

THE CODE-SWITCHING/BORROWING DEBATE: EVIDENCE FROM ENGLISH-ORIGIN VERBS IN AMERICAN NORWEGIAN

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ABSTRACT: The speech of bilinguals tends to contain occurrences of language mixing, and the mixed items are often single words or word-stems. The classification of such lone other-language items as CODE-SWITCHES or BORROWINGS, and how to define those terms, has received much attention. Some view these processes as part of the same diachronic continuum, in which case there is no reason to assume that they involve different morphosyntactic procedures. Others, however, see the two as fundamentally distinct processes. Looking at English-origin verbs in the *Corpus of American Norwegian Speech*, which documents the heritage language American Norwegian, I show that the way lone other-language items pattern with regards to their inflectional morphology can be explained within a late-insertion exoskeletal approach to grammar, in which the syntactic structures are generated independently from the lexical items. Furthermore, this analysis allows a new take on the code-switching/borrowing debate, in which the two classifications mentioned above are not in opposition.

KEYWORDS: bilingualism, borrowing, code-switching, Distributed Morphology, language mixing

1. INTRODUCTION*

Bilinguals occasionally mix the languages in their repertoire. This can, for instance, involve the speaker uttering one sentence in one language and then switching to another language for the next sentence, a phenomenon called INTERSENTENTIAL LANGUAGE MIXING. More interesting from a grammatical point of view, however, is the language mixing that occurs within a sentence, i.e., INTRASENTENTIALLY. Such mixing involves chunks from one language, often referred to as the DONOR LANGUAGE, occurring in a sentence otherwise comprised of the other language, the RECIPIENT LANGUAGE. The material from the donor language could be just a single word or even a word stem. Such lone donor-language items have received much attention in the literature, and a main issue has been whether they should be classified as instances of CODE-SWITCHING or BORROWING, and, no less trivially, what those two terms should denote. In addition to this debate about terminology and classification, the past decades have also seen several attempts at formally analyzing language mixing.

This article provides a case study in language mixing involving verbs of English origin that occur in the speech of a population of heritage speakers of Norwegian who have lived their entire lives in America. I make use of a formal model which can account for both the monolingual and mixed speech patterns observed. The model in question, namely an exoskeletal model which relies on the late insertion of the phonological exponents of lexical items, was originally proposed on the basis of monolingual data (see, e.g., the extensive discussions in Borer 2005a, b and Lohndal 2014). It has recently been

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shown to account successfully for the most frequently observed mixing pattern for English-origin verbs and nouns in this heritage variety of Norwegian (Grimstad et al. 2014; Riksem et al. to appear), and in Grimstad et al. (2017), it is also shown to account for some observed exceptions to the most typical mixing pattern. The present article, however, is the first attempt to systematize all the English-origin verbs found in a corpus of spoken American Norwegian and see how they pattern. The observed variation can be explained by a late-insertion exoskeletal grammar model, and is in fact expected given such a model's layout. This strengthens the support for the model in question considerably. As it happens, the observed mixing pattern and the formal model discussed here also fit well with aspects of Muysken's (2000, 2013) proposed typology of CODE-MIXING,¹ and this study can therefore inform the code-switching/borrowing debate. My research questions can be summarized as follows:

- RQ1: How do the English-origin verbs in a corpus of American Norwegian pattern with regards to their inflectional morphology?
- RQ2: Can a late-insertion exoskeletal model account for these mixing patterns?
- RQ3: How can these mixing patterns inform the code-switching/borrowing debate?

The structure of this article is as follows. Section 2 introduces the code-switching/borrowing debate, and I will first present the general debate (2.1) before focusing more closely on the specific language mixing typology of Muysken (2.2), which will be useful in illuminating the data. Section 3 lays out the type of formal model I utilize. In Section 4.1, I present the heritage variety of Norwegian and the speech corpus analyzed here, and 4.2 contains the data, i.e., how English-origin verbs pattern in this corpus. How a late-insertion exoskeletal model can account for the data is addressed in Section 5.1, before 5.2 discusses the consequences this analysis has for the code-switching/borrowing debate. Sections 6 concludes the article.

2. THE CODE-SWITCHING/BORROWING DEBATE

I am using the term *language mixing* to “describe a situation where a speaker produces linguistic outcomes constituted by a mixture of elements from two or more languages” (Lohndal 2013: 2 fn). This is meant as a strictly observational, pre-theoretical term which encompasses all types of mixing, whether it consists of a single mixed item or a larger chunk, whether it is spontaneous or established and whether the material from the donor language is grammatically integrated into the recipient language or not.² For lone donor-language items, this means that established loanwords are included alongside items that possibly are mixed for the nonce, and also that an item is considered mixed regardless of whether it behaves morphosyntactically according to rules of the donor or recipient language. The only criterion for inclusion is that the linguistic output is observed to contain elements from more than one language. This stance means I can remain agnostic about whether a particular mixed item I come across is mixed for the nonce or established as a loanword, a question which has been at the center of the debate I will address in the following section.

In the literature, however, what I denote *language mixing* is usually divided into various subtypes that are treated separately. One typical distinction sets what is labelled *code-switching* apart from borrowing, and in the following section, I will present the debate researchers are having on account of this distinction and argue that much of the disagreement in the field stems from the fact that different researchers use the same terms to refer to different things.

2.1 Comparing apples and oranges - different sets of characteristics

Gardner-Chloros (2009: 10-11) writes the following:

¹ Muysken uses the term *intrasentential code-mixing* to refer to “cases where lexical items and grammatical features from two languages appear in one sentence” (2000: 1), i.e., in a manner fairly parallel to my use of the term *intrasentential language mixing* (but with one important distinction concerning lexical borrowing, which will be addressed in Sections 2.2 and 5.2).

² Muysken (2015: 242) also refers to *language mixing* (and *language interaction*) as the most neutral terms existing for these phenomena.

[Code-switching (CS)] is not an entity which exists out there in the objective world, but a construct which linguists have developed to help them describe their data. It is therefore pointless to argue about what CS is, because, to paraphrase Humpty Dumpty, the word CS can mean whatever we want it to mean.

The same, of course, could be said about borrowing or any other theoretical construct. It might seem like a trivial and thus rather unnecessary statement, but looking at the code-switching/borrowing debate, it appears as if this simple fact – that the meaning of this term is not evident *a priori* – at times is forgotten. Thus, one runs the risk of overlooking the fact that several different sets of criteria defining these terms exist in the literature (see, e.g., Stammers & Deuchar 2012: 630). With that in mind, we can look at two different sets of characteristics that are often used and the theoretical consequences each of them have.³

Some researchers see code-switching and borrowing as part of the same diachronic continuum (see, e.g., Myers-Scotton 1993, 2002, 2006; van Coetsem 2000; Thomason 2003). Others, however, see the two as fundamentally distinct processes (e.g., Sankoff & Poplack 1981; Poplack & Dion 2012; MacSwan 1999; MacSwan & Colina 2014). While the former group uses some variation on the characteristics provided in A below, the latter relies on characteristics along the lines of B.⁴

- A. Borrowing is the diachronic process by which languages enhance their vocabulary (or other domains of structure), while code-switching is instances of spontaneous language mixing in the conversation of bilinguals. Borrowed items originate as code-switches.
- B. Code-switching involves inserting alien words or constituents into a clause; borrowing involves entering alien elements into a lexicon.

When researchers use the same terms to mean different things, it is bound to result in confusion. As an example, when Poplack, Sankoff & Miller (1988) introduced the term *nonce borrowing* to apply to items that are borrowed spontaneously for the nonce,⁵ researchers like Myers-Scotton (1993) and Haspelmath (2009)⁶ dismissed the term point blank for being straight out contradictory. In their view, borrowings are completed processes of language change – in other words, by definition established. What Poplack and her associates call *nonce borrowings*, however, would in the same theory be referred to as *code-switching*. Haspelmath (2009) does acknowledge that one might broaden the definition of borrowing in such a way as to include Poplack, Sankoff & Miller's (1988) *nonce borrowing*. However, he stresses that he cannot see how they can do so without ending up with a definition of borrowing that encompasses all instances of code-switching – effectively making *nonce borrowing* the term for all types of code-switching.

This critique of the term *nonce borrowing*, of course, only works when you apply characteristics akin to those in A; it is theory-dependent. Borrowing is by definition established, ergo it cannot be spontaneous. But for Poplack and her associates, who use the term *borrowing* to refer to items that are copied from the mental lexicon a bilingual speaker has for the lexical items of one language to the mental lexicon the same speaker has for items of another language, diachrony does not need to enter into the picture. Instead, the distinction between code-switching and borrowing relies solely on whether or not the item in question is taken straight into the syntax or first copied to another mental lexicon.

The researchers relying on the characteristics described in B are not without their own theory-dependent arguments, however. In an article tellingly named *Myths and facts about loanword development*, Poplack & Dion (2012), for instance, looked at the diachronic trajectory as well as the synchronic behavior of English-origin items in Quebec French over a real-time period of 61 years. Even

³ There are other ways of using these two terms as well; see, e.g., Haspelmath (2009: 36-40) on different versions of the term *borrowing*. For the purposes of this paper, however, presenting these two approaches will suffice.

⁴ A and B are somewhat altered and expanded versions of the sets of characteristics given by Matras (2009: 106) and Muysken (2000: 69).

⁵ According to Poplack (2015: 921), the term *nonce borrowing* was first coined by Weinreich (1953/1968), but with a different meaning.

⁶ Note that even though Haspelmath sees loanwords as established by definition, he does not necessarily agree that they originate as code-switches, concluding that it “is an intriguing suggestion, but so far there is not much evidence for it” (2009: 43).

though the study itself is rigorous and impressive, certain conclusions are just as theory-dependent as those of Myers-Scotton (1993) and Haspelmath (2009) above. For instance, they find that whereas lone donor-language items in their study are morphosyntactically integrated into the recipient language from the get-go, mixed multiword fragments retain the morphosyntax of the donor language. Based on this observation and the fact that most of the items mixed for the nonce never recurred in the 61-year period under study, they conclude that the speakers “borrow the former, and code-switch the latter” (2012: 279), meaning loanwords do not originate as code-switches. This is a fair conclusion given their own diagnostics for code-switching and borrowing. However, when they conclude that this is evidence that researchers like Myers-Scotton are wrong when they see the two as part of a diachronic continuum, they are disregarding the fact that these other researchers are characterizing the two concepts differently – and, as a result, that morphosyntactic integration is an irrelevant factor.

Now that it is clear that there are at least two different sets of characteristics at play, the question becomes how to arrive at more consistent characteristics. To do so, we need to remember another seemingly trivial fact: namely, why we need terminology in the first place. For a term to be needed, it should refer to a pattern or phenomenon that can be observed and, consequently, is worthy of scientific study. Both sides of this debate focus on observations that clearly meet this criterion; however, the observations in question differ from one another. What the proponents of B are studying is the fact that whereas some mixed items are morphosyntactically integrated into the recipient language, others retain the morphosyntax of the donor language. That is an empirical distinction we can label and study. As for the proponents of A, they are more concerned with the observation that speakers who are at least to some extent bilingual can language mix in novel ways, and that mixed items can become adopted into the recipient language to such a degree that even monolingual speakers of the recipient language can make use of them. Moreover, in time, speakers might not even be aware that the item in question was not originally native to their language. These are also empirical facts that we can label and study. In other words, the research efforts of both groups should continue, but the labels for these phenomena should be disambiguated to avoid equivocation or confusion.

2.2 Muysken’s typology

In his 2000 book, *Bilingual Speech: A Typology of Code-Mixing*, Muysken agrees with the present author, Stammers & Deuchar (2012) and others when he concludes, “[m]uch of the confusion in the field appears to arise from the fact that several distinct processes are at work” (2000: 3). He goes on to identify three different types of mixing:

Insertion of material (lexical items or entire constituents) from one language into a structure from the other language

Alternation between structures from languages

Congruent lexicalization of material from different lexical inventories into a shared grammatical structure

This list is later expanded to include a fourth type, called BACKFLAGGING, which is the insertion of heritage language discourse markers in L2 discourse (Muysken 2013). Since this article is concerned with verbs, not discourse markers, I will not discuss backflagging any further.

Muysken exemplifies INSERTION with both single mixed items, as in (1), and bigger mixed constituents, as in (2):⁷

- | | | |
|-----|--|--------------------------------------|
| (1) | na’iish-crash lá
1sg:pass out-crash EMPH
‘I am about to pass out.’ | (Navajo/English; Canfield 1980: 219) |
| (2) | Yo anduve <i>in a state of shock</i> por dos días | (Spanish/English; Pfaff 1979: 296) |

⁷ Examples (1)-(4) are reproductions of Muysken’s examples (2), (3), (5) and (10) (2000: 5-6), respectively. I present the examples in the way they originally appeared, with or without glosses. In (1), “1sg:pass” is “first person singular passive” and “EMPH” is “emphatic”.

‘I walked in a state of shock for two days.’

However, he stresses that lexical borrowing should be kept separate from insertion and other types of code-mixing, maintaining that “[c]ode-mixing involves inserting alien words or constituents into a clause; borrowing entering alien words into a lexicon” (2000: 69). As for ALTERNATION, there is a switch from one language to another rather than a chunk in one language being somehow embedded under the structure of the other. This is shown in (3).

- (3) Les femmes et le vin, *ne ponimayu* (French/Russian; Timm 1975: 312)
‘Women and wine, I don’t understand.’

In addition, he introduces the type of mixing he calls CONGRUENT LEXICALIZATION, which he illustrates with, among others, the following example of Spanish/English mixing from Pfaff (1976: 250):

- (4) Bueno, *in other words*, *el flight* [que sale de Chicago *around three o’clock*].
‘Good, in other words, the flight that leaves Chicago around three o’clock’

He admits that this could be seen as a combination of several insertions and alternations within one another, and in Muysken (2015), he stresses that the main code-mixing distinction is between insertion and alternation. However, he notes that (i) some of the mixed fragments are not separate constituents and (ii) the constituents all seem to obey grammatical rules that are common to both languages. As a result, he concludes that the third term, *congruent lexicalization*, is needed, since “the going back and forth suggests that there may be more going on, and that the elements from the two languages are inserted, as constituents or as words, into a shared structure (2000: 7).” In other words, congruent lexicalization can occur when a grammatical structure is shared by the two languages in question and the speaker therefore is free to randomly insert lexical elements from either language.

Regardless of whether or not one agrees that congruent lexicalization is needed in addition to insertion and alternation, one issue with Muysken’s (2000) typology is the fact that the status of loanwords is somewhat unclear. On the one hand, he states on page 1 that “it will also be necessary to separate cases of code-mixing from **lexical borrowing**”. This is further substantiated on page 71, where he asserts that mixing below word-level is lexical borrowing, not code-mixing. However, on page 60, he states that borrowing is a kind of insertion (which in turn, of course, is a kind of code-mixing); and on page 5, he illustrates insertion with the example rendered as (1) above, where an English verb stem receives verbal inflections from Navajo (in other words, an example of mixing below the word level).

It is possible that the solution to these apparent contradictions is that Muysken sees lexical borrowing as akin to insertion in many ways, but that other factors set it apart and make it necessary to exclude it from code-mixing as such. However, the most obvious reason for doing so does not have to do with empirical facts related to his mixing data, but with how one envisions the storage of lexical items in the brain. In Muysken’s model, a bilingual speaker has an individual mental lexicon for each language he or she knows. Building on that, he assumes that whereas insertion and other types of code-mixing involves elements from both lexicons being inserted into the syntax, lexical borrowing involves an element being copied from one lexicon into the other – which means that when the item in question is used in the syntax, only one lexicon is actually involved. This is illustrated in Figure 1.

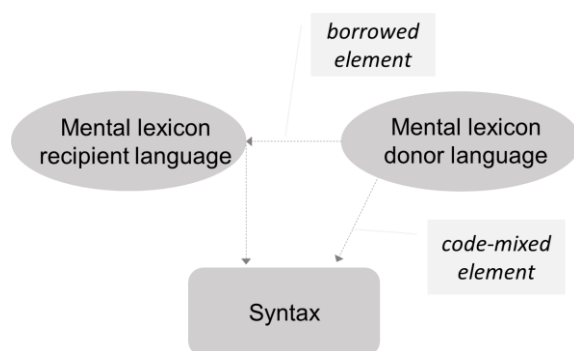


FIGURE 1. LEXICAL BORROWING AND CODE-MIXING WITH SEPARATE MENTAL LEXICONS

If, however, lexical elements from all languages a speaker knows are stored in one and the same lexicon or list, this distinction would fall away. This is precisely what is assumed in the model made use of here, which will be presented in the following section.

3. A LATE-INSERTION EXOSKELETAL MODEL OF LANGUAGE MIXING

Given an exoskeletal approach to grammar, syntactic structures are not derived by properties of a lexical entry, the way one would assume given a lexicalist model. Instead, what might appear to be properties of a lexical entry – which, depending on the specific version of the theory, may include argument structure, syntactic category and morphological information – are derivatives of a syntactic structure which is generated independently from the lexical items that will come to realize them. The term *exoskeletal* originates with Borer’s work (2005a, b), but I will use it to refer to the family of models that all share the insights outlined above. These include, e.g., van Hout (1996), Marantz (1997, 2013), Borer (2005a, b, 2013), Áfarli (2007), Ramchand (2008), Lohndal (2014), and Alexiadou et al. (2015a). These models were initially developed to account for monolingual data. In recent years, however, this approach has also proved successful in analyzing language mixing (see, e.g., González-Vilbazo & López 2011; Pierantozzi 2012; Bandi-Rao & den Dikken 2014; Grimstad et al. 2014; Alexiadou et al. 2015b; Merchant 2015; Lillo-Martin et al. 2016; Riksem 2016; Alexiadou 2017; Grimstad et al. (2017); Riksem et al. (to appear)).⁸⁹

I will make use of an exoskeletal approach to grammar with a late-insertion approach to morphology, as in DISTRIBUTED MORPHOLOGY (DM) (Halle & Marantz 1993; Harley & Noyer 1999; Embick & Noyer 2007; Embick 2015). Instead of a single lexicon, DM assumes three separate lists that are accessed at different stages of the derivation, depicted in Figure 2:

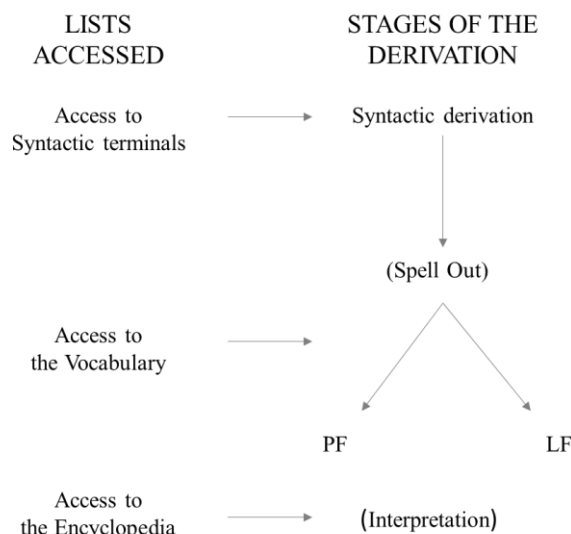


FIGURE 2. THE GRAMMAR (EMBICK & NOYER 2007: 301)

The syntactic terminals consist of roots and features or feature bundles, the latter two known collectively as ABSTRACT MORPHEMES. I assume that all roots one individual has ever learned, whether the speaker

⁸ Note that these accounts differ in *how* exoskeletal they are, e.g., whether they assume that roots or categorized stems make out the smallest building blocks; but all of these make use of exoskeletal ideas.

⁹ Branchini & Donati (2016) study code-blending, i.e., simultaneous speech and sign language by bimodal bilinguals, and find that a lexicalist model explains the data better than an exoskeletal one (contrary to their conclusions in previous work on code-switching). However, Lillo-Martin et al. (2016) come to the opposite conclusion based on the same type of data. I do not have enough space to discuss these data here, but note that code-blending is an important source of data for future research.

is monolingual or multilingual, are stored together.¹⁰ In other words, roots do not belong to any language in the sense of being listed separately or having any language features.¹¹ Instead, knowledge of what language a specific root usually appears in is stored in the Encyclopedia, along with other idiosyncratic and idiomatic pieces of information. Abstract morphemes, on the other hand, are here thought to be stored in language-specific lists. This means that someone competent in two languages or varieties will have one list for the abstract morphemes of the first one, another list for those of the other, and a third list encompassing all the roots. This is depicted in Figure 3.¹²

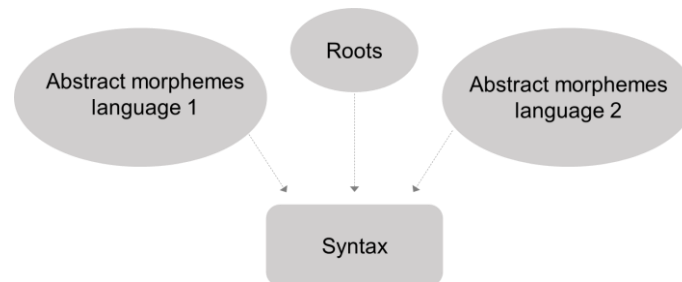


FIGURE 3. SEPARATE LISTS OF ABSTRACT MORPHEMES AND SHARED LIST OF ROOTS

The features that make up the abstract morphemes are part of a universal repository, so according to this view, learning a language or variety is learning which features are “active” in that specific language and how they bundle together, and then storing that information as specific abstract morphemes. Thus, if Norwegian makes use of the feature bundle [+X, +Y, +Z], and a particular speaker of Norwegian also speaks another language or variety which makes use of the exact same feature bundle, the same bundle will be stored in both lists.

At Spell-Out, once the syntactic structure has been generated, VOCABULARY ITEMS, i.e., the phonological exponents, are inserted. The exponents of roots are inserted freely into designated slots,¹³ whereas the functional ones are subject to feature matching requirements in line with the SUBSET PRINCIPLE (Halle 1997):

Subset Principle: The phonological exponent of a Vocabulary Item is inserted into a position if the item matches all or a subset of the features specified in that position. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. Where several Vocabulary Items meet the conditions of insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.

I will provide syntactic structures and show how a model such as this one can explain the data in Section 5.1. A more thorough description of the model can be found in Riksem et al. (to appear). First, however, I will present the heritage variety American Norwegian and the corpus I am drawing data from (4.1) and then the actual data (4.2).

¹⁰ Note that this model would work just as well for the data in this paper if the smallest lexical building blocks for the syntax were categorized roots, i.e., stems, rather than bare roots. For ease of exposition, I will follow DM in assuming listed roots. I will also write *root* when referring to a mixed item below word-level, even though we cannot know whether it in fact was mixed as a bare root or a categorized one, i.e., a stem (see Riksem et al. to appear for a discussion of whether these mixed items below word-level in CANS are roots or stems). On the couple of occasions that I have mentioned *verb stem* up to this point, it has been in a pre-theoretical sense, necessitated because I had not yet introduced the formal model.

¹¹ For DM-based approaches to language mixing that assume language-specific root lists, see Pierantozzi (2012) and Lillo-Martin et al. (2016).

¹² How language mixing works given this model will be shown in Section 5.2.

¹³ If the mixed item were a stem rather than a bare root, it could be inserted freely into designated slots as well, i.e. ones where the given lexical category (verb, noun, ...) was licit. The same goes for bigger mixed chunks, such as full DPs, TPs, PPs etc. See Grimstad et al. (2014) for a discussion of how these are handled in the model.

4. AMERICAN NORWEGIAN AND LANGUAGE MIXING

4.1 American Norwegian

American Norwegian is the variety of Norwegian spoken by Norwegian immigrants who came to the US between roughly 1825 and 1925, as well as some of their descendants. Most of the immigrants settled in tight-knit Norwegian communities and, consequently, Norwegian remained the prominent home language and was actively used in the community at large for quite some time (Haugen 1953). This resulted in children growing up in the US with American Norwegian as their L1. As such, American Norwegian can rightly be characterized as a *heritage language*, i.e., a non-dominant language in the larger speech community that is available to certain children (Rothman 2009: 156).

Despite living in predominantly Norwegian communities, the language of the immigrants was gradually affected by contact with English. Amongst other things, this resulted in extensive language mixing. This and other aspects of their speech have been observed, recorded and described repeatedly since the 1930's,¹⁴ culminating in data collection for the *Corpus of American Norwegian Speech*, or CANS (Johannessen 2015), which started in 2010. CANS is a searchable online database with sound and video files from which I obtained the data presented below.¹⁵ It currently comprises recordings of 50 2nd to 5th generation immigrants, most between 70 and 100 years old at the time of recording. All of them are L1 speakers of American Norwegian, which they learned at home, but the use of Norwegian in the overall community had dwindled to near-zero by the time these speakers grew up, resulting in them becoming dominant in English upon entering school. The vast majority did not teach their children Norwegian, and most of them had practiced their Norwegian only sporadically, sometimes not for decades, at the time the recordings began. Although their proficiency levels vary, Johannessen & Salmons (2012: 141) report that after some initial fumbling, they were all able to conduct conversations in Norwegian.¹⁶

4.2 English-origin verbs in American Norwegian

This article is concerned with the English-origin verbs found in the CANS corpus, and in particular the ones that occur alone in otherwise Norwegian utterances.¹⁷ Examples (5)-(6) give a sense of how these appear in the corpus. Note that the English items are marked in **bold** whereas pauses and hesitations are marked with “#” and “e”, respectively. The information in parentheses and italics after each American Norwegian example identifies the CANS speaker who uttered that specific quote. When necessary, the transcriptions are altered in order to present English words with English spelling. It should also be noted that CANS provides both orthographic and phonetic transcriptions. For clarity, I have used the orthographic one here.¹⁸ I have also chosen to gloss only the relevant items.

- (5) a. *og* **hunt-er** *med bue og pil nå* (*coon_valley_WI_04gm*)
and hunt-PRES with bow and arrow now
'and hunts with bow and arrow now'
- b. *Vi bare satt der og* **watch-a** *da* (*rushford_MN_01gm*)
we just sat there and watch-PAST then
'We just sat there and watched then.'
- c. *Jeg ville ikke* **bother-e** *henne* (*westby_WI_01gm*)
I would not bother-INF her
'I would not bother her.'
- (6) a. *og hun # nettopp nå # em #* **died** (*albert_lea_MN_01gm*)

¹⁴ See, e.g., Haugen (1953) and Hjelde (1992).

¹⁵ How I have made use of the corpus will be described throughout Section 4.2.

¹⁶ Note that whereas some are very fluent and have a distinct Norwegian phonology, others struggle more.

¹⁷ See Áfarli (2015) for an exoskeletal analysis of English-origin verbs that occur in American Norwegian in the data material presented in Haugen (1953) and Hjelde (1992).

¹⁸ The orthographic transcription is standardized to BOKMÅL, the more common of the two available written Norwegian standards (see Venås 1993, Vikør 1995).

- and she # just now # em # died
 ‘and she # just now # em # died’
- b. e v- vi # **translated** «Synnøve Solbakken» (gary_MN_01gm)
 e w- we # translated «Synnøve Solbakken»
 ‘e w- we “ translated «Synnøve Solbakken»’
- c. før vi reiste # **talk** snakkepå telefon (webster_SD_01gm)
 before we travelled # talk talk on telephone
 ‘before we travelled # talk talk on the telephone’

What is immediately evident is that these English-origin verbs fall into two main groups: those that appear with overt Norwegian inflectional suffixes, as in (5a-c), and those that do not, as in (6a-c). The aim of this section is to show in detail how these English-origin verbs are dispersed across these two groups.

I began by identifying each occurrence of every English-origin verb I could find in the corpus and classifying them as either morphologically integrated into Norwegian (by means of an overt Norwegian suffix) or not. For quality control, I have listened carefully to every example and verified that the affixes were produced as transcribed.¹⁹ I also noted whether the verb appeared in an otherwise Norwegian utterance or not. The result is shown in Table 1:

	Overt Norwegian inflection	Overt English inflection / lacking inflection ²⁰
Part of English utterance	8	1262
Alone in otherwise Norwegian utterance	210	82
Total	218	1344

TABLE 1. MORPHOLOGICAL INTEGRATION BY AFFIXATION OF ENGLISH-ORIGIN VERBS IN CANS.

I found a total of 1562 English-origin verbs in CANS, and out of those, the vast majority – 1262 tokens or 81% – consisted of English verbs occurring in English utterances and following the English inflectional pattern. The utterances labelled *English* were either separate English utterances (full sentences or one-word exclamations) or English utterances of at least two words embedded in otherwise Norwegian utterances. In the latter category, I included all instances where an English verb was either directly adjacent to another English word, as in (7a), or adjacent to a constituent containing an English noun, as in (7b).

A mere eight of the verbs that occurred in such English utterances displayed overt Norwegian inflectional suffixes. Out of those, seven were part of two-word English utterances embedded in a larger Norwegian one, such as (7a-b):

- (7) a. så jeg **keep-er** **track** av det (portland_ND_01gm)
 so I keep-PRES track of that
 ‘so I keep track of that.’
- b. du kan jo ikke **mow-e** noen **lawn** (coon_valley_WI_07gk)
 you can well not mow-INF any lawn

¹⁹ I do not discuss phonology for reasons of space, and therefore do not have any American Norwegian counterevidence to the claim that whereas loanwords will have the recipient language phonology, code-switches retain the phonology of the donor language (MacSwan 1999; MacSwan & Colina 2014). However, as mentioned in 2.1., Poplack and her associates have collected and analyzed large corpora involving language mixing, as presented in Poplack, Sankoff & Miller (1988), Poplack (2012) and Poplack & Dion (2012). Summing up these analyses, Poplack (2015: 419) states that “because phonological integration is gradient, in both long-attested [...] and more recent borrowings [...], as well as in CS and in unmixed speech more generally, on its own it is a poor predictor of language status.” Moreover, corpus searches show that the phonology of a single item may even vary intra-individually (Poplack, Sankoff & Miller 1988: 71). Faced with such data, it is hard to see how a model relying on phonological integration as an important criterion can be correct.

²⁰ All the verbs lacking inflections were forms that would be bare following a standard English inflectional pattern and with an overt inflection following a standard Norwegian inflectional pattern.

occurring in different inflected versions a total of seven times uttered by three different speakers, and with only one of those seven occurrences lacking overt Norwegian inflection.²¹ Although not as frequent as, e.g., *farm*, which appears alone in otherwise Norwegian utterances 46 times, this is still more frequent than most English-origin verbs in the corpus, as illustrated in Figure 4:

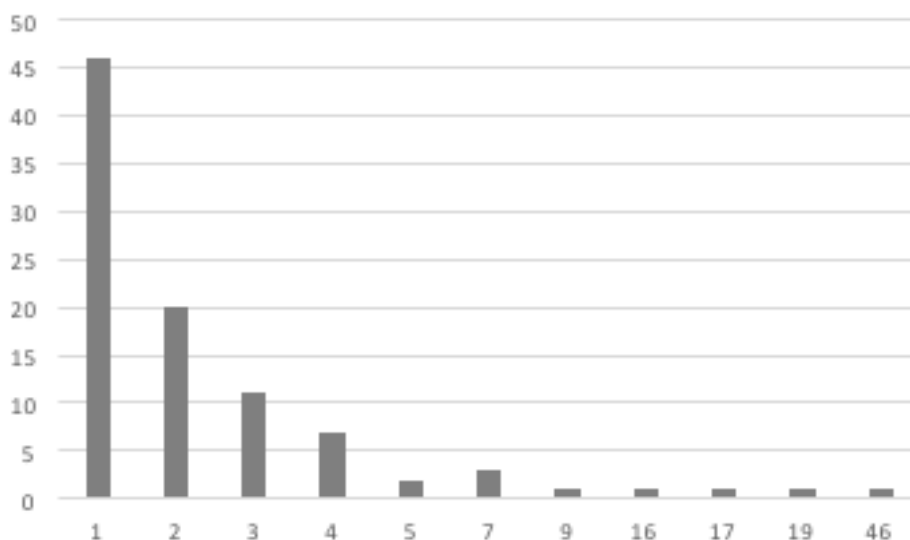


FIGURE 4. THE LEMMA FREQUENCY OF LONE ENGLISH-ORIGIN VERBS IN CANS.

The x-axis shows the frequency whereas the y-axis shows the number of lone English-origin verbs in CANS with that specific frequency. Whereas 46 English-origin verbs occur once, only three occur seven times, like *visit*, and a mere five occur more than that. It therefore seems unlikely that the speaker in (9a) would have problems with this particular verb.

There is no certain way to determine what triggered a specific instance of discourse flagging, however, so many of the inclusions in each of these two subgroups can probably be contested. Even so, it is interesting to see how the data pattern overall. The subgrouping yielded the following results, shown in Table 2:

	Overt Norwegian inflection	Overt English inflection / lacking inflection
Part of English utterance	8	1262
Alone with seemingly related flagging	27	61
Alone with seemingly unrelated flagging	34	15
Alone without flagging	149	6
Total	218	1344

TABLE 2. MORPHOLOGICAL INTEGRATION BY AFFIXATION OF ENGLISH-ORIGIN VERBS IN CANS WITH DISCOURSE FLAGGING AS A VARIABLE.

The pattern stands out more clearly in a stacked bar chart, given as Figure 5:

²¹ *Do* is less common, with three occurrences uttered by three speakers and each lacking overt Norwegian inflection.

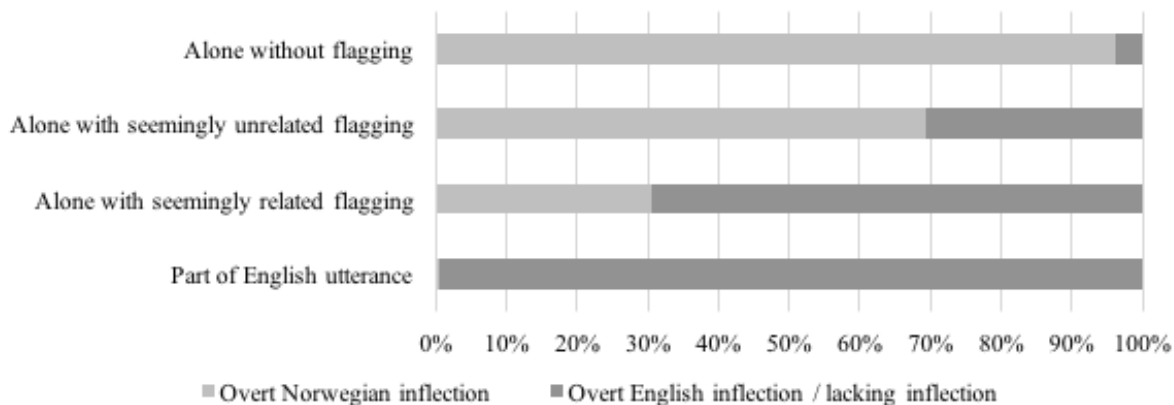


FIGURE 5. MORPHOLOGICAL INTEGRATION BY AFFIXATION OF ENGLISH-ORIGIN VERBS IN CANS WITH DISCOURSE FLAGGING AS A VARIABLE.

This suggests that discourse flagging indeed is a relevant factor. When an English-origin verb occurred alone and appeared to be flagged, it only displayed overt Norwegian inflection about 31% of the time. When the scenario was the same but the flagging seemed unrelated to the verb, however, it displayed inflection 69% of the time, and when the verb occurred alone without any discourse flagging, the chance of it appearing with overt Norwegian inflection was 96%.

To sum up, we see that when an English-origin verb appears in a larger English utterance, it is virtually never morphologically integrated into Norwegian, whereas it almost always is when it appears alone and unflagged in an otherwise Norwegian utterance. If it appears to be flagged, however, it is more likely to not be integrated even when it occurs alone in a Norwegian context.

5. ANALYSIS

5.1 A late-insertion exoskeletal account of the data

We have seen that the lone English-origin verbs in CANS appear with overt Norwegian inflectional affixes 72% of the time. I will address how this fits with Muysken’s typology in Section 5.2., but first, in this section I will show how the proposed late-insertion exoskeletal model can account for these data.

First, we have examples such as (5a), repeated here as (10):

- (10) *og hunt-er med bue og pil nå* (coon_valley_WI_04gm)
 and hunt-PRES with bow and arrow now
 ‘and hunts with bow and arrow now.’

Even though there is an English root, *hunt*, the rest of the utterance – including the verbal inflection – is Norwegian. In the framework I adopt, this is entirely expected, and in fact this is the only possible outcome for an English root mixed into a Norwegian utterance. The reason is the way the model works in collaboration with the Subset Principle.

A late-insertion exoskeletal model proposes that roots are devoid of features.²² Inflectional properties are situated in a functional head in the “middle field” of the sentence, e.g., as the head of TP, although the precise label of the functional head is not important for present purposes. This means that when deciding which inflection the root will receive, it does not matter which language the specific root is associated with; all that matters is which feature bundle occurs on the functional head. The structure for a simple intransitive sentence containing the verb in (10), *hunter* (the English verb *hunt* plus Norwegian inflection), will for instance be as in Figure 6.²³

²² Or, if this were a mixed verb stem, no features apart from the lexical category.

²³ The structure builds mainly on Lohndal (2012, 2014) and makes use of the Voice projection introduced by Kratzer (1996).

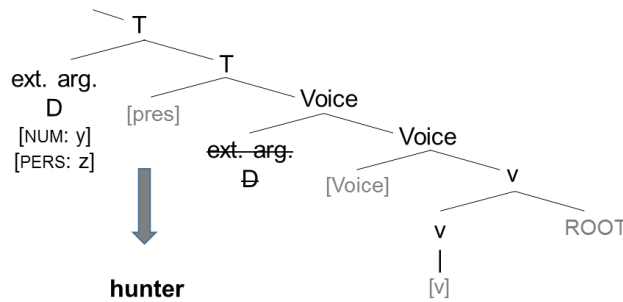


FIGURE 6. SYNTACTIC STRUCTURE FOR *HUNTER*.

I assume that the categorized root, i.e., the verb stem, acquires tense by moving to T via Voice.²⁴ We can be certain that the feature bundle in T must be the Norwegian one because the exponent is *hunter*, with Norwegian inflection, not *hunt* or *hunts*. Figures 7 and 8 show how a portion of the tree would have looked, had the structure instead been English.

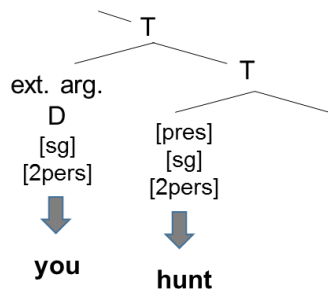


FIGURE 7. SYNTACTIC STRUCTURE FOR *YOU HUNT*

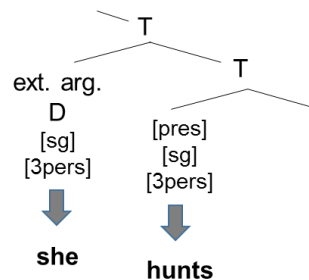


FIGURE 8. SYNTACTIC STRUCTURE FOR *SHE HUNTS*

The only thing distinguishing the English tense projection from the Norwegian one, is that the English T has unvalued features for number and person that have to be valued by features of the external argument. When the external argument has the features [NUM: SG, PERS: 3], as in Figure 8, the exponent of T is *hunts* with an *-s*. When it contains any other feature combination, the exponent is *hunt*, as in Figure 7. In other words, English has subject-verb agreement. Norwegian does not, however; this implies that the feature bundle of T used in Norwegian does not include unvalued features for number and person. Following the Subset Principle, then, English *hunt* and *hunts* are ruled out as possible phonological exponents of the feature bundle of the Norwegian T projection, since they include features for number and person that are not in the structure.

Given this model, it is not strange that lone English-origin verbs in American Norwegian usually appear with overt Norwegian inflection. The speakers are, after all, attempting to speak a variety of Norwegian, meaning they are in a Norwegian LANGUAGE MODE (cf. Grosjean 2008, 2013 for a similar use of this notion). It therefore makes sense that they will pick abstract morphemes from the Norwegian list when generating the syntactic structure, and the corresponding Norwegian phonological exponents will hence be the best matches.²⁵

What could be construed as surprising is that 28% of the verbs in the sample lack overt Norwegian inflection. Following the model I adopt, there are only two possible explanations. One is that the abstract morpheme in T is the Norwegian one and that the exponent therefore is Norwegian too, albeit a null affix, which occurs in some Norwegian dialects.²⁶ The other option is that the abstract morpheme in T

²⁴ Next, the inflected verb would move to C, since Norwegian is a V2 language.

²⁵ Notice that this probably would influence what phonological exponent the speaker chooses even if there were an identical abstract morpheme in the American list. If congruent lexicalization indeed occurs, such examples would provide extra support to this model, showing that whenever a bilingual speaker makes use of an abstract morpheme present in both languages that the speaker knows, exponents from either language can freely be inserted.

²⁶ I will not attempt to ascertain which English-origin verbs with null affixes have English structures and which have Norwegian ones. First, it would be impossible to say for certain, especially because it is impossible to say anything of certainty about the speakers' dialectal backgrounds (both because some never mention where their ancestors originate from, and because

is the English one, and since some of the verbs in the corpus have overt English suffixes, like the ones in (6a-b), *died* and *translated*, it is in any case necessary to explain this pattern. Such sudden use of an English abstract morpheme in an otherwise Norwegian utterance might seem surprising and unmotivated, given the idea of being in a particular “language mode”; however, as we have seen, these verbs were mostly accompanied by discourse flagging. Indeed, it seems as if these speakers were searching for particular Norwegian verbs, but coming up short and as a last resort opting to utter the equivalent English verbs instead. If so, it would make sense that the speaker used an English abstract morpheme, even just for that single verb, since the language mode would be English. Muysken also raises this possibility, stating that “if the switch is flagged, alternation between codes is a plausible option” (2000: 102), and a similar conclusion is drawn by Poplack, Sankoff & Miller (1988: 54).

The structure for such a verb, e.g., *translated* in (6b), is given in Figure 9.²⁷

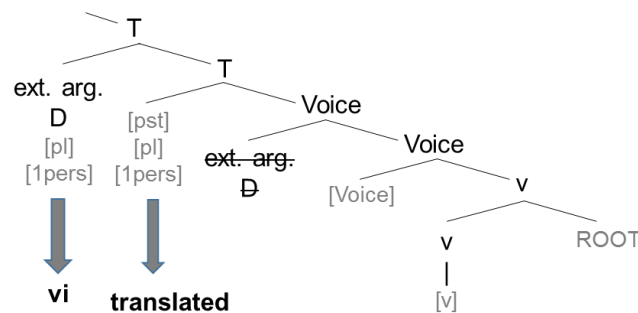


FIGURE 9. SYNTACTIC STRUCTURE FOR ‘VI TRANSLATED’.

In the literature, however, lone donor-language items with donor-language inflections seem rare (see, e.g., Poplack 2012: 645, in which she states that “the overwhelming majority of [lone other language items (LOLIs)] were integrated in this way” in the Ottawa-Hull corpus; “this way” refers to LOLIs appearing with the morphosyntax of the recipient language. I believe there is an obvious reason for why they are unusually frequent (28% of the cases) in these data, and this also illustrates why it is a good idea to look at heritage speakers when studying language mixing. Precisely because they are heritage speakers, they are prone to having lexical retrieval problems when speaking Norwegian.²⁸ In the interview context that the corpus recordings stem from, they are asked to do precisely that (i.e., speak Norwegian). This pressure to stay in “Norwegian mode” could explain why they often only utter in English the one word they cannot remember in Norwegian and then continue in Norwegian, rather than switching to English for the rest of the utterance, which is a more attested language mixing pattern. The CANS corpus clearly shows that bilingual speakers are capable of producing lone donor-language items with donor-language inflections. However, most of them simply do not do it often, if ever, since another strategy – to produce them with recipient-language inflections – tends to be their first choice.

This analysis is strengthened by the fact that, as shown in Figure 10, both strategies are attested for almost half of the speakers who used one or more lone English-origin verbs in their recorded speech.

their input regardless could have consisted of all kinds of dialects, seeing as they grew up in communities with more than one dialect present). And second, a late-insertion exoskeletal model can explain both types, so for the present purposes this distinction is of limited importance.

²⁷ I include only the subject and verb from (6a) for ease of exposition.

²⁸ As pointed out by Schmid & Jarvis (2014: 729), “[i]t has become almost axiomatic in language attrition research to assume that lexical-semantic knowledge is the most vulnerable part of the linguistic repertoire, deteriorating first, fastest and most dramatically as compared to, for example, grammar or phonetics”.

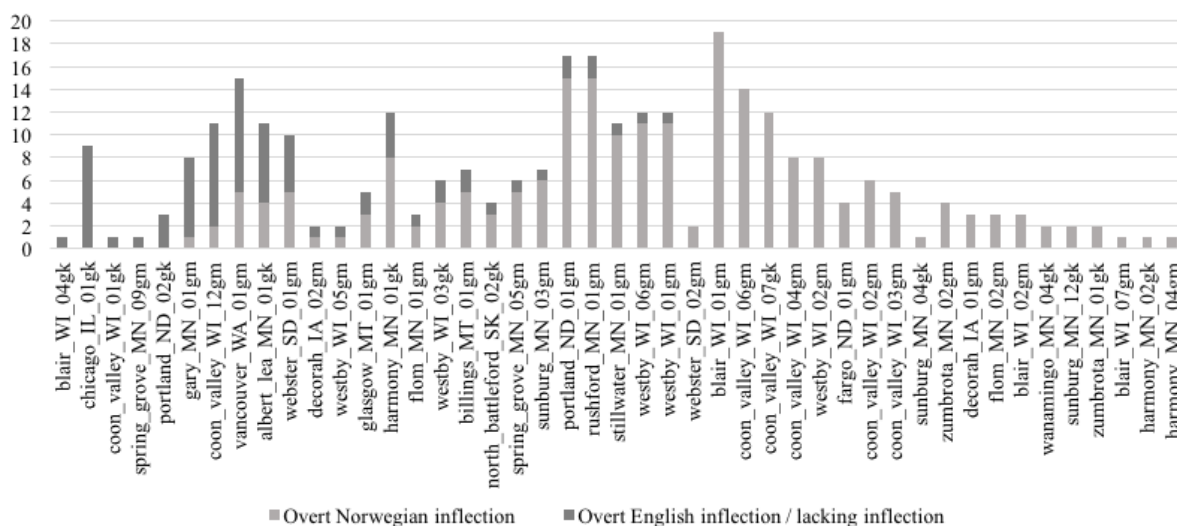


FIGURE 10. LONE ENGLISH-ORIGIN VERBS IN CANS PER SPEAKER.

Having shown how the model can account for the data, it is now time to see what consequences this novel analysis has for the code-switching/borrowing debate, and in particular for Muysken’s typology.

5.2 Consequences for the code-switching/borrowing debate

Given the late-insertion exoskeletal model presented here, three scenarios are formally possible when an English-origin verb appears in an otherwise Norwegian sentence:

1. The abstract morpheme in T is Norwegian, so the exponent will be Norwegian as well.
2. The abstract morpheme in T is English, so the exponent will be English as well.
3. The abstract morpheme in T is identical for English and Norwegian, so the exponent can come from either language.

When we look at how the data pattern, they fit remarkably well with these predicted scenarios. The syntactic structure for the verb *hunter* ‘hunts’, depicted in Figure 6, exemplifies Scenario 1, whereas the structure for *translated*, depicted in Figure 9, is an example of Scenario 2. Verbs without overt affixes depict either Scenario 1 or 2, depending on whether the abstract morpheme in T is Norwegian or English. Scenario 3 would be akin to Muysken’s congruent lexicalization, which, as mentioned in Section 2.2, could be a combination of insertions and alternations as well. Since this paper is focused on lone English-origin verbs, it is difficult to determine whether some of the data might be examples of congruent lexicalization, since that would require looking more closely at the immediate context than I have done. What is important, however, is that the model predicts that something like congruent lexicalization, or Scenario 3, *can* happen.²⁹

As mentioned earlier, this late-insertion exoskeletal model was developed mainly to account for monolingual data, so it is in no way obvious that it would be suitable for explaining language mixing patterns. The fact that it happens to account so well for these data strengthens the model considerably. Furthermore, it also seems to account well for the extensive mixing data presented in Muysken (2000), on the basis of which he builds his mixing typology. However, as illustrated in Figure 1, Muysken also makes the assumption that bilinguals have separate mental lexicons for the different languages they speak. This means that in order for a lexical element to be adopted into the recipient language, i.e., to become a *bona fide* loanword, it must be copied into the mental lexicon of the recipient language and

²⁹ Note that even though congruent lexicalization is formally possible given this model, this does not automatically mean that it must occur. Many non-formal factors could interplay to make speakers unlikely to adopt such a strategy. For instance, being in a certain “language mode”, brought about by choosing abstract morphemes from the list of Language A, probably makes the phonological exponents associated with Language A more salient and likely choices – even though Language B might have exponents that express the exact same features.

be given an appropriate feature bundle there. When the loanword is later used in the recipient language, it is drawn from that mental lexicon and inserted into the syntax. If a word is code-mixed rather than borrowed, however, it is taken directly from the mental lexicon of the donor language and inserted into the syntax, never entering the other lexicon.

If one relies on a lexicalist model where lexical items are stored in the mental lexicon with inherent feature bundles,³⁰ there is no choice but to assume that adopting a loanword somehow means creating a new lexical item with the feature bundle appropriate for the recipient language.³¹ As shown above, the same is true when one assumes language-specific lexicons. With a late-insertion exoskeletal model, however, roots are bare and, hence, are stored without language-specific features – allowing all of them to be stored in one list. Adopting loanwords no longer involves having to copy the item from one list or lexicon to another, so there is nothing that formally distinguishes loanwords from other, more spontaneous forms of language mixing. Instead, one can base the formal distinction on the empirical language mixing evidence, which we saw fit well with the three different scenarios predicted by the exoskeletal model.

Using Muysken’s terminology, the result is as follows for lone donor-language verbs in American Norwegian:³²

1. **Insertion:** The abstract morpheme in T is from the recipient language, so the exponent will be from the recipient language as well.
2. **Alternation:** The abstract morpheme in T is from the donor language, so the exponent will be from the donor language as well.
3. **Congruent lexicalization:** The abstract morpheme in T is identical for both languages, so the exponent can come from either language.

This means altering the descriptions of insertion and alternation provided in Muysken (2000), but in fact, it very much resembles the descriptions he provides in Muysken (2015: 259): “The main distinction is between insertion (involving a clear matrix language imposing its constraints) and alternation (involving several languages imposing their constraints and hence a requirement of equivalence).” Importantly, these operational descriptions are context-based, meaning a specific item cannot be defined as an instance of insertion or alternation in and of itself; it only has one of those labels when it is used in a specific context. In fact, a “native” item is an instance of insertion as well, since the process – drawing a root from the list of roots and an abstract morpheme from a list of those – is identical, regardless of whether the speaker has encyclopedic knowledge that suggests that the root in question is “native” or not.

³⁰ MacSwan (1999, 2014) is the main proponent for a lexicalist attempt at explaining language mixing. See, e.g., Grimstad et al. (2014), Lohndal (2016), Riksem et al. (to appear), and, in particular, Grimstad et al. (2017) for arguments against such an approach and in favor of an alternative exoskeletal option.

³¹ Note that whether the lexical items are stored in language-specific lexicons or not is not dictated by a lexicalist model.

³² As I only have looked at one language pair, I cannot make claims about lone donor-language verbs in general (nor about insertion and alternation in general). Muysken (2000: 184) identifies four different ways in which a lone donor-language verb can be incorporated into the recipient language whereas Wohlgemuth (2009: 6) identifies three main ones, and the English-origin verbs in American Norwegian are all of the same type. The two other main types in Wohlgemuth (2009) are using a recipient language light verb to accommodate a non-inflected donor language item and using a verbalizer between the donor language item and the inflection. Bandi-Rao & den Dikken (2014: 165) show that the light verb strategy is used when an English verb is incorporated into Telugu whereas both that one and the verbalizer strategy is used when a Sanskrit verb is incorporated into Telugu. They see this as evidence of code-switching and borrowing being two distinct processes, where the Sanskrit verbs sometimes are borrowed whereas the English ones always are code-switched. This is a necessary move for them as their model bans code-switching within phonological words that are morphosyntactic heads (2014: 172), which is precisely what happens in some of the Sanskrit-Telugu cases (as well as the American Norwegian cases, I might add). As we see, however, they are rather part of a larger mixing typology involving at least one more type, i.e., the one we see in American Norwegian, where the donor-language verb is incorporated the same way a recipient-language verb would be. For other papers that also attempt to explain one or more of these donor-language verb incorporation types not attested in American Norwegian, see, e.g., González-Vilbazo (2011) and Alexiadou (2017). Future research should test whether a late-insertion exoskeletal model where all roots are stored together also can account for the remaining types of lone donor-language verb incorporation, as well as language mixing involving other word classes and bigger chunks.

This means there is no formal distinction between a “native” word, an established loanword and a spontaneous instance of insertion (*nonce borrowing*, following Poplack and her associates).³³ From an empirical point of view, this makes sense, since there is no clear empirical distinction between the three. Whether I know that the verb *get* was borrowed into early Middle English from early Scandinavian (Oxford English Dictionary online 2016), for instance, will depend on my encyclopedic knowledge rather than some inherent formal quality of the word in question. In other words, insertion is an observational term, based solely on whether the speaker in question perceives the lexical items in a given utterance to originate from different languages. To be able to discuss how borrowed or integrated a certain “non-native” item is, we can use Muysken’s term LISTEDNESS (2000: 71).³⁴

The dimension of listedness refers to the degree to which a particular element or structure is part of a memorized list which has gained acceptance within a particular speech community. We can arrange linguistic elements on a scale running from essentially creative to essentially reproductive.

Put differently, the listedness of a particular item essentially sums up how frequent it is in use and how dispersed it is across a speech community. As a final note, this also happens to harmonize very well with what Poplack (2012: 647-648) notes:

Nonce borrowings were never intended as, nor claimed by us to be, a linguistically distinct category from other types of lexical borrowings. On the contrary, we have noted repeatedly that in terms of grammatical integration, nonce borrowings and established loanwords are virtually the SAME, any distinctions between them being social, in terms of diffusion across the community, and phonological, in terms of increasing integration as a function of frequency, diffusion and age of attestation. If anything, the nonce borrowing is a reinforcement of the distinction between CODE-SWITCHING and borrowing, at the level of lone other-language items.

Change the terms established loanword and nonce borrowing to more- or less-listed inserted items and the terms code-switching and borrowing to alternation and insertion, respectively, and we are in perfect accord.³⁵

6. CONCLUSIONS

There is disagreement in the literature concerning the analysis of lone donor-language items and what borrowing and code-switching should mean. Some researchers address how lone donor-language items can gradually become more integrated into the recipient language over time. They typically refer to these items as code-switched or borrowed based on whether they are spontaneous mixes or integrated loanwords. Others, however, are more concerned with the formal analysis of lone other-language items and base their definitions of code-switching and borrowing on an assumed formal distinction. This paper has proposed to reconcile these two views by making use of an exoskeletal approach to syntax that assumes late insertion of phonological content and an approach to the lexicon in which items from all of a speaker’s known languages are contained in one list.

Section 4.2 showed that lone English-origin verbs in a corpus of American Norwegian seem to have either Norwegian or English inflectional morphology. The ones with English inflections are in the minority and hardly ever occur without discourse flagging. This suggests that English-origin verbs in this heritage variety of Norwegian usually only receive English inflectional morphology when speakers try and fail to remember the equivalent Norwegian verbs and are forced to make a conscious switch to

³³ This also resolves the issue of whether loanwords originate as code-switched items (Poplack & Dion 2012). When there is no formal distinction between the two, a speaker can use alternation at one point and insertion at another, and the two instances have no bearing on each other (apart from maybe socially).

³⁴ According to Muysken, the term originated with DiSciullo & Williams (1989).

³⁵ When I still choose to use Muysken’s terms, the explanation is twofold. First, as shown in Section 2.1, the terms *code-switching* and *borrowing* are used in so different ways by different researchers that it leads to equivocation and confusion. Second, even though I agree with what Poplack (2012) says in the above quote, our approaches are different when it comes to how items are stored.

English. Section 5.1 illustrated how a late-insertion exoskeletal model can account for these data patterns. This is achieved by separating roots, feature bundles, phonological exponents and encyclopedic knowledge into distinct lists, as in Distributed Morphology. In combination with the Subset Principle, this ensures that any root, whether originally associated with English or Norwegian, can receive any inflectional morphology. The morphosyntax is determined by which language the feature bundles come from, whereas the bare roots can be freely inserted into designated slots.

I contend that a model like the one I adopt has several empirical advantages over previous approaches. This answers the first two research questions presented in the introduction, namely how the English-origin verbs in the corpus pattern and whether a late-insertion exoskeletal model can account for this. With that in place, I can also use these mixing patterns to inform the code-switching/borrowing debate. I suggest using the term *alternation* when we have lone donor-language verbs with donor-language inflectional morphology and *insertion* when there is recipient-language morphology. This is a formal distinction which fits with my data, and is expected given a late-insertion exoskeletal model. These terms can replace the fraught terms *borrowing* and *code-switching* when referring to formally distinct types of language mixing. To describe how inserted items can become gradually more integrated over time, I propose the term *listedness*. All these three terms – *borrowing*, *insertion* and *listedness* – are adopted from Muysken (2000), although the first two are used here more in accordance with their definitions in Muysken’s more recent work (Muysken 2015). It remains to be seen how this proposed explanation for language mixing, based on a late-insertion exoskeletal model, can handle other mixing patterns cross-linguistically; however, based on the analyses in this paper, it looks like a promising solution worth exploring further.

References

- Åfarli, T. A. (2007). Do Verbs have Argument Structure? In E. Reuland, T. Bhattacharya & G. Spathas (eds.), *Argument Structure*, 1-16. Amsterdam: John Benjamins.
- Åfarli, T. A. (2015). Hybrid Verb Forms in American Norwegian and the Analysis of the Syntactic Relation between the Verb and its Tense. In J. B. Johannessen & J. C. Salmons (eds.), *Germanic Heritage Languages in North America. Acquisition, attrition and change*, 161-177. Amsterdam: John Benjamins.
- Alexiadou, A. (2017). Building verbs in language mixing varieties. *Zeitschrift für Sprachwissenschaft* 36 (1). 165-192.
- Alexiadou, A., E. Anagnostopoulou, & F. Schäfer. (2015a). *External Arguments in Transitivity Alternations: A Layering Approach*. Oxford: Oxford University Press.
- Alexiadou, A., T. Lohndal, T. A. Åfarli & M. B. Grimstad. (2015b). Language Mixing: A Distributed Morphology approach. In T. Bui & D. Özyildiz (eds.), *Proceedings of NELS 45*, 25-38. Create Space.
- Bandi-Rao, S. & M. den Dikken. (2014). Light switches: On V as a pivot in codeswitching, and the nature of ban on word-internal switches. In J. MacSwan (Ed.), *Grammatical Theory and Bilingual Codeswitching*, 161-183. MIT Press: Cambridge, MA.
- Borer, H. (2005a). *Structuring Sense I: In Name Only*. Oxford: Oxford University Press.
- Borer, H. (2005b). *Structuring Sense II: The Normal Course of Events*. Oxford: Oxford University Press.
- Borer, H. (2013). *Structuring Sense III: Taking Form*. Oxford: Oxford University Press.
- Branchini, C. & C. Donati. (2016). Assessing lexicalism through bimodal eyes. *Glossa: a journal of general linguistics* 1 (1). 1-30. DOI: <http://dx.doi.org/10.5334/gjgl.29>
- Canfield, K. (1980). A Note on Navajo-English Code-mixing. *Anthropological Linguistics* 22. 218-220.
- Di Sciullo, A. M. & E. Williams. (1989). *On the Definition of Word*. Cambridge, MA: The MIT Press.
- Embick, D. (2015). *The Morpheme: A Theoretical Introduction*. Boston/Berlin: Walter de Gruyter.
- Embick, D., & R. Noyer. (2007). Distributed Morphology and the Syntax-Morphology Interface. In G. Ramchand & C. Reiss (eds.), *The Oxford Handbook of Linguistic Interfaces*, 289-324. Oxford: Oxford University Press.
- Gardner-Chloros, P. 2009. *Code-switching*. Cambridge: Cambridge University Press.
- Get, v. (2016). In *Oxford English Dictionary online* (3rd ed.). Retrieved from <http://www.oed.com/view/Entry/77994?rskey=RyO5eT&result=4#eid>.
- González-Vilbazo, K. & L. López. (2011). Some properties of light verbs in code-switching. *Lingua* 121. 832-850.
- Grimstad, M. B., T. Lohndal, & T. A. Åfarli. (2014). Language mixing and exoskeletal theory: A case study of word-internal mixing in American Norwegian. *Nordlyd* 41. 213-237.
- Grimstad, M. B., B. R. Riksem, T. Lohndal, & T. A. Åfarli. (2017). Lexicalist vs. exoskeletal approaches to language mixing. Ms., Norwegian University of Science and Technology.
- Grosjean, F. (2008). *Studying Bilinguals*. Oxford: Oxford University Press.
- Grosjean, F. (2013). Bilingual and Monolingual Language Modes. In Carol A. C. (ed.), *Encyclopedia of Applied Linguistics*, 1-9. Malden: Blackwell.
- Halle, M. (1997). Distributed Morphology: Impoverishment and Fission. In B. Bruening, Y. Kang & M. McGinnis (eds.), *MITWPL 30: Papers at the Interface*, 425-449. Cambridge: MITWPL.
- Halle, M. & A. Marantz. (1993). Distributed Morphology and the Pieces of Inflection. In K. Hale & S. J. Keyser (eds.), *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 111-176. Cambridge, MA: The MIT Press.
- Harley, H., & R. Noyer. (1999). Distributed Morphology. *Glott International* 4. 3-9.
- Haspelmath, M. (2009). Lexical borrowing: Concepts and Issues. In M. Haspelmath & U. Tadmor (eds.), *Loanwords in the world's languages: A comparative handbook*, 35-54. Berlin: Mouton de Gruyter.
- Haugen, E. (1953). *The Norwegian Language in America*. Philadelphia: University of Philadelphia Press.
- Hjelde, A. (1992). *Trøndsk talemål i Amerika*. Trondheim: Tapir.
- Johannessen, J. B. (2015). The Corpus of American Norwegian Speech (CANS). In B. Megyesi (ed.), *Proceedings of the 20th Nordic Conference of Computational Linguistics NODALIDA 2015* (NEALT Proceedings Series 23), 297-300. Vilnius, Lithuania.
- Johannessen, J. B., & Salmons, J. (2012). Innledning. [Introduction]. *Norsk Lingvistisk Tidsskrift [Nor. J. Linguist.]* 30. 139-148.
- Kratzer, A. (1996). Severing the External Argument from the Verb. In J. Rooryck & L. Zaring (eds.), *Phrase Structure and the Lexicon*, 109-137. Dordrecht: Kluwer.
- Lillo-Martin, D., R. M. de Quadros & D. Chen Pichler. (2016). The development of bimodal bilingualism: implications for linguistic theory. *Linguistic Approaches to Bilingualism* 6 (6). 719-755.

- Lohndal, T. (2012). Without Specifiers: Phrase Structure and Argument Structure. Doctoral dissertation, University of Maryland.
- Lohndal, T. (2013). Generative grammar and language mixing. *Theoretical Linguistics* 39. 215-224.
- Lohndal, T. (2014). *Phrase Structure and Argument Structure: A Case Study of the Syntax-Semantics Interface*. Oxford: Oxford University Press.
- Lohndal, T. (2016). The role of underspecification in grammar. *Linguistic Approaches to Bilingualism* 6 (6). 782-785.
- MacSwan, J. (1999). *A Minimalist Approach to Intrasentential Code Switching*. New York: Garland.
- MacSwan, J. (2014). Programs and Proposals in Codeswitching Research: Unconstraining Theories of Bilingual Language Mixing. In J. MacSwan (ed.), *Grammatical theory and bilingual codeswitching*, 1-33. Cambridge, MA: MIT Press.
- MacSwan, J., & S. Colina (2014). Some Consequences of Language Design: Codeswitching and the PF Interface. In J. MacSwan (ed.), *Grammatical Theory and Bilingual Codeswitching*, 185-210. Cambridge, MA: MIT Press.
- Marantz, A. (1997). No Escape from Syntax: Don't Try Morphological Analysis in the Privacy of Your Own Lexicon. In A. Dimitriadis, L. Siegel, C Surek-Clark & A. Williams (eds.), *Proceedings of the 21st Penn Linguistics Colloquium*, 201-225. University of Pennsylvania: UPenn Working Papers in Linguistics.
- Marantz, A. (2013). Verbal argument structure: Events and participants. *Lingua* 130. 152-168.
- Matras, Y. (2009). *Language Contact*. Cambridge, UK: Cambridge University Press.
- Merchant, J. (2015). On ineffable predicates: Bilingual Greek-English code-switching under ellipsis. *Lingua* 166. 199-213.
- Muysken, P. (2000). *Bilingual Speech. A Typology of Code-Mixing*. Cambridge: Cambridge University Press.
- Muysken, P. (2013). Language contact outcomes as the result of bilingual optimization strategies. *Bilingualism: Language and Cognition* 16(4). 1-22.
- Muysken, P. (2015). Déjà Voodoo or New Trails Ahead? Re-evaluating the Mixing Typology Model. In R. Torres Cacoullous, N. Dion & A. Lapierre (eds.), *Linguistic Variation: Confronting Fact and Theory*, 242-261. New York: Routledge.
- Myers-Scotton, C. (1993). *Duelling Languages: Grammatical Structure in Code Switching*. Oxford: Oxford University Press.
- Myers-Scotton, C. (2002). *Contact Linguistics: Bilingual Encounters and Grammatical Outcomes*. Oxford: Oxford University Press.
- Myers-Scotton, C. (2006). *Multiple voices: An introduction to bilingualism*. Malden: Blackwell.
- Pfaff, C. (1976). Functional and syntactic constraints on syntactic variation in code-mixing. In B. Steever et al. (eds.), *Papers from the parasession in diachronic syntax*, 248-259. Chicago Linguistic Society.
- Pfaff, C. (1979). Constraints on Language Mixing: Intrasentential Code-Switching and Borrowing in Spanish/English. *Language* 55 (2). 291-318.
- Pierantozzi, C. (2012). Agreement within early mixed DP. In K. Braunmüller & C. Gabriel (Eds.), *Multilingual Individuals and Multilingual Societies*, 137-152. Amsterdam: John Benjamins.
- Poplack, S., D. Sankoff, & C. Miller. (1988). The social correlates and linguistic processes of lexical borrowing and assimilation. *Linguistics* 26. 47-104.
- Poplack, S. (2012). What does the Nonce Borrowing Hypothesis hypothesize? *Bilingualism: Language and Cognition* 15 (3). 644-648.
- Poplack, S. (2015). Code-switching: Linguistic. In N. Smelser & P. Baltes (eds.), *International Encyclopedia of the Social and Behavioral Sciences, 2nd edition*, 918-925. Amsterdam: Elsevier Science.
- Poplack, S. & N. Dion. (2012). Myths and facts about loanword development. *Language Variation and Change* 24 (3). 279-315.
- Ramchand, G. (2008). *Verb Meaning and the Lexicon: A First Phase Syntax*. Cambridge: Cambridge University Press.
- Riksem, B. R. In press. Language Mixing in American Norwegian Noun Phrases. *Journal of Language Contact*.
- Riksem, B. R., M. B. Grimstad, T. Lohndal & T. A. Åfarli. To appear. Language mixing within verbs and nouns in American Norwegian. *Journal of Comparative Germanic Linguistics*.
- Rothman, J. (2009). Understanding the nature and outcomes of early bilingualism: Romance languages as heritage languages. *International Journal of Bilingualism* 13 (2). 155-163.
- Sankoff, D. & S. Poplack. (1981). A formal grammar for code-switching. *Papers in Linguistics: International Journal of Human Communication* 14 (1): 3-45.
- Schmid, M.S. & S. Jarvis. (2014). Lexical access and lexical diversity in first language attrition. *Bilingualism: Language and Cognition* 17 (4). 729-748.

- Stammers, J. & M. Deuchar. (2012). Testing the nonce borrowing hypothesis: Counter-evidence from English-origin verbs in Welsh. *Bilingualism: Language and Cognition* 15 (3). 630-643.
- Thomason, S. G. (2003). Contact as a Source of Language Change. In R. D. Janda & B. D. Joseph (eds.), *A Handbook of Historical Linguistics*, 687-712. Oxford: Blackwell.
- Timm, L. A. (1975). Spanish-English Code-Switching: El Porqué [sic] y How-Not-To. *Romance Philology* 28 (4). 473-482.
- van Coetsem, F. (2000). *A General and Unified Theory of the Transmission Process in Language Contact* (Monographien zur Sprachwissenschaft 19). Heidelberg: Universitätsverlag Winter.
- van Hout, A. (1996). Event Semantics and Verb Frame Alternations. Doctoral dissertation [TILDIL Dissertation Series], Tilburg University.
- Venås, K. (1993). On the choice between two written standards in Norway. In E. H. Jahr (ed.), *Language Conflict and Language Planning* (Trends in Linguistics. Studies and Monographs [TiLSM] 72), 263–278. Berlin/New York: Mouton de Gruyter.
- Vikør, L. S. (1995). *The Nordic languages: Their status and interrelations* (Nordic Language Secretariat 14). Oslo: Novus Press.
- Weinreich, U. (1953/1968). *Languages in Contact*. The Hague: Mouton.
- Wohlgemuth, Jan. (2009). *A Typology of Verbal Borrowings*. Berlin: de Gruyter Mouton.

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