in the target language. One major problem with this generalization is that it requires Moravcsik to posit zero derivational morphemes to save her generalization in cases where there is no overt derivational mechanism present. Moreover, she admits that she does not have a good explanation for why the treatment of borrowed verbs as nouns should be universal in the first place (Moravcsik, p.c. 2003). In spite of these problems, Moravcsik's proposal is not uninteresting. The treatment of loan verbs as nonverbs is, indeed, quite common, and does call for an explanation. In the course of this paper (Section 6) we shall return to this issue and propose an explanation.

Since 1975, the literature on language interference and code switching has been rapidly increasing, and several studies provide examples of loan verbs. They are all restricted to individual language cases, however. Pugh (1999) stands out as a broader study focused on structural patterns involving loan verbs, but it is still limited to a particular group of languages, namely Finnic. Similarly outstanding, Mifsud's (1995) in-depth study is focused on loan verbs borrowed into Maltese.

The only major contribution since Moravcsik (1975) is Ch. 7 of Muysken (2000), a rich source of

data and discussion. Muysken identifies many of the patterns that we illustrate in this paper, but classifies them somewhat differently. Where we distinguish four major types — the light verb strategy, indirect insertion, direct insertion, and paradigm transfer — Muysken (2000) divides the first type into three subtypes, essentially collapses our next two types, and ignores the fourth. In the course of our paper we shall return to differences between Muysken's and our approaches.

Our own research began with presentations by Wichmann (2004a, 2004b) at various workshops and with Wohlgemuth's work towards a dissertation on the topic of loan verbs, which has so far resulted in a database design and a still growing collection of data (cf. Wohlgemuth 2005a, 2005b). Both authors have carried out their work in relation to the Loanword Typology Project of the Max Planck Institute for Evolutionary Anthropology. As of January 2006, we have collected data from over 60 languages in 72 donor-recipient combinations. There are data from all over the world and a wide range of different language families are represented.[1]

2. Terminological issues
2.1. Verb
We do not operate with any strict definition of 'verb', as such an entity can be difficult to define unequivocally. Even if generally inadequate (Croft 2000:65), a notional definition according to which verbs denote actions or events will suffice for the present purposes. We count as loan verbs all items that function as verbs in the source language, even if they are treated as nouns (and are subsequently verbalized) in the borrowing language (a common phenomenon). In contrast, we exclude case where the item functions as a noun in the source language, such as Finnish *jobbata* 'to work', where the infinitive verbal ending *-ata* has been added to the English noun *job* (Nau 1995:72), or Japanese *sekkusu suru* 'have sex', literally meaning 'to do sex ' (Schmidt 2005). In some cases it is impossible to know whether the borrowed form is to be regarded as a verb or a noun in the source language for reasons of homophony or lability of part-of-speech membership, e.g. French *faxer* (from Vendelin and Peperkamp n.d.: 10), which conceivably could just as well represent a borrowing of the English noun *fax (machine)* as of the English verb *(to) fax*. In such cases we choose to be inclusive, and simply treat the form on a par with other loan verbs.

2.2. Light verb
The way we use the term 'light verb' is also consciously vague. We employ the term for verbs like 'do' or 'make' or verbs of a similarly broad referential scope, which are used in complex constructions where they have an auxiliary-like function. Our use corresponds to the original coiner of the term, Jespersen (1954, VI, 117-118), rather than to generativist literature particularly, into which it was introduced by Grimshaw and Mester (1988). Cross-linguistically, a common form of light verb is 'to do', and it has been observed that one of the major functions of 'do'-periphrasis cross-linguistically is precisely to integrate loan verbs (Jäger 2004; cf. also Van der Auwera (1999) for additional background on the typology of 'do'-periphrasis). Since verbs other than 'to do' may be involved in loan verb integrating constructions we use the broad term 'light verb strategy' for such cases rather than the otherwise simple and catchy term 'the do-strategy.'

2.3. Borrowing
A major problem in defining borrowing is how to distinguish true loans from 'nonce borrowings', i.e. words that are introduced into the target language in an ad hoc fashion (Poplack, Sankoff, and Miller 1988). Good evidence for a true borrowing would be that the item is replacing or has replaced an

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earlier, synonymous word or that it denotes some kind of object or action which was once new to the culture but which has now become an integral part of it. These may be called 'cultural borrowings' (Myers-Scotton 1993). Recorded language history showing the presence of the word over several generations is of course also good evidence. Phonological modification may be indicative of loanword status if there is a contrast with phonologically unmodified nonce borrowings (Heath 1989:23-25).

Other criteria sometimes invoked are the occurrence of a foreign lexeme in the speech of monolinguals, its frequency, or the perception of the speakers themselves regarding its status in the language (Schatz 1989:132). In many cases, however, none of these criteria can be applied. It is often difficult to apply criteria involving semantics since translation equivalents may often have differences in connotations (Backus 1996:115-131). The situation becomes particularly difficult in the case of verbs. Since the semantics of verbs is usually more general than that of nouns, it is difficult to establish whether some native verb in the target language is or is not synonymous with the putative loan verb. For similar reasons it is difficult to establish on cultural grounds that a true borrowing must have taken place. And as regards recorded language history, this is often not available. Phonological modification is a criterion that only applies occasionally. And, finally, we often do not have information concerning the occurrence of the word in the speech of monolinguals, its frequency within a corpus, or speakers' perceptions regarding its status. Thus, we admit to often having to make educated guesses as regards what is a true borrowing and what is a nonce borrowing.

3. Observed patterns

In the following we review the four major patterns of loan verb integration that we have found: the light verb strategy, indirect insertion, direct insertion and paradigm transfer. In section 6 below the results are summarized in tabular form.

3.1. The light verb strategy

The light verb strategy most often involves a verb meaning 'to do' for the integration of loan verbs — so often, in fact, that one would be tempted to simply call it the 'do-strategy', were it not for the fact that a few languages employ other verbs, as we show further on in this section. We begin by exemplifying the more common strategy, picking three random examples from our sample.

(1) MANANGE [Tibeto-Burman] < NEPALI [I.E.]
1hai 1la-pa
yawn   do-NOM
'to yawn' [cf. Nep. *haii aau-nu* 'yawn come-INF'] (Kristine Hildebrandt, p.c., 2004)

(2) TEXISTEPEC POPOLUCA (TEXISTEPEQUEÑO) [Mixe-Zoquean] < SPANISH
I   njunu   nwyat   pensar   ñyaka'ap?
'I   njunu   ny-wat   pensar   ny-yaka'-p
and how   2.ERG-do think   2.ERG-kill-FUT
'And how do you intend to kill him?' [Sp. *pensar*] (Wichmann 1996:79)

Turkish verbal borrowings from French are nominalized by means of source-language devices before they enter into the target language's 'do'-construction.

(3) TURKISH < FRENCH
isole   etmek
isolated   do/make
'to isolate, insulate' [Fr. *isolé*] (Lewis 1967:154, via Dan Slobin, p.c.)

Other examples where a phrasal 'do'-verb is involved in loan verb accommodation may be drawn from the following languages and sources, some of which are cited in Muysken (2000):
  – American Portuguese [Romance] < English (Pap 1949:114-117)
  – Amharic [Semitic] < English (Pete Unseth, p.c.)

- Anatolian Arabic < Turkish [Turkic], Kurdish [Indo-Iranian] (Vocke and Waldner 1982:XLIV, 215)
- Armenian (Eastern) < Russian [East Slavic] (Kozintseva 2003:222)
- Awa Pit [Barbacoan] < English (Curnow 1997:156)
- Bangla [Indo-Aryan] < English (Moravcsik 1975:14)
- Basque < French, Spanish [Romance] (Haase 1992:87, Trask 1997)
- Greek < U.S. English [West Germanic] (Moravcsik 2003)
- Hausa [Chadic] < English (Madaki 1983)
- Hindi [Indo-Aryan] < English (Kachru 1978)
- Hungarian [Finno-Ugric]< English (Moravcsik 1975:14)
- Kaqchikel [Mayan] < Spanish (Stenson 1998:224)
- Lebanese Arabic < French (Abou 1962:65)
- Malayalam, Kannada, Telugu [Dravidian] < English (Moravcsik 1975:14)
- Moroccan Arabic [Semitic] < Dutch (Boumans 1998:223-269)
- Navaho [Athapaskan] < English (Canfield 1980: 219)
- Panjabi [Indo-Aryan] < English (Romaine 1985)
- Pipil [Uto-Aztecan] < Spanish (Campbell 1985:144)
- Popoloca [Otomanguean] < Spanish (Veerman-Leichsenring 1991:160, 289, 290, 441, 479)
- Sarnami (Surinam Hindustani) [Indo-Aryan] < Sranan [English-based creole], Dutch [West Germanic], English (Kishna 1979)
- Tamil [Dravidian] < English (Sankoff et al. 1986, Annamalai 1978)
- Turkish [Turkic] < Dutch (Backus 1992:77)
- Urdu [Indo-Aryan] (Moravcsik 1975: 14)
- Yakut [Turkic] < Russian (Brigitte Pakendorf, p.c.)

In some languages the light verb forms a compound with the borrowed verb. We do not consider this treatment significantly different from the phrasal construction but rather something that would follow from the way that the target language generally behaves with regard to complex verbs. Below we provide a couple of examples.

Korean sometimes uses borrowed verbs to express particular nuances of meaning or to render a message less comprehensible to uninvited listeners. The following example is of a French loan verb, but similar examples of borrowing from English also exist.

(4) KOREAN [Isolate] < FRENCH
Mary-ka   John-eul   detester.hae-yo
Mary-NOM   John-ACC   hate.do-DECL
'Mary hates John.' (Thekla Wiebusch p.c. via Soyoung Roger-Yun, p.c.)

In Pech, Spanish loan verbs are accommodated by uniting the loan verb, which assumes the shape of the infinitive minus final *r*, with the Pech verb stem *iš-k-* 'do'. A clash of vowels is resolved by normal morphophonological processes.

(5) PECH (PAYA) [Chibchan] < SPANISH
reséš-k-
reša-íš-k-
pray-do
'to pray' [Sp. *rezar*] (Holt 1999:62).

In a few languages verbs other than 'do', but of a similar degree of semantic generality, are observed in the light verb borrowing strategy. These are used either in addition to, or instead of, 'do'. The following are cases in point; other examples involve English borrowings into Japanese (Hinds 1986:28) or Georgian and Avar borrowings into Bezhta (Comrie 2005).

(6) CARIB [Carib] < GUIANESE FRENCH CREOLE
pentiré   *poko*   *man*
paint   busy.with   3SG.COPULAR
'He is painting.' [GFC *pentiré*] (Renault-Lescure 2004: ex. 19)

(7) ITELMEN [Chukotko-Kamchatkan] < RUSSIAN
werit   *eɭes*
believe   be
'to believe' [Rus. *верить*] (Georg and Volodin 1999:57)

Sometimes a motivation for using a light verb other than 'do' relates to transitivity. Thus, in the Azoyú variety of Tlapanec, Spanish loan verbs are accommodated with either 'do' or 'make', the latter being used to express the causative of the Spanish verb. The 'do'-construction is also used for certain Tlapanec expressions of a verbalizing nature and the 'make'-construction is also used for creating periphrastic causatives of native verbs, though in the latter case a subordinating particle *di²* is involved.

(8) TLAPANEC [Otomanguean] < SPANISH
  a. *Nu-²ni³*   *kompa²ỹã¹*
     IPFV-do.3PL   accompany
     'They are accompanying.' [Sp. *acompañar*] (Wichmann, field notes 2003)
  b. *Mu-²ʔỹĩ³²=luʔ²*   *eska²pa¹*   *čaʔᵇgu²*
     FUT.PL.AGENTIVE-make.1PL.INCL>3SG.AN   escape   girl
     ci²   *štuʔwa²hma¹yuʔᵇũ²*
     who   tied.up.3.SG there
     'We'll make the girl who is tied up there escape.' [Sp. *escapar*] (Wichmann, field notes 2003)

Peculiar to languages of northern Australia is a type of complex predicate where, even in the native vocabulary, an open class of uninflecting 'coverbs' (sometimes called 'preverbs') combines with a closed class of inflecting verbs. Given the presence of such a construction, loan verbs may readily be inserted into the coverb slot, as in the following example:

(9) GURINDJI [Pama-Nyungan] < JAMINJUNG [Jaminjungan]
    tibart wani-nya
    jump fall-PAST
    '(S)he jumped.' (McConvell 2005:3)

A similar example, involving loan verbs from the English-based creole Kriol into Jaminjung, is cited in Schultze-Berndt (2003:151). Related to this is the kind of verbal compounding seen in Warlpiri borrowings from English, as illustrated in (10a-b). Warlpiri appears to have undergone a change whereby erstwhile constitutents in the coverb construction have lost their syntactic and prosodic independence (Nash 1982). The choice of native compounded verb is guided by transitivity, *-jarrimi* 'INCHOATIVE' occurring with intransitives and *-mani* 'get/take/affect' with transitives.

(10) WARLPIRI [Pama-Nyungan] < ENGLISH
  a. *sliipi-jarrimi*
     sleep-INCH
     'to sleep.' (Bavin and Shopen 1985:82)
  b. *jasi-mani*
     chase-affect
     'to chase.' (Bavin and Shopen 1985:82)

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Future studies of loan verbs in Australia could provide important new insights into loan verb typology given the structural peculiarities of the languages here as well as the great amount of linguistic diffusion on this continent (e.g., Dixon 2002:24-30).

3.2. Indirect insertion
In many languages an affix is required to accommodate loan verbs. Once the affix is added the normal inflectional patterns may be applied. Although based on limited data, it seems to be a valid generalization that whenever the affix has a function in addition to that of accommodating loan verbs, this function relates to the flagging of part-of-speech membership. Sometimes the affix is a verbalizer, sometimes a nominalizer, and sometimes it marks a particular class of verb. Often, however, the affix has no other function than that of accommodating loan verbs. Nevertheless, in those cases where we have been able to identify the etymologies of such 'loan verb affixes' (henceforth glossed 'LV'), they have been found to originate in affixes in other languages where their functions also relate to the flagging of part-of-speech membership. We return to these cases in section 4 below. In the following we simply illustrate the range of this pattern, which we call the indirect insertion pattern.

Meyah is among the languages that employ an LV affix of unknown origin. Apparently the prefix *ebe-* is needed to accommodate loan verbs not beginning with a vowel, since Meyah verbs normally must be vowel-initial.

(11) MEYAH [East Bird's Head] < INDONESIAN [Austronesian]
    di-ebe-belajar
    1SG-LV-learn
    'I am learning.' [Ind. *belajar* 'to learn'] (Gravelle 2002:149)

Another case is Manange, which employs a suffix *-ti* to accommodate some loan verbs. As we saw in example (1) above, in other cases a light verb strategy is used. The reason why one or the other strategy is used is not clear (in section 5 below we provide more examples of languages employing more than one strategy).

(12) MANANGE [Tibeto-Burman] < NEPALI [Indo-Aryan]
    <u>*bolai*</u>-*ti*   *1mi*   *ro*
    call-LV   EVID   REP
    'He called (for the frog)' [Nep. *bolai*] (Kristine Hildebrandt, p.c., from field notes).

Another Tibeto-Burman language employing a LV affix of unknown origin is Belhare. Here the affix is *-ap* (Balthasar Bickel, p.c.).

Nahuatl has been in intensive contact with Spanish for half a millennium and freely borrows words from all parts of speech. The following example is from the Pastores variant of Eastern Guerrero. Nahuatl verbs may be divided up into different verb classes. One of them is characterized by ending in *-oa*. Synchronically, this suffix does not have any particular function. All Spanish loan verbs are treated as members of the class of verbs in *-oa*. As is normal with these verbs, the *a* of *-oa* becomes suppressed under further suffixation.

(13) NAHUATL (PASTORES) [Uto-Aztecan] < SPANISH
    Ya   *ki-*<u>*puntaro*</u>-*tika-ya*   *se*   *de*   *ihwante*
    now   3OBJ-point-PROG-IMPFV   one   of   them
    'Now he had one of them at gunpoint.' [Sp. *apuntar*] (Wichmann, field notes 1992)

As a case where the accommodating affix does have a grammatical function in the target language, we may cite Shipibo-Konibo. This language is in intensive contact with Quechua and Spanish, and uses the same verbalizing suffix *-n* to accommodate verbs from both of these languages, as illustrated in (14).

(14) SHIPIBO-KONIBO [Pano-Ucayalina] < QUECHUA [Quechuan] & SPANISH

justamente la educación r-iki no-n yoi-ti atipa-n-ke
precisely F.ART education EV-COP 1.PL-ERG say-INF.ABS can.Q-*n*-CMPL
la. . . el único camino que no-a cambia-n-ti
F.ART M.ART only road that 1PL-ABS change:3-*n*-INF
'Precisely education is, we could say, the. . . only road that can change us. . .'
[Q. *atipa* 'to be able to', Sp. *cambiar* 'to change')] (Valenzuela 2003)

As evidenced by data cited by Valenzuela (2003), other Pano-Ucayalina languages such as Wariapano and Kapanawa follow the Shipibo-Konibo pattern of using the *-n* suffix for the integration of Spanish loan verbs.

Many European languages use LV affixes, and, as was the case with Pano-Ucayalina, the patterns may be shared among closely related languages. Thus, Germanic languages like German, Danish, and Dutch use a cognate suffix to accommodate French and Latin loan verbs (cf. section 4 below). The Finnic languages Ingrian and Votic both require the suffix *-tt* for Russian loan verbs (Pugh 1999:120). Finally, various Slavic languages like Russian, American Czech, and American Polish affix a verbalizing suffix *-ova* to borrowed English verbs (Moravcsik 1975:15).

Other cases of languages that use indirect insertion are Welsh, which borrows many English verbs by adding a deverbalizer *-io* (Orin Gensler, p.c.); Modern Greek, which uses *-αρ-*, derived from the Italian infinitive *-are*, to accommodate French loans (Mackridge 1987:315), the Turkic language Yakut, which uses a verbalizer (either *-LA:* and very rarely *-Iy*) for Russian loan verbs (Brigitte Pakendorf, p.c.), and the Chibchan language Rama, which employs the verbalizer *-ting* for Spanish loan verbs (Grinevald n.d.: 174).

3.3. Direct insertion

By 'direct insertion' we refer to a process whereby the loan verb is plugged directly into the grammar of the target language with no morphological or syntactic accommodation. We include such cases in this category even if a phonological modification has taken place. The borrowed form may be root-like, infinitive-like, imperative-like, inflected for third person or nominalized by means of devices in the source language, and probably others. Sometimes it is difficult to establish which of these various source language forms of the loan verb is taken over. In any case, all of the source language instanciations seem to represent a sort of citation form in the analysis of the borrowing speakers. In the following we provide examples of each of these subtypes of direct insertion.

Direct insertion of a root-like stem occurs in borrowings by various Germanic (e.g., German and Danish) or Romance languages (e.g. Spanish) from English. It also occurs among languages that belong to many other families, however. The following example is from the northwestern Amazon region, where Tukano has become an increasingly important lingua franca. The target language illustrated is Hup, which is spoken by a minority of predominantly hunter-gatherers. True borrowings into Hup may be distinguished from nonce borrowings by the criterion relating to phonological modification. Borrowed verbs are truncated to one syllable in conformity with Hup phonotactic structure (15a), whereas the appearance of Tucano verbs in Hup speech that results from nonce code-switching is identified by the absence of truncation (15b).

(15) HUP [Maku] < TUKANO [Tukanoan]

a. *ʔam-ăn ʔãh yu-té-h*
   2SG-ABS 1SG wait-FUT-DECL
   'I'll wait for you'. [Tuk. *yuu* 'to wait'] (Patience Epps, p.c.)

b. *ʔan pihi-tæn, wetamɔ-tæ̃ʔ-æ̃y ʔãh-ãh ʔãh nɔ-ɔh*
   1SG.OBJ call-COND help-CNTRFCT-IMPF 1SG-DECL 1SG say-DECL
   'If they (Tukanos) call me, I should help, I say'. [Tuk. *piha* 'to help'; *wetamɔ* also from Tukano, but exact source form remains to be identified] (Patience Epps, p.c.)

French loan verbs in the Figuig Berber language of Eastern Morocco provide another example of direct insertion of a root-like stem (16a-b). According to Maarten Kossmann (p.c.), Moroccan Arabic loan verbs are treated like the French ones.

(16) FIGUIG BERBER [Berber] < FRENCH
    a.   *i-g̃õfla*
         3SG.M-be.swollen/PFV
         'he is swollen up.' [Fr. *gonfler* 'to swell'] (Maarten Kossmann, p.c.)
    b. *tt-g̃õnfli-x*
         IMPFV-be.swollen-1SG
         'I am swelling up.' (Maarten Kossmann, p.c.)

The direct insertion of an infinitive-like stem is found with Spanish borrowings into the Purépecha language of Michoacán, Mexico. From various examples in Chamoreau (2000) it appears that Spanish verbs, slightly modified phonologically by adding an apparently epenthetic *i* to the infinitive, are plugged directly into the verbal morphology.

(17) PURÉPECHA (TARASCAN) [Isolate] < SPANISH
    'Xi pe'Nsari-ša-ka   'iški   ¢'iPku-i-ka-Ø
    1   think-PROG-ASSERT.1/2 that   dead-COP-SUBJ-3
    'Me, I thought he was dead.' [Sp. *pensar*] (Chamereau 2000:142)

Other cases of direct insertion of root- or infinitive-like stems may be drawn from the following contact situations:

- Bislama [English-based creole] < Samoan [Austronesian] (Crowley 1990:138), Melanesian Pidgin (Crowley 1990:110), French (Crowley 1990:118, 128), English (Crowley 1990:128), Tok Pisin (Crowley 1990:134)
- Bolivian Quechua [Quechuan] < Spanish (Muysken 2000:63)
- Carib [Carib] < Sranan and Dutch (Renault-Lescure 2004)
- Coptic [Afro-Asiatic, Egyptian] < Greek (Lambdin 1983)
- Estonian [Finnic] < German (Neetar 1990:356), Low German (Neetar 1990:356), Russian (Neetar 1990:355-356)
- Evenki [Tungus] < Yakut [Turkic] (Malchukov 2003:242)
- Fijian [Austronesian] < English (Schütz 1978:6, 38, 44, 241; 1985: 142)
- Finnish < English (Nau 1995:72)
- French < English (Vendelin and Peperkamp, n.d.:10)
- Gawwada [Afro-Asiatic, Cushitic] < Amharic [Semitic] (Tosco 2005)
- Jakarta Indonesian [Austronesian] < English (Chaer 1976:43, 95), Dutch (Chaer 1976:235)
- Jalonke [Niger-Congo, Mande] < Fula (Guinean) [Niger-Congo, Atlantic] (Lüpke 2005)
- Ket [Yeniseian] < Russian (Minaeva 2003:48; Werner 2002)
- Korean [isolate] < English (Kang 2003:254)
- Lama [Niger-Congo] < French (Ulrich 1997:458)
- Lower Sorbian [Slavic] < German (Bartels 2005)
- Miskito [Misumalpan] < English (Hale 1994:270)
- Mosetén [isolate] < Spanish (Sakel 2005)
- Nenets [Uralic] < Russian (Malchukov 2003:239)
- Pilagá [Mataco-Guaicurú] < English (Vidal 2001:117)
- 16th-century Quechan [Yuman] < Spanish (Lockhart 1998:43)
- Tok Pisin [English-based creole] < English (Smith 2002:94, 97, 99, 104, 112, 207)

According to Maarten Kossmann (p.c.), who provided us with the examples in (18), the Northern

Songhay language Tasawaq (Niger) takes over Tuareg verbs with the Tuareg 3SG.M person prefix and subsequently treats them as normal verb stems. Sometimes, though, the 3SG.M prefix is absent, possibly for reasons having to do with the formal structure of the verb. In (18) the Tuareg loan *ëlmëq* 'to swim' is borrowed in the 3M perfective Form, *i-lmäq* 'he swam'.

(18)   TASAWAQ [Nilo-Saharan, Northern Songhay] < TUAREG [Afro-Asiatic, Berber]
  a. *gháy   yílmàq*
    1SG   swim.PERF
    'I swam'
  b. *ghá   bb-ílmàq*
    1SG   IMPFV-swim
    'I am swimming'
  c. *ghá   `mm-ílmàq*
    1s   SUBJ-swim
    'would that I swim'

Tuareg has nouns with 'verby' semantics like *tusrak* 'sneezing' or *tusut* 'coughing'. Since most Tasawaq verbs can also function as nouns these formally nominal forms can also be treated as verb stems (19).

(19) TASAWAQ < TUAREG
  ghá   b-tásrìg
  1s   IMPFV-sneeze
  'I am sneezing' [Tua. *tusrak* 'sneezing'] (Maarten Kossmann, p.c.).

This last example is related to the type where the directly inserted item is a form nominalized by means of devices in the source language. An example of this is provided by the following Michif sentence (cited in Muysken 2000:208). While verbs in the mixed French-Cree language Michif normally come from the Algonquian language Cree, some are from French and English. These take the prefix *lï*, which is from the French article *le*, and a suffix *-i:* from the French infinitive *-er*.

(20) MICHIF < ENGLISH

  lï   kat   dï   žyjɛt   gi:-lï-sɛlibre:t-i-na:n
  DET   four   of   July   1PA-DET-celebrate-INF-IA.1PL
  'We celebrated the Fourth of July'. (Bakker 1997b: 115-16)

3.4. Paradigm transfer
In some rare cases the loan verb is not adapted to the recipient language's morphology at all but is borrowed along with significant parts of the donor language's verbal morphology which maintains its function. We call this paradigm transfer. This is different from borrowed verbs with 'fossilized' donor language morphology like those in (18) and (19) above, where an inflected form is borrowed but where the donor language inflection has no function in the recipient language at all; in cases like (18) or (19), all inflection or derivation applied to the borrowed verb uses morphology native to the recipient language.
 A restricted case of morphology borrowed along with the verb is shown in (21).

(21) MINGRELIAN < GEORGIAN
  a-mšvid-en-s
  TV-soothe-PRS-3SG
  '(s)he soothes' [Geo. *a-mšvid-eb-s*] (Lela Zamušia, p.c., 2005)

In a handful of its verbal borrowings from Georgian, Mingrelian maintains the thematic vowel (TV) *a-* of Georgian — as opposed to *o-* which would be normal in Mingrelian. No further morphology was
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borrowed along with these verbs (Lela Zamušia, p.c., 2005).

In cases of what we designate here as actual paradigm transfer, however, the donor morphology maintains its function within the recipient language to a much greater extent. For instance, the person agreement affixes on borrowed verbs may be those of the donor language, as in the following example where –*sun*, the Turkish 2nd person marker, occurs with the borrowed verbs:

(22) ROMANI (AGIA VARVARA) < TURKISH
     and   *o*   *sxoljo* *ka* *siklos* *te*   <u>*okursun*</u> *ta* *te*   <u>*jazarsun*</u>
     in   ART   school FUT learn.2 COMP read.2SG and COMP write.2SG
     'at school you will learn how to read and write' (Bakker 2005:9) [Tur. *okumak* 'to read', *yazmak* 'to write']

Turkish loan verbs in Agia Varvara Romani are inflected with their original Turkish suffixes in present and past tense; only the first person plural past-tense suffix deviates from the Turkish paradigm due to analogical leveling (Igla 1996:214-216).

A similar pattern is reported by Newton (1964) for Kormatiki (also called *Araviká*), an Arabic dialect of Cyprus, which is heavily influenced by Cypriot Greek; "C[ypriot Greek] verbs in K[ormatiki] are conjugated exactly as they are when they occur in C[ypriot Greek]" (Newton 1964:47).

It may at times prove difficult to distinguish such forms of loan verb integration from occasional word-level code-switching unless one has independent examples of different inflected forms. In the case of Agia Varvara Romani, however, code-switching can be ruled out since these inflected non-native words would then be limited to verbs only, and – oddly – there would be no similar switches involving other word classes. Furthermore, these unadapted borrowings occur freely in Romani sentences, not just in fossilized idiomatic expressions where they might be considered phrase-level switches (cf. Igla 1989, Igla 1996). It may be added that present-day speakers are no longer bilingual in Romani and Turkish, because the speakers of this variety moved from Turkey to Greece several generations ago.

Paradigm transfer only occurs in intensive contact situations, involving bilingualism or the extended contact of a mixed language (like Kormatiki) with one of its sources (here: Greek).

4. The borrowing of borrowing patterns

Bakker (1997a) may be the first study to show that a language may borrow borrowing patterns from another language. The language dealt with is Romani, whose various dialects in fact use various inflectional suffixes from Greek to accommodate borrowings from other languages. These suffixes, which vary somewhat from dialect to dialect, do not mark particular grammatical categories in Romani, but only serve to signal that the lexeme has been borrowed. Of particular interest are the formal patterns of verb borrowing, summarized by Bakker (1997a:12-13) as follows:

> Borrowed verbs are only integrated with a loan marker between the borrowed verb and the inflection. These markers find their source in aorist markers. Anatolian Greek dialects use the Turkish aorist/preterit marker -*d*- as does the Sepečides Romani dialect. Other Anatolian Greek dialects use the -*iz*- element which is derived from the Greek sigmatic aorist (Boretzky and Igla 1991:35). This element is also used in several Romani dialects, sometimes followed by the Romani element -*ar*-, notably in Vlax dialects. Other Romani dialects use -*in*-, which is not reported from borrowings into Greek, but which is a common ending in Greek, and of increasing frequency since classical times.

While the author considers the borrowing of a borrowing mechanism "highly unusual if not unique" (Bakker 1997a:18), it does occur elsewhere. To demonstrate this, we will give a couple of additional examples.

One example is provided by Romance verbal borrowings in Nordic languages, especially from Latin and French, which take suffixes that descend from Old Nordic -*era*. This, in turn, seems to be based on the Middle Low German loan verb adaptation suffix -*êren* (Simensen 2002:955). The -*era* pattern must have been adopted from Middle Low German along with some verbs borrowed from

their Romance sources via this language, such as *fallera* 'deceive, mislead', *formera* 'to form, shape', and *spazera* 'to walk', but it was extended to other loan verbs even those taken over directly from Latin, such as *disputera* 'to dispute', *komponera* 'to compose', and *traktera* 'to treat, entertain'. Interestingly, an alternative pattern existed, as evidenced by shorter forms in *-a*, e.g., *disputa* and *kompona* (Simensen 2002:955). Nevertheless, it is the *-era* pattern which won out, and which was applied to the full range of Latin and Old French loan verbs.

Another example comes from the Uto-Aztecan language Yaqui, which borrows Spanish verbs using the verb class marker *-oa* from Nahuatl, another Uto-Aztecan language. This suffix functions as a loan-verb-accommodating element in Nahuatl, as was exemplified in (13) above. The pattern is productive in Yaqui, and seems to be applied both to older borrowings and nonce borrowings. Some examples of individual verbs (from Zarina Estrada, p.c.) are: *wantaroa* 'to hold' (Sp. *aguantar*), *kombilaroa* 'to mix' (Sp. *combinar*), *piaroa* 'to lend' (Sp. *fiar*), *leiaroa* 'to read' (Sp. *leer*), *passaroa* 'to pass' (Sp. *pasar*), and *pensaroa* 'to think' (Sp. *pensar*). The following sentence example is from an oral narrative reproduced in Silva Encinas (2004, ex. 91; communicated to us by Zarina Estrada).

(23)   Yaqui [Uto-Aztecan] < Spanish
       Che'a   chúkula   into   te   retratár-oa-wa-k
       more   later   CONJ   1PL   portray-oa-PASS-PERF
       'And later we were photographed.' [Sp. *retratar*]

More intensive research would surely reveal additional examples of the borrowing of a borrowing strategy. This phenomenon appears to be common enough that one hypothesis to suggest itself when one encounters a loan-verb-accommodating affix without a known origin is that the affix may well derive from another language where it has a similar function.

5. One language with more than one strategy

At least seven of the over 60 languages in the sample show more than one borrowing strategy. This ratio will probably turn out to be higher when more data become available on a broader spectrum of language combinations. Generally, one has to distinguish two different occurrences of languages with more than one borrowing strategy: a) those where a language has changed strategies in the course of time but did not have more than one productive pattern in use at any one time, and b) those where a language makes use of different productive patterns at the same time.

Finnish would be an example for the first scenario. While its general situation of language contact has not changed substantially over the last few centuries, it has employed different patterns at different periods for borrowed verbs of the same origin. The Nordic *-era* suffix mentioned above also made its way into Finnish where it was joined by the verbal suffix *-ta* to form the complex *-eerata*, as in *frankeerata* 'to stamp, affix postage' (Nau 1995:65). This suffix is apparently not fully productive anymore and has mostly been replaced by *–oida*, as in *maximoida* 'to maximize' (ibid.). The most recent borrowings, however, seem to be accommodated by direct insertion of a root-like stem, yielding infinitives like e.g. *chätätä* 'to chat' (Hennariikka Kairanneva, p.c.; Florian Siegl, p.c.).

When a language shows different borrowing patterns at the same time, this calls for an explanation. While it is tempting to speculate that the structural outcome of a verb-borrowing event may be predicted from structural properties of the target language, perhaps in combination with properties of the source language, such a hypothesis turns out to be problematical. Different strategies for different donor languages is exemplified by English loan verbs in other Germanic languages such as German, Dutch or Danish, which are directly inserted, as opposed to Romance loan verbs, which are indirectly inserted, requiring cognates of the Middle Low German suffix *-êren*, discussed in section 4 above. Thus, properties of the target language are not sufficient to make predictions. Moreover, there are also examples where one and the same language borrows verbs from one and the same source language using different strategies for different individual verbs. Thus, the Finnic language Karelian uses the Finnic suffix *-č* for some Russian verbs but not for others (Pugh 1999:120). So here both indirect and direct insertion is found. Another case is that of Nepali loan verbs in Manange, where some involve a 'do'-construction, cf. (1) above, while others take a suffix

-ti, cf. (12). Finally, Anthony Grant (p.c.) informs us that both in verb borrowings from Farsi to Urdu and from Hebrew to Yiddish the light verb strategy is common, but that direct insertion exists as well. A similar situation is found with English loan verbs in Spanish and Greek. Here even one and the same verb may be treated by these two different strategies, e.g., English *to click (with a computer-mouse)* can be borrowed as Spanish *hacer clic* as well as *clicar* (the Internet offers many examples of both, and also demonstrates a similar competition in Catalan and Portuguese), and in Greek we similarly find both *κάνω κλικ* and *κλικάρω*. Such examples show that structural properties are not sufficient to make predictions, not even when both the source and the target languages are taken into account.

One might attempt to rescue the hypothesis by arguing that among the different patterns there could be a major one and a minor one(s), and that at least the major one might be explained structurally, whereas the minor one(s) would be due to some obscure peculiarities. This, however, is belied by cases where a language only has one major strategy for verb borrowing and where this strategy is different from the one expected from the morphosyntactic resources of the language. For instance, in the Moroccan Arabic spoken in the Netherlands we find that Dutch verbs are accommodated by means of a 'do'-construction which corresponds neither to Moroccan Arabic nor to Dutch patterns (Maarten Kossmann, p.c., in reference to Boumans 1998). A mirror-image of this occurs in Welsh, which freely allows finite verbs to be paraphrased with a construction involving the corresponding verbal noun and (following it) the light 'do'-verb, but where indirect insertion nevertheless appears to be the preferred pattern of loan verb integration (Orin Gensler, p.c.).

6. Generalizations
6.1. The loan verb integration hierarchy
The kind of evidence offered in the preceding section shows that the choice in a given language of one of the four major loan-verb-accommodation patterns cannot be predicted absolutely from structural properties of the languages involved. We cannot exclude that there are tendencies in this direction, but our material is not yet extensive enough to make sound statistical judgments. In any case, it is necessary to look for additional explanations of the patterns observed in individual languages. One such explanation might be areal tendencies. For instance, the light verb strategy is a very widespread way of treating English loan verbs in languages of India. Again, more material would allow us to make somewhat more precise statements regarding this. On the other hand, it is also quite likely that it will not be possible to make any firmer observations than the tendency of borrowing patterns to show areal distributions. It is unlikely that any particular pattern is concentrated in one part of the world to the exclusion of others, and it is likely that some areas are more conducive to uniformity of borrowing patterns than others. A final explanation, necessitated by the existence of different strategies in one and the same language, relates to degrees of bilingualism. Although much more research has to be done correlating different structural patterns with different sociolinguistic settings associated with the particular borrowing events, we would like to venture the hypothesis that if a language has different patterns, these could correlate with the degrees to which speakers of the target language are exposed to the source language(s). We propose, as an idea to be tested in future research, the following hierarchy:

(24) LOAN VERB INTEGRATION HIERARCHY
light verb strategy < indirect insertion < direct insertion <| paradigm transfer

The degree to which a loan verb is integrated into the target language may be considered inversely proportional to the amount of formal mechanics expended by the target language on accommodating the loan verb (ignoring, for the present purposes, phonological aspects). From this point of view, the lowest degree of integration is associated with the light verb strategy, which involves a whole extra constituent for the integration. A somewhat higher degree of integration is associated with indirect insertion, where just an affix is required. In the case of direct insertion we have complete integration: here the loan verb is treated as if it were native. It is less straightforward to place paradigm transfer in the hierarchy since, one the one hand, no formal accommodation effort has been expended while, on

the other hand, the loan verb is in a sense unintegrated inasmuch as it retains the inflectional morphology of the source language and resembles a code-switch. This accounts for our use of the composite symbol "<|", indicating that paradigm transfer might be considered part of the hierarchy, but that it has a special status.

Interpreted in the sense just mentioned, as a simple descriptive device for degree of morphological integration, the hierarchy is hardly problematical. As mentioned, however, we would also like to suggest that it could be used to make predictions regarding borrowing behavior. Although we would not in general venture to predict which formal strategy a given language would use for integrating loan verbs, we would like to suggest that if a language already has a strategy and changes this or adds another one, then the new strategy's placement in the hierarchy relative to the earlier strategy would be determined by the relative degree of bilingualism in the source language or languages. Thus, more bilingualism would mean the choice of a strategy further to the right in the hierarchy and less bilingualism a strategy further to the left. We would predict, for instance, that if language X borrows verbs from language Y by means of the light verb strategy or indirect insertion, but uses direct insertion from language Z, then this would mean that there is more bilingualism in Z than in Y on the part of the mother-tongue speakers of X. In section 5 above we have cited a few cases where one language uses different strategies to integrate loan verbs from different source languages or where different verbs from one and the same source may be treated differently. To resume, the contact situations were the following:

- German, Dutch, Danish < English vs. Romance
- Karelian < some Russian verbs vs. others
- Manange < some Nepali verbs vs. others
- Modern Greek < some French and English verbs vs. other English verbs or even one and the same English verb
- Spanish < some English verbs vs. others or even one and the same English verb
- Urdu < some Farsi verbs vs. others
- Yiddish < some Hebrew verbs vs. others

At present we do not have detailed studies available of any of these cases. We would, for instance, predict that the Manange loan verbs from Nepali which take *-ti* date to a period with more bilingualism in Nepali than the loan verbs involving the light verb construction. Predictions based on similar lines of reasoning would apply to the other cases. At present this is of course pure speculation, but we have at least provided a testable hypothesis, which should encourage more detailed research into the outcomes of different contact situations.

Boumans (1998) has also reflected on a possible correlation between the structural outcome of verb borrowing and the kind of contact situation involved. He contrasts Moroccan Arabic/Dutch code-switching in the Netherlands with Arabic/French code-switching in Morocco. In the former situation Dutch verbs are integrated by means of a 'do'-construction, whereas in the latter French verbs appear to be directly inserted — they are "inflected by means of attaching Arabic prefixes and suffixes to the French verb stem" (Boumans 1998:369). Boumans suggests that the occurrence of a 'do'-construction in code-switching is "characteristic for migrant bilingualism in modern industrialized societies" (Boumans 1998:369). We find this suggestion unnecessarily bold and far too specific but are sympathetic to Boumans' more general hypothesis that sudden and intense contact may lead to relatively unintegrated borrowings of the type represented by the light verb strategy. We stress again, however, that a testable hypothesis requires the existence of alternative patterns in one and the same target language such that structural factors can be excluded and sociolinguistic settings more directly compared. Only in this way can a hypothesis regarding a correlation between structural and sociolinguistic factors be stated in a testable way.

6.2. Moravcsik's proposals

The frequent cases of direct insertion (see the large list in section 3.3. above) run counter to Moravcsik's (1975) proposed universal according to which it is impossible to borrow a verb as a verb

(cf. our discussion of her position in section 1 above). She argues that languages which use direct insertion nevertheless comply with the generalization since they have morphologies that allow a noun root to be treated as a verb. However, since there is no positive evidence that the borrowed roots in question are in fact being treated as nouns, the argument is not strong. In general, it would seem that there must be a clear denominalization procedure involved before one can truly argue that verbs are borrowed as nouns. Admittedly such procedures are attested in a large number of cases. Thus, Moravcsik's generalization often applies, even if it cannot count as a universal. Why is it, then, that verbs are often treated as nouns when transferred to another language?

The explanation that we propose is that in the transfer process verbs may become alienated from the morphosyntactic contexts that define their part-of-speech membership and that they thus 'arrive' in the target language underspecified for this feature. With regard to the sociolinguistic implications of the loan verb integration hierarchy we previously suggested that direct insertion implies a relatively high degree of bilingualism. This hypothesis also feeds into this discussion of Moravcsik's generalization. If the treatment of verbs as non-verbs shows these verbs to be underspecified for part-of-speech membership, then the treatment of verbs as verbs, i.e. when direct insertion occurs, would conversely show those verbs to have retained their specification for part-of-speech membership. This could not happen without a good command of the larger structures of the donor language(s) on the part of at least some of the borrowers. In sum, we have three reactions to Moravcsik's proposal. First, we rephrase the generalization that verbs cannot be borrowed as verbs to a generalization that verbs often get borrowed as non-verbs — not necessarily as nouns, but simply underspecified for part-of-speech membership. Secondly, we would state this as a widespread tendency rather than an absolute universal. Thirdly, we would argue that the explanation is ultimately of a sociolinguistic nature, hypothesizing that the cases where Moravcsik's generalization (in its modified form) holds imply a somewhat lower degree of bilingualism than the cases where it does not hold.

7. Conclusions and questions for future research
The purpose of this paper was to present a suitable descriptive classification of the patterns of borrowing of verbs found in the world's languages and to extract generalizations, including possible predictions, from the patterns found.

The data investigated largely represent a convenience sample based on the literature on language contact, personal communication, and descriptions of individual languages. More data could be drawn from (especially) the last-mentioned type of source, but the evidence at hand seems sufficient to substantiate our claim that cross-linguistically there are four major strategies for borrowing verbs: what we have called the light verb strategy, indirect insertion, direct insertion, and paradigm transfer. These four strategies were defined and exemplified in section 3 above.

In some cases not only verbs, but also the strategy for borrowing verbs may be transferred from one language to another. That is, affixes which are used in a particular language to accommodate loan verbs, following the indirect insertion strategy, may be borrowed by another language where they continue to be used to accommodate new loan verbs. Three examples of this 'borrowing of a borrowing pattern', first identified in Bakker (1997a), were provided in section 4. The recurrence of the phenomenon provides a guide for the philologist. That is, when one encounters a loan-verb-accommodating affix without a known origin, it is quite possible that it will turn out to have been borrowed from another language where its function is or was similar.

Another important observation was the not uncommon existence of more than one borrowing pattern in one and the same language. This is found in around 10% of the languages of our sample (cf. section 5).

From our investigation we made the generalization that the early proposal of Moravcsik (1975) according to which it is impossible to borrow a verb as a verb should be rejected. Examples where this happens are, in fact, numerous. Nevertheless, cases that support Moravcsik's approach are also numerous, and we propose to explain these as cases where the verb is treated in the recipient language as underspecified for part-of-speech class membership as a consequence of its alienation from the morphosyntactic context of the donor language (see section 6.2).

Another generalization made in this paper relates to our proposed loan verb integration hierarchy,

cf. (24) above. We see this primarily as a means to explain the existence in one and the same language of more than one borrowing strategy. The hierarchy is based on the hypothesis that the degree to which a loan verb is integrated into the target language may be considered inversely proportional to the amount of formal mechanics expended by the target language in accommodating the loan verb. The degree of integration, in turn, may relate to the degree of bilingualism in the donor language. Thus formal differences in the way that one and the same target language borrows verbs may relate to different degrees of intensity of contact with the donor language(s).

Our study has revealed that loan verb typology is a rich and rewarding area of investigation. The present study is anything but exhaustive. In future research the database should be expanded. At present it is quite hard to come by examples of loan verbs in descriptive grammars, but we hope that this situation will slowly change as awareness of the interest of studying loan verbs increases. Most of the presently available published data involve major European donor languages, and we need more data involving other donor languages. As mentioned in section 3.1, Australia is an example of an area which needs better investigation.

Not only does the database need to be broadened, we also need more detailed, in-depth studies of how individual languages have borrowed verbs over time. A major result of the present paper is that if we are to make any predictions whatsoever as regards preferred verb borrowing strategies, we need to look at cases where one language has more than one strategy, and it is crucial that such studies be both diachronically and sociolinguistically oriented. We need to know when a given borrowing occurred and under what social circumstances. The data we have presented here are far from sufficient to sustain the proposed loan verb integration hierarchy. Currently the hierarchy is to be regarded simply as a hypothesis to be tested, and we hope that other scholars will join us in this research.

References

Abou, Selim
    1962   *Le bilinguisme arabe-français au Liban*. Paris: Presses Universitaires de France.
Annamalai, E.
    1978   The anglicised Indian languages: a case of code mixing. *International Journal of Dravidian Linguistics* 7.2, 239-247.
Backus, Ad
    1992   *Patterns of Language Mixing. A Study in Turkish-Dutch Bilingualism*. Wiesbaden: Harrassowitz.
    1996   *Two in One. Bilingual Speech of Turkish Immigrants in the Netherlands*. Studies in Multilingualism, 1. Tilburg: Tilburg University Press.
Bakker, Peter
    1997a   Athematic morphology in Romani: the borrowing of a borrowing pattern. In: Matras, Yaron, Peter Bakker, and Hristo Kyuchukov (eds.), *The Typology and Dialectology of Romani*. Amsterdam: John Benjamins, 1-21.
    1997b   *A Language of Our Own: The Genesis of Michif, the Mixed Cree-French Language of the Canadian Métis*. New York: Oxford University Press.
    2005   Intertwining and Michif. Paper presented at the Romanisation Worldwide Conference; Bremen, 5-9 May 2005.
Bartels, Hauke
    2005   Loan words in Lower Sorbian – Literary language vs. dialects. Paper presented at the Loanword Typology Workshop, Max Planck Institute for Evolutionary Anthropology, Leipzig, 6-7 June 2005.
Bavin, Edith and Tim Shopen
    1985   Warlpiri and English: languages in contact. In: Clyne, Michael (ed.), *Australia, meeting place of languages*. Pacific Linguistics, C-92. Canberra: Australian National University, 81-94.
Boretzky, Norbert and Birgit Igla
    1991   *Morphologische Entlehnung in den Romani-Dialekten*. Arbeitspapiere des Projektes 'Prinzipien des Sprachwandels', 4. Essen: Fachbereich Sprach- und Literaturwissenschaften an der Universität Essen.
Boumans, Louis

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     1998   *The Syntax of Codeswitching: Analysing Moroccan Arabic/Dutch Conversation*. Tilburg: Tilburg University Press.

Campbell, Lyle
     1985   *The Pipil Language of El Salvador*. Berlin: Mouton de Gruyter.
     1993   On proposed universals of grammatical borrowing. In: Aertsen, Henk and Robert Jeffers (eds.), *Historical Linguistics 1989. Papers from the 9th International Conference on Historical Linguistics*. Amsterdam/Philadelphia: John Benjamins, 91-109.

Canfield, Kip
     1980   Navajo-English code-mixing. *Anthropological Linguistics* 22, 218-220.

Chaer, Abdul
     1976   *Kamus Dialek Melayu Jakarta - Bahasa Indonesia*. Jakarta: Nusa Indah.

Chamereau, Claudine
     2000   *Grammaire du purépecha parlé sur des îles du lac de Patzcuaro*. Munich: LINCOM EUROPA.

Comrie, Bernard
     2005   Loan words in Bezhta: Some preliminary thoughts. Paper presented at the Workshop on Grammatical and Lexical Borrowing, Manchester, 29 September-1 October 2005.

Croft, William
     2000   Parts of speech as language universals and as language-particular categories. In: Vogel, Petra M. and Bernard Comrie (eds.), *Approaches to the Typology of Word Classes*. Berlin/New York: Mouton de Gruyter, 65-102.

Crowley, Terry
     1990   *Beach-la-Mar to Bislama. The Emergence of a National Language in Vanuatu*. Oxford: Clarendon Press.

Curnow, Timothy Jowan
     1997   *A Grammar of Awa Pit (Cuaiquer): An Indigenous Language of South-Western Colombia*. Ph.D. dissertation, Australian National University.

Dixon, R. M. W.
     2002   *Australian Languages. Their Nature and Development*. Cambridge: Cambridge University Press.

Georg, Stefan and Alexander P. Volodin
     1999   *Die itelmenische Sprache. Grammatik und Texte*. Tunguso Sibirica, 5. Wiesbaden: Harrassowitz.

Gravelle, Gilles
     2002   Morphosyntactic properties of Meyah word classes. In: Ger P. Reesink (ed.), *Languages of the Eastern Bird's Head*. (= Pacific Linguistics 524). Canberra: Australian National University, 109-180.

Grimshaw, Jane and Armin Mester
     1988   Light verbs and Φ-marking. *Linguistic Inquiry* 19, 205-232.

Grinevald, Colette G.
     n.d.   *A Grammar of Rama*. Université de Lyon. Report to National Science Foundation, BNS 8511156. Manuscript in possession of the authors.

Haase, Martin
     1992   *Sprachkontakt und Sprachwandel im Baskenland. Die Einflüsse des Gaskognischen und Französischen auf das Baskische*. Hamburg: Buske.

Hale, Ken
     1994   Preliminary observations on lexical and semantic primitives in the Misumalpan languages of Nicaragua. In: Goddard, Cliff and Anna Wierzbicka (eds.): Semantic and lexical universals: theory and empirical findings. Amsterdam / Philadelphia: Benjamins. (= Studies in Language Companion Series; 25), 263-283.

Heath, Jeffrey
     1989   *From Code-Switching to Borrowing. A Case Study of Moroccan Arabic*. London/New York: Kegan Paul International.

Hinds, John
     1986   *Japanese*. Croom Helm Descriptive Grammars. London: Croom Helm.

Holt, Dennis
     1999   *Pech (Paya)*. Munich: LINCOM EUROPA.

Igla, Birgit
     1989   Kontaktinduzierte Sprachwandelphänomene im Romani von Ajia Varvara (Athen). In:

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Boretzky, Norbert, Werner Enninger, and Thomas Stolz (eds.), *Vielfalt der Kontakte. Beiträge zum 5. Essener Kolloquium über "Grammatikalisierung: Natürlichkeit und Systemökonomie" von der Universität Essen*, Vol. 1. Bochum-Essener Beiträge zur Sprachwandelforschung, 7. Bochum: Brockmeyer, 67-80.

    1996   *Das Romani von Ajia Varvara. Deskriptive und historisch-vergleichende Darstellung eines Zigeunerdialekts*. Wiesbaden: Harrassowitz.

Jäger, Andreas
    2004   The cross-linguistic function of obligatory 'do'-periphrasis. Paper presented at the 2004 Conference of the Australian Linguistic Society. <http://66.249.93.104/search?q=cache:xcVAbVnhYrEJ:dspace.library.usyd.edu.au:8080/bitstream/123456789/111/1/ALS-20050630-AJ.pdf+loan verbs&hl=en>

Jespersen, Otto
    1954   *A Modern English Grammar on Historical Principles*. London: George Allen & Unwin, and Copenhagen: Ejnar Munksgaard.

Kachru, B.
    1978   Toward structuring of code-mixing: an Indian perspective. *International Journal of the Sociology of Language* 16, 28-46.

Kang, Yoonjung
    2003   Perceptual similarity in loanword adaptation: English postvocalic word-final stops in Korean. *Phonology* 20, 219-273.

Kishna, Sita. 1979. *Lexicale interferentie in het Sarnami*. M.A. thesis, University of Amsterdam.

Kozintseva, Natalia
    2003   Armenian and Russian: Grammatical contacts. In: Ureland, Sture (ed.): *Studies in Eurolinguistics*, Vol. 1: *Convergence and divergence of European languages*. Berlin: Logos, 219-234.

Lambdin, Thomas O.
    1983   *Introduction to Sahidic Coptic*. Macon: Mercer University Press.

Lewis, Geoffrey L.
    1967   *Turkish Grammar*. Oxford: Clarendon Press.

Lockhart, James
    1998   Three Experiences of Culture Contact: Nahua, Maya, and Quechua. In: Boone, Elizabeth Hill / Cummins, Tom (eds): *Native Traditions in the Postconquest World*. Washington D.C.: Dumbarton Oaks, 31-53.

Lüpke, Friederike
    2005   Contact between Jalonke (Mande) and Pular (Atlantic). Paper presented at the Workshop on grammatical and lexical borrowing; Manchester, 29 September-1 October 2005.

Mackridge, Peter
    1987   *The Modern Greek Language*. Oxford: Clarendon Press.

Madaki, Rufa'i Omar
    1983   *A Linguistic and Pragmatic Analysis of Hausa-English Code-Switching*. Ph.D. dissertation, University of Michigan.

Malchukov, Andrej
    2003   Russian interference in Tungusic languages in an areal-typological perspective. In Ureland, Sture (ed.): *Studies in Eurolinguistics*, Vol. 1: *Convergence and divergence of European languages*. Berlin: Logos, 235-251.

McConvell, Patrick
    2005   Meaning change and stratigraphy in Gurindji loanwords: plugging the loanword typology project into regional contexts and databases. Paper presented at the Loanword Typology Workshop, Max Planck Institute for Evolutionary Anthropology, Leipzig, 6-7 June 2005.

Mifsud, Manwel
    1995   *Loan verbs in Maltese. A descriptive and comparative study*. Leiden: Brill. (Studies in Semitic languages and linguistics; 21).

Minaeva, Vera
    2003   Russian grammatical interference in Ket. *STUF* 56.1/2, 40-54.

Moravcsik, Edith
    1975   Borrowed verbs. *Wiener Linguistische Gazette* 8, 3-30.
    1978   Language contact. In: Greenberg, Joseph (ed.), Charles A. Ferguson, and Edith A. Moravcsik (ass. eds.), *Universals of Human Language 1*. Stanford: Stanford University Press, 93-122.

      2003   Borrowed Verbs. Manuscript in possession of the authors.

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

Myers-Scotton, Carol
      1993   *Duelling Languages: Grammatical Structure in Code-Switching*. Oxford: Clarendon.

Nash, David
      1982   Warlpiri verb roots and preverbs. In: Swartz, Stephen (ed.), *Papers on Warlpiri Grammar, in Memory of Lothar Jagst*. Working Papers of SIL-AAB, Series A, Vol. 6. Berrimah, N.T., 165-216.

Nau, Nicole
      1995   *Möglichkeiten und Mechanismen kontaktbewegten Sprachwandels unter besonderer Berücksichtigung des Finnischen*. Munich/Newcastle: Lincom Europa.

Neetar, Helmi
      1990   Lehnverben und die deverbale Nominalderivation: insbesondere im Estnischen. In: E. A. Savel'eva (ed.): *Materialy VI Mezdunarodnogo Kongressa Finno-Ugrovedov*. Vol. 2. Moscow: Nauka. 355-357.

Newton, Brian
      1964   An Arabic-Greek Dialect. In: *Papers in Memory of George C. Pappageot*. Supplement to *Word* 20. 43-52.

Pap, Leo
      1949   *Portuguese American Speech: An Outline of Speech Conditions among Portuguese Immigrants in New England and Elsewhere in the United States*. New York, Columbia University: King's Crown.

Poplack, Shana
      1980   Sometimes I'll start a sentence in Spanish Y TERMINO EN ESPAÑOL. *Linguistics* 18, 581-618.

Poplack, Shana, David Sankoff, and Christopher Miller
      1988   The social correlates and linguistic processes of lexical borrowing and assimilation. *Linguistics* 26, 47-104.

Pugh, Stefan M.
      1999   *Systems in Contact, System in Motion*. Studia Uralica Upsaliensia 30. Uppsala.

Renault-Lescure, Odile
      2004   Contacts de langues et réanalyse de certaines structures prédicatives en kali'na (langue caribe). Paper presented at the International Joint Conference of the SCL-SCPL-ACBLPE on Caribbean and Creole Languages, Curaçao, 11-15 August 2004.

Romaine, Suzanne
      1985   The syntax and semantics of the code-mixed compound verb in Panjabi/English bilingual discourse. Paper presented at the Georgetown University Round Table on Languages and Linguistics.

Sakel, Jeanette
      2005   Universals of grammatical borrowing. Paper presented at the Romanisation Worldwide Conference; Bremen, 5-9 May 2005.

Sankoff, David, Shana Poplack, and S. Vanniarajan
      1986   *The Case of Nonce Loans in Tamil*. Centre de Recherches Mathématiques, Technical Report 1348. University of Montreal.

Schatz, Henriette F.
      1989   Code-switching or borrowing? English elements in the Dutch of Dutch-American immigrants. *ITL Review of Applied Linguistics* 83, 125-162.

Schmidt, Christopher K.
      2005   Untitled paper presented at the Loanword Typology Workshop, Max Planck Institute for Evolutionary Anthropology, Leipzig, 6-7 June 2005.

Schultze-Berndt, Eva
      2003   Preverbs as an open word class in Northern Australian languages: synchronic and diachronic correlates. In: Booij, Geert and Jaap van Marle (eds.), *Yearbook of Morphology 2003*. Dordrecht: Kluwer Academic Publishers, 145-177.

Schütz, Albert J.
      1978   English loanwords in Fijian. In: Albert Schütz (ed.): *Fijian Language Studies: Borrowing and Pidginization*. (= Bulletin of Fiji Museum No. 4). pp. 1-50.
      1985   *Fijian language*. Honolulu: University of Hawaii Press.

Silva Encinas, Manuel Carlos
      2004   *La secuencia temporal en el discurso narrativo en la lengua yaqui*. M.A. thesis, Universidad

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de Sonora.

Simensen, Erik

2002   The Old Nordic lexicon. In: Bandle, Oskar, Kurt Braunmüller, Ernst Håkon Jahr, Allan Karker, Hans-Peter Naumann, and Ulf Teleman (eds.), *The Nordic Languages: An International Handbook of the History of the North Germanic Languages*. Handbücher zur Sprach- und Kommunikationswissenschaft, Vol. 22.1. Berlin/New York: de Gruyter, 951-963.

Smith, Geoff P.

2002   *Growing up with Tok Pisin. Contact, creolization, and change in Papua New Guine's national language*. London: Battlebridge.

Stenson, Nancy

1998   Spanish loanwords in Cakchiquel. In: Hinton, Leanne and Pamela Munro (eds.), *Studies in American Indian Languages: Description and Theory*. Berkeley: University of California Press, 223-233.

Tosco, Mauro

2005   Gawwada (East Cushitic; South-West Ethiopia). Paper presented at the Workshop on grammatical and lexical borrowing, Manchester, 29 September-1 October 2005.

Trask, R. Larry

1997   *The History of Basque*. London / New York: Routledge.

Ulrich, Charles H.

1997   Loanword adaptation in Lama: testing the TCRS model. *Canadian Journal of Linguistics* 42.4, 415-463.

Valenzuela, Pilar M.

2003.   Los préstamos verbales del español en el shipibo-konibo: aportes a un propuesto universal del contacto lingüístico. Paper presented at the 51th International Congress of Americanists, Santiago de Chile, 14-18 July 2003.

Van der Auwera, Johan

1999   Periphrastic 'do': typological prolegomena. In: Tops, Guy A. J. (ed.), *Thinking English grammar: to honour Xavier Dekeyser*. Leuven: Peeters, 457-470.

Veerman-Leichsenring, Annette

1991   *Gramática del popoloca de Mezontla (con vocabulario y textos)*. Amsterdam / Atlanta: Rodopi.

Vendelin, Inga and Sharon Peperkamp

n.d. *The influence of orthography on loanword adaptations*. Manuscript in the possession of the authors.

Vidal, Alejandra

2001   *Pilagá Grammar (Guaykuruan Family, Argentina)*. Ann Arbor: University of Michigan Dissertation Services, 2001. (UMI Number 3004006).

Vocke, Sibylle and Wolfram Waldner

1982   *Der Wortschatz des anatolischen Arabisch*. Erlangen: Universität Erlangen.

Werner, Heinrich

2002   *Vergleichendes Wörterbuch der Jennisej-Sprachen*. Wiesbaden: Harrassowitz.

Wichmann, Søren

1996   *Cuentos y colorados en popoluca de Texistepec*. Copenhagen: C.A. Reitzel.

2004a   Structural patterns of verb borrowing. Paper presented at the Workshop on Loan Word Typology, Max Planck Institute for Evolutionary Anthropology, Leipzig, 1-2 May 2004.

2004b   Loan verbs in a typological perspective. Paper presented at the Seminar on Contact Linguistics, Linguistic Circle of Copenhagen, 14 December 2004.

Wohlgemuth, Jan.

2005a   Loanword typology: establishing a database of verbal borrowings. Paper presented at the Romanisation Worldwide Conference; Bremen, 5 May 2005 and at the 37th Studentische Tagung Sprachwissenschaft, Saarbrücken, 7 May 2005.

2005b   Towards a typology of verbal borrowings. Paper presented at the Postgraduate Linguistics Conference; Victoria University, Wellington, 13-14 August 2005.