

Loanword marking as a mechanism of structural change

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This paper focuses on the loanword integration mechanism whereby the loans are incorporated into a marginal word class in the recipient language. Synchronically, such integration mechanism appears to function as a loanword marking device motivated by the speakers' awareness of these words' foreign origin and desire to preserve their foreign flavor. Diachronically, it may lead or contribute to far-reaching structural and typological changes in the recipient languages. The specific focus of the paper is on prosody and inflection, with representative case studies drawn from a diverse selection of languages.¹

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1. Introduction

In his work on language contact, Lars Johanson identifies a mechanism of contact-induced change labeled *frequential copying*. It consists in a change in the frequency of a native structural pattern under the influence of its functional equivalent in another language (the 'model code'). One possible outcome of frequential copying is for the affected pattern to gain in frequency and become less marked:

Frequential copying means that frequency patterns peculiar to model code units are copied onto units of the basic code so that the latter undergo an increase or a decrease in the frequency of occurrence. For example, elements which already exist in the basic code, though they are more "normal" in the model code, may gain ground and become less marked. (Johanson 2002: 292)

In Johanson (2012), the above mechanism is used to explain the emergence of certain non-canonical modal constructions in Turkic languages that have been in contact with Indo-European languages. As seen in (1), in canonical modal constructions the complement is expressed via a non-finite verb form.

- (1) Turkish (Johanson 2012: 195-196)
 a. *Gel-mek iste-r-im.*
 come-INF² want-AOR-1S
 'I want to come.'

- b. *Gel-me-sin-i iste-r-im.*
come-VN-3S-ACC want-AOR-1S
'I want him/her/it to come.'

In non-canonical constructions, the complement is expressed via a finite verb form; such constructions may also contain a complementizer (see (2)).

(2) Ottoman Turkish (Johanson 2012: 198-199)

- a. *Dile-r-im [ki] gel-e-m.*
want-AOR-1S [CPL] come-OPT-1S
'I want to come.'
- b. *Um-ar-ım ki gel-e-sin.*
hope-AOR-1S CPL come-OPT-2S
'I hope you will come.'

Johanson (2012) argues that the constructions in (2) were “not alien to Turkic” and were merely “reinforced and expanded” under Indo-European influence: “A combinational pattern already existing gained ground under foreign influence and became less marked” (p. 202).

Lyle Campbell (1987) used the label “changes of enhancement” to discuss similar changes to several marginal syntactic constructions in Pipil (Uto-Aztecan). The changes in question, all attributed to Pipil’s contact with Spanish, consist of obligatorification of the definite and indefinite articles, the use of third person plural verb forms as passives or impersonals, and a progressive verbal construction whose structure, usage, and frequency match the Spanish progressive:

Several aspects of Pipil grammar, while probably not unknown before Spanish contact, seem to have changed ‘in spirit’ to conform to Spanish norms. That is, in some cases, originally more marginal native constructions have been enhanced, become more salient, due to the more central role played in Spanish grammar of constructions with corresponding functions. (Campbell 1987: 271-272)

Sarah G. Thomason (2007) discusses some evidence from fieldwork suggesting that the type of changes described above are likely to have arisen as deliberate accommodations to the surface structure of the model code in the speech of bilinguals. She describes two elicitation experiments in which the bilingual consultants were asked to translate English sentences into their respective languages. The speaker of Montana Salish used uninflected intransitive verb forms instead of the more usual morphologically complex transitive verb forms in his translations, producing

a word order approximating that of English. Thomason explains that, although grammatical in Montana Salish, such sentences “are very odd except in certain stylistically marked discourse contexts” (p. 54). In another case she reports, Nisgha-English bilinguals used overt object pronouns in constructions in which such usage is stylistically marked as indicative of emphasis. In both these cases, the bilingual speakers deliberately used marked but available native constructions in a conscious attempt to match the surface structure of the English sentences with which they were presented.

Although the above examples involve syntactic constructions, it seems that the notion of frequential copying is broad enough to be applicable to the type of contact-induced change whereby a phonologically and/or morphologically marginal word class in the recipient language is expanded and becomes less marked as a result of absorbing loans. Pertinent case studies indicate that the SYNCHRONIC impetus for assigning loanwords to a marginal word class may be traced to the (bilingual) speakers’ psycholinguistic need to signal their awareness of these words’ foreign origin. This aspect is explicitly pointed out by Ratliff (2002: 32) in the context of assigning borrowed words a rare tonal pattern, while Schulte (2005: 320) argues more generally that “a low incidence and functional load of an available linguistic structure can lead to its exploitation as marker of loanwords” (see also Operstein 2017a as well as §3.1 and §4.3 below). A contributing reason for integrating loanwords into a marginal word class may be accidental formal similarity between the donor and recipient languages, inviting and facilitating such integration; Mifsud (1996: 122) captures this notion via the term “linguistic *appui*”. The importance of surface similarities for facilitating morphological integration of loans is emphasized by Heath (1989), who sees, for example, the phonetic and morphosyntactic similarities between the noun and verb phrases in the donor language French (*le NOUN* and *il VERB-ait*) and the corresponding structures in the recipient language Moroccan Colloquial Arabic (MCA) (/l-NOUN/ and /y-VERB-i/) as crucial for “getting the foot in the door”.³ The similarities between the donor and recipient languages may also derive from a deep genetic relationship between them (see §4.1).

Viewed from the DIACHRONIC perspective, adaptation of loans to a marginal word class may lead or contribute to far-reaching structural and typological changes in the receiving language. The case studies assembled in this paper, which focus on prosodic and inflectional integration, capture languages at different diachronic stages of this process, with the long-term structural and typological effects better visible in some languages than in others.

This paper is organized as follows. Section 2 delimits loanword mark-

ing by means of assigning loans to a marginal word class from other loanword marking strategies. Section 3 looks at the marking of loanwords by means of assigning them to a marked preexistent prosodic class, with representative examples drawn from Cèmuhi, Zaniza Zapotec, and Israeli Hebrew. Section 4 looks at the marking of loan verbs by assigning them to a marginal inflectional class, with the case studies drawn from Qafar-Saho, Maltese, Romanian, and Russian. Section 5 focuses on the marking of borrowed nouns via assignment to a marked inflectional class and is based on examples drawn from Slavic and Romance languages as well as German. Section 6 summarizes the main results and points out some directions for future research.

2. Loanword marking

Loanwords may be singled out in a language's grammar in a variety of ways. The range of clues that betray a word's foreignness may include nonnative segments or consonant clusters or their nonnative distribution, prosody, word length, syllable structure, and lack of morphological integration (see, e.g., Schwarzwald 1998 on the clues for word foreignness in Israeli Hebrew). The flagging of loans can be deliberate; for example, in written language they may be flagged by the use of special graphic devices such as italics or underlining (Serianni 1989: 150), the orthography of the source language (Babanov 2011: 42), or even "a conspicuously different script" (Kay 1995: 73). The degree of integration of a loanword can be consciously manipulated by (bilingual) speakers to signal a range of attitudes and allegiances, including their ethnic or cultural identity, socioeconomic status, education, urbanity, religiosity, attitude toward the source language, attitude toward bilingualism, openness to other cultures, and political views (Hill & Hill 1986; Hafez 1996; Zuckermann 2003).

In the context of this study's focus on loanword marking by means of prosody and inflection, two ways of flagging loans are of especial interest since they need to be distinguished from the loanword marking mechanism considered here (which henceforth will be referred to as LM). The first consists of creating a separate prosodic or inflectional class for loanwords. The creation of prosodic classes that are specific to loans is discussed in Davis *et al.* (2012), where it forms an integral part of the proposed taxonomy of loanword prosody. The creation of a new inflectional class for loans may be achieved by borrowing words together with their inflectional paradigms (Kossmann 2010), or it may involve a more complex mechanism. The first strategy may be illustrated by the borrowing of Spanish masculine nouns together with their plural forms in northern MCA, exemplified

in (3a) (Heath 1989: 24, 185-186). As evidenced by the plural form in (3b), the recipient language has extended the borrowed pattern beyond its etymological context. According to Serianni (1989: 150), in Italian the plural suffix *-s* is commonly perceived as “la modalità tipica per ottenere un plurale straniero”, which likewise leads to its extension to non-etymological contexts, cf. *lieders* (< Gm. *Lied(er)* ‘song(s)’).⁴

- (3) a. Spanish MCA
bocadillo (s.) /bukadiju/ ‘sandwich’
bocadillo-s (p.) /bukadiju-s/
gol (s.) /gun/ ‘goal (in soccer)’
gol-es (p.) /gun-ɨs/
- b. French MCA
stilo (s.) /stilu/ ‘ballpoint pen’
 /stilu-s/

A more complex strategy of creating a loanword-specific inflectional class has been described for Korlai Portuguese (KP) (Clements & Luís 2015). KP has inherited from Portuguese the verb inflection classes 1 through 3 (see Table 1), along with their corresponding inflection class markers *-a-*, *-e-*, and *-i-*. Class 4 is a new inflectional class used for integrating loan verbs from Marathi. Clements and Luís argue that the inflection marker *-u-* that characterizes this class arose via reanalysis of the final vowel in the Marathi negative prohibitive form, a development prompted in part by “the structural similarity between the phonotactic and morphotactic structure of verb forms in Marathi and KP” (p. 231).

Table 1. Verb inflection classes in Korlai Portuguese

	CLASS 1	CLASS 2	CLASS 3	CLASS 4
	Ptg. <i>cant-a-r</i> >	Ptg. <i>beb-e-r</i> >	Ptg. <i>ergu-i-r</i> >	Mar. <i>loʔ-ú</i> >
Unmarked	<i>kat-á</i>	<i>beb-é</i>	<i>irg-í</i>	<i>loʔ-ú</i>
Past	<i>kat-ó</i>	<i>beb-é-w</i>	<i>irg-í-w</i>	<i>loʔ-ú</i>
Gerund	<i>kat-á-n</i>	<i>beb-é-n</i>	<i>irg-í-n</i>	<i>loʔ-ú-n</i>
Completive	<i>kat-á-d</i>	<i>beb-í-d</i>	<i>irg-í-d</i>	<i>loʔ-ú-d</i>

A related mechanism of loanword marking to be distinguished from LM is the flagging of loans by means of formatives that have been refunctionalized for this purpose. For example, a number of Spanish-origin nouns in Chogueta Rarámuri (Tarahumara) are furnished with the locative case suffix *-tʃi* (see (4)). In borrowed nouns, this suffix loses its locative mean-

ing and functions instead as a loan noun integration device (Caballero & Carroll 2013: 2, fn. 3).

(4)	Spanish	>	Rarámuri	
	<i>tren</i>		[treen-tʃi]	'train'
	<i>harina</i>		[arfin-tʃi]	'flour'
	<i>limeta</i>		[liméta-tʃi]	'bottle'
	<i>molino</i>		[moriin-tʃi]	'mill'

Such loanword markers have more commonly been described for verbs (Wohlgemuth 2009; Gardani 2016). One example is the derivational suffix *-ev* attached to Romance verbal loans in Modern Greek. As seen in (5) (from Ralli 2012: 431), the loan verb marker is placed between the borrowed Romance stem and the Greek inflectional ending.

(5)	Salentino	>	Griko	
	<i>kunt-are</i>		<i>kunt-e-o</i>	'narrate'
	<i>nutric-are</i>		<i>nutrik-e-o</i>	'feed'
	<i>riusc-ire</i>		<i>resc-e-o</i>	'succeed'
	<i>vombik-are</i>		<i>vombik-e-o</i>	'vomit'

In the context of loan verbs, *-ev* loses its derivational function:

In this context, *-ev-* does not provide the verbal category, as is its usual role when added to nominal bases, but flags a particular class of verbs, those of Romance origin, and assigns these verbs to a specific conjugation (IC I). From the range of Greek verbalizers it is the only one to be used as an integrating element. Therefore, I suggest that in the particular setting of accommodating Romance verbs, it has lost its verbalizing properties (creation of verbs from nouns) and has become a class marker. [...] This change is a typical case of grammaticalization (Ralli 2012: 441)

LM differs conceptually from both of the above mechanisms of loanword marking in that it does not involve the creation of a new prosodic or inflectional class that is specific to loans, or the use of an integration morpheme that is specific to loans. Instead, the loanwords are singled out through integration into a preexistent prosodic or inflectional class that is phonologically and/or morphologically marginal in the recipient language.

The development whereby membership in a marginal word class assumes the function of a loanword marker may be conceptualized in terms of exaptation. This notion, introduced into linguistics by Lass (1990), has been expanded and modified in the contributions to Norde

& Van de Velde (2016) (see Operstein 2017c). In particular, while Lass's original definition of exaptation envisioned only refunctionalization of (inflectional) morphological material that has become functionless ('junk'), Van de Velde & Norde (2016) extend this notion to non-directional changes in all structural domains, defining it as "the leap-like co-optation of a trait for a new function that is not immediately related to its former function" (p. 10). It may be argued that the type of change involved in using membership in a marginal word class as a loanword marking device may be insightfully captured by this notion. As will be seen in the case studies, the motivation for this development is traceable to extra- and socio-linguistic factors.

3. Prosody

3.1. Low-toned loans in Cèmuḥî

The prosodic treatment of loanwords from non-tonal languages in Cèmuḥî, a tonal Austronesian language from New Caledonia, provides a good starting point for introducing various aspects of LM. The following description is based on Rivierre (1994).

Cèmuḥî has three tones, high, mid, and low. The immediate source of the high tone is word-initial geminates, that of the mid tone word-initial singleton consonants, and that of the low tone word-medial geminates (see (6); from Rivierre 1994: 499). Native Cèmuḥî morphemes take the same tone on all the syllables.

- (6) CCVCV > CVCV (high tone)
 CVCV > CVCV (mid tone)
 CVCCV > CVCV (low tone)

Low-toned words "were originally in a small minority in comparison with mid tone and high tone words" (p. 506). In the Cèmuḥî vocabulary as a whole, they account for about twenty percent of the words, however, they "make up an abnormally high proportion of loan-words" (p. 502). Borrowed vocabulary in Cèmuḥî comprises both loans from neighboring Polynesian languages and from European languages; both groups of languages are toneless. The low tone is found on the initial syllable of nearly all European borrowings beginning with non-fricative consonants.⁵ The examples in (7) show that the assignment of the low tone to the initial syllable does not depend on whether it is stressed in the donor language.

- (7) Source word > Cèmuḥî loan

Fr. <i>clef</i>	<i>kile</i>	‘key’
Fr. <i>bouton</i>	<i>bùto</i>	‘bud’
Fr. <i>tabac</i>	<i>tàpa</i>	‘tobacco’
Fr. <i>café</i>	<i>kàpé</i>	‘coffee’
Eng. <i>copper</i>	<i>kàpwa</i>	‘corrugated iron’
Eng. <i>money</i>	<i>mwàní</i>	‘money, gold’
Lat. <i>crux</i>	<i>kùrucé</i>	‘cross’

Rivierre offers the following explanation:

This little-used low register acquired an expressive character, and was used as an “accommodating register” for newly-borrowed words. It may be thought that the strangeness, the unfamiliarity of these loanwords, by reason of their form (length, phonetic structure) and meaning, was emphasized by use of this particular register (although its use is not entirely predictable). (Rivierre 1994: 506)

While the majority of low-toned borrowings take the same tone on all the syllables, some are additionally marked in Cèmuhî phonology by having a separate tone on each syllable. In most loans, this tone assignment is not explainable on phonetic grounds, such as the presence of a fricative in the loanword. The resulting borrowings contrast with most native morphemes, which tend to take the same tone on all the syllables (see (8)).

(8)	Native morphemes	Borrowed morphemes	
	<i>píne</i> ‘to count’	<i>kùrucé</i> ‘cross’	(< Lat. <i>crux</i>)
	<i>pūa</i> ‘fishing net’	<i>nàní</i> ‘nanny-goat’	(< Eng. <i>nanny</i>)
	<i>èloo</i> ‘basket’	<i>pàací</i> ‘cattle, cow’	(< Fr. <i>vache</i>)

The above prosodic treatment of loans produces two effects of note in Cèmuhî. First, by being assigned to a large number of borrowed words, the marginal low tone and low-high tonal pattern acquire productivity as loanword markers. Outside of loans, these “prosodic patterns of an expressive, unusual nature” “are used to an expressive effect”, including in swear words and onomatopoeic forms, e.g. *gùgune* ‘to make a muffled noise’, *kiliwû* ‘tiny’, *dùubwón* ‘labial click’ (p. 507, 519). Second, the marginal prosodic patterns that arose in the course of language development were “reactivated or completed by means of expressive lexical creations and loans” (p. 519). These features of LM – utilization of a rare native pattern for both atypical (expressive or novel) native words and loans, and expansion of a marginal native pattern through absorption of loanwords – recur in other case studies as well (see, in particular, §3.3, §4.2, and §4.3).

3.2. Low-toned loans in Zaniza Zapotec

A similar pattern of prosodic adaptation to the one seen in Cèmuḥî is found in Zaniza Zapotec, an Otomanguanean language of Mexico (Operstein 2017a). Zaniza Zapotec has three contrastive tones, high, mid, and low; the low tone has the lowest type frequency in native vocabulary. Since the sixteenth century, Zaniza Zapotec has been borrowing words from Spanish; owing to the diachronic phonological changes in both languages, the Spanish loanwords are clearly divisible into at least two chronological strata (Operstein 2016, 2017b). In the more recent stratum, the stressed syllable of the Spanish loanword receives the high tone or, more rarely, the mid tone (see (9a)). In the earlier stratum, the stressed syllable is assigned the perceptually unmotivated low tone (in 9b).

(9)	Spanish	>	Zaniza Zapotec	
	a.		lápis	/láp/ 'pencil' (recent loans)
			tenis	/tén/ 'sneakers'
			sábana	/sáb/ 'sheet'
			lámina	/lám/ '(metal) sheet'
	b.		silla	/ʃil/ 'saddle, chair' (old loans)
			yegua	/jèw/ 'mare'
			vaca	/bàg/ 'cow'
			queso	/kèz/ 'cheese'

As in the case of Cèmuḥî, the assignment of a rare tone to Spanish loanwords has activated a marginal native pattern by functionalizing it into a loanword marking device. Also as in Cèmuḥî, the number of Zaniza Zapotec morphemes with this tone has grown, as has its functional load due to the emergence of new minimal pairs, such as /jèw/ 'mare' – /jèw/ 'expensive' and /ʃil/ 'saddle, chair' – /ʃil/ 'sheep'. The data from Zaniza Zapotec additionally illustrates the fact that the productivity of a loanword marking mechanism is not of an indefinite duration but may disappear with a change in the system for handling borrowed material (Heath 1989: 204), specifically when the sociolinguistic conditions behind the marking no longer apply (see Schulte 2005 and §4.3).

3.3. Fixed-stress loans in Israeli Hebrew

Stress in Israeli Hebrew is represented by two subsystems with differing rules, verbal and nominal. As summarized by Cohen & Ussishkin (2013), verbal stress is completely predictable. Uninflected verbs are usually stressed on the final syllable (see (10a) below). Penultimate stress occurs when the suffixed subject marker is either consonant-initial (in (10b)) or, in selected *binyanim* (conjugations), when it consists of a single vowel (in (10c) and (10c')). Epenthetic vowels, inserted to

avoid certain consonant-consonant and vowel-consonant sequences, are ignored for the purposes of stress assignment (compare (10a') with (10a) and (10b') with (10b)).

- (10) a. *qadám* 'he preceded'
 a'. *hifít(a)x* 'he promised'
 b. *qadám-ti* 'I preceded'
 b'. *šafát(e)-ti* 'I judged'
 c. *qád-a* 'she bowed'
 c'. *hiqdím-a* 'she arrived early'

Verbs from foreign sources are adapted to the stress pattern of native verbs (Schwarzwald 1998: 140), though Recht (2010: 329) observes that “one or two colloquial loanword-based verbs” violate the native rules by keeping the stress pattern of the base noun. As an example he offers *histáľbet* ‘make fun’, which keeps the stress location of the Arabic loan *stáľbet* ‘fun, humor’, from which it is derived.

The nominal subsystem – nouns and adjectives – is divided into several prosodic subclasses. The major split is between mobile- and fixed-stress nominals. An estimated 76.3% of all Hebrew nouns belong to the mobile-stress category, characterized by the shift of stress to the last syllable in inflected forms (Cohen & Ussishkin 2013, based on Bolozky & Becker 2006). In their bare (unaffixed) form, 86.8% of the mobile-stress nouns are stressed on the ultima and 13.2% on the penult (see (11) and Figure 1). Autochthonous Hebrew words are thus characterized by ultimate or penultimate stress (Schwarzwald 1998: 123, 131; 2013: 45); many researchers agree that mobile-stress nouns of the type shown in (11a) represent the Hebrew norm (Cohen & Ussishkin 2013).

- (11) m.s. m.p. f.s. f.p.
 a. *xavér* *xaverím* *xaverá* *xaverót* ‘friend’
 b. *jéľed* *jeladím* *jaldá* *jeladót* ‘child’

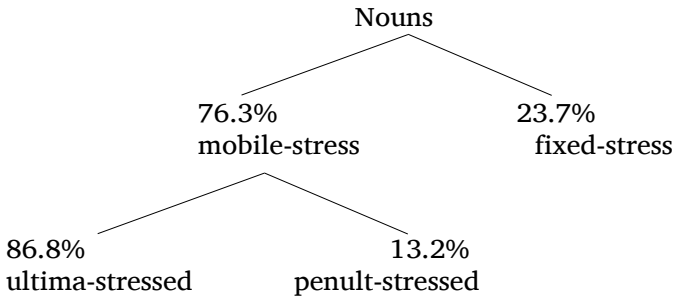


Figure 1. Prosodic classes of nouns in Israeli Hebrew (based on Cohen & Ussishkin 2013)

In fixed-stress nominals, the stress may fall on any syllable in the bare form and does not shift to the final syllable in inflected forms. An estimated 23.7% of Hebrew nouns belong to this class, which consists of native stems, old loans, proper nouns, some ethnicity and resident terms, and several less typical word categories including slang words, non-templatic neologisms such as blends and acronyms, some reduplicated nouns, game words, and some words in familiar, informal register (Schwarzwald 1998: 125, 129; Bolozky 2000: 56-58; Coffin & Bolozky 2003: 28-30; Pariente & Bolozky 2014) (see (12)).⁶

(12)	m.s.	m.p.	f.s.	f.p.	
	<i>telavívi</i>	<i>telavívim</i>	<i>telavívít</i>	<i>telavívijot</i>	'(resident) of Tel Aviv'
	<i>rasár</i>	<i>rasárim</i>	<i>rasárit</i>	<i>rasárijot</i>	'sergeant-major' (acronym)
	<i>rámqol</i>	<i>rámqolim</i>			'loudspeaker' (blend)
	<i>sabón</i>	<i>sabónim</i>			'nerd' (slang)
					(<i>saboním</i> 'soaps')
	<i>kláf</i>	<i>kláfim</i>			'children's game cards'
					(<i>kláfim</i> 'cards')
	<i>marák</i>	<i>marákim</i>			'soup' (informal)
					(normative <i>merakím</i>)
	<i>ádlér</i>	<i>ádlérim</i>			'Adlers' (surname)
			<i>méira</i>	<i>méirot</i>	'Meiras' (forename)
	<i>cxók</i>	<i>cxókim</i>			'laughter'
			<i>glída</i>	<i>glídot</i>	'ice cream'

The fixed-stress prosodic class also absorbs modern nominal borrowings (see (13)).⁷ In longer nominals, the stress may shift in the plural, but never to the last syllable.

(13)	m.s.	m.p.	f.s.	f.p.	
	<i>studént</i>	<i>studéntim</i>	<i>studéntit</i>	<i>studéntijot</i>	'student'
	<i>senátor</i>	<i>senátorim</i>	<i>senátorit</i>	<i>senátorijot</i>	'senator'
	<i>albáni</i>	<i>albánim</i>	<i>albánit</i>	<i>albánijot</i>	'Albanian'
	<i>objektívi</i>	<i>objektívijim</i>	<i>objektívít</i>	<i>objektívijot</i>	'objective'
	<i>blóf</i>	<i>blófim</i>			'bluff'
	<i>butík</i>	<i>butíkim</i>			'boutique'
	<i>xamsín</i>	<i>xamsínim</i>			'heat wave'
	<i>télefon</i>	<i>télefonim</i> ~ <i>telefónim</i>			'telephone'
			<i>téma</i>	<i>témot</i>	'theme'
			<i>protékcja</i>	<i>protékcjot</i>	'protection'

A number of researchers converge on the idea that failure to shift stress to inflectional suffixes marks the respective nominals as loans. For example: "The stress of the loan words does not fall on the suffixes, a characteristic which marks their foreignness as well" and "when one

observes [...] an unusual stress pattern in inflection or derivation [...] one might plausibly suspect, with a relatively low chance of error, that the word is in fact a foreign word” (Schwarzwald 1998: 134, 142). In Schwarzwald (2013), failure to shift stress to inflectional suffixes is identified as one of the features that distinguish “nonintegrated” words from “standard general Hebrew” words. The former category contains, apart from modern loans, such other items as proper nouns, acronyms, and “[l]ow-register words, including slang, colloquial, non-normative, and substandard words, some of them with emotional connotations, versus learned, medium or high register words” (p. 47).

Fixing the stress on the stem also affects the morphological component of Israeli Hebrew in that it makes the relation between inflectionally or derivationally related forms more transparent (Boložky 2000: 81). Schwarzwald (2013: 45-47) views the fixing of stress and regularization of inflection as interconnected developments. The regularizing effect of fixed stress on derivation is illustrated in (14): when the adjective-forming suffix *-i* and the abstract noun-forming suffix *-ijut* are added to borrowed bases, acronyms, and substandard words, they are unstressed.

(14)	Noun	Adjective	Abstract noun	
	<i>dát</i>	<i>datí</i>	<i>datijút</i>	‘religion/religious/being religious’
	<i>séks</i>	<i>séksi</i>	<i>séksijut</i>	‘sex/sexy/sex appeal’

In summary, the effects of assigning borrowed nominals to the fixed-stress class in Israeli Hebrew parallel those seen in the other languages. The immediate effect is flagging these words as loans; the fact that the marked prosodic class also hosts atypical vocabulary, such as acronyms and substandard words, provides a further parallel with the case studies from the other languages. The independent tendency in Israeli Hebrew to use penultimate stress “as a marker of informality or familiarity” (Boložky 2000: 81), features that characterize many of the words in the fixed-stress category, may have a contributing effect on the prosodic adaptation of these loans. The long-term effect of LM on phonology is to contribute to the language’s shift toward immobile stress; Boložky (2000: 57) suggests that keeping the stress fixed in inflection may already represent the natural choice in colloquial Israeli Hebrew, as opposed to normative Hebrew. The regularizing effect of LM is also apparent in morphology, where fixing the stress on the base increases its transparency in inflection and derivation.

4. Verbs

4.1. Prefix verbs in Qafar-Saho

Our first example of the use of a marginal inflectional class for loanword adaptation involves morphological integration of verbs taken from Semitic languages in the Qafar-Saho subgroup of East Cushitic. The following account is based on Hayward & Orwin (1991).

Some East Cushitic languages have verbs that mark subject agreement and derivation by means of prefixes, and mood and aspect by means of stem-internal ablaut. Prefix verbs constitute minority sets in all the languages, the normal proceeding being to indicate these categories by means of suffixation. The prefix conjugation is “a relatively minor, irregular, and archaic conjugation pattern” (p. 157) with cognates elsewhere in Afro-Asiatic, including Semitic and Berber. The suffix conjugation is hypothesized to have originated in a periphrastic construction consisting of an uninflected main verb and a postposed inflected compounding or auxiliary verb. The two conjugation types are illustrated in Table 2.

Table 2. Selected forms of Qafar *eḥet* ‘chew’ and *fak* ‘open’ (Hayward & Orwin 1991: 158-159)

		PREFIX VERB	SUFFIX VERB
Active	3s.m.pf.	<i>jeḥete</i>	<i>fake</i>
	3s.f.pf.	<i>teḥete</i>	<i>fakte</i>
	3s.m.impf.	<i>jaḥate</i>	<i>faka</i>
	3s.f.impf.	<i>taḥate</i>	<i>fakta</i>
Passive	3s.m.pf.	<i>jemḥette</i>	<i>fakkiime</i>
	3s.f.pf.	<i>temḥette</i>	<i>fakkinte</i>
	3s.m.impf.	<i>jamḥatte</i>	<i>fakkiima</i>
	3s.f.impf.	<i>tamḥatte</i>	<i>fakkinta</i>

Table 3 shows the number of prefix verbs in the individual East Cushitic languages. The highest number is found in Qafar and Saho, nevertheless, even in these languages prefix verbs constitute a marginal inflection class, being outnumbered by suffix verbs by a ratio of about 1 : 6.

Table 3. Prefix verbs in East Cushitic languages (Hayward & Orwin 1991: 159)

	LANGUAGE	NUMBER OF PREFIX VERBS
Omo-Tana group	Somali varieties	1-9
	Rendille	12
	Bayso	1
	Arbore	12
	Elmolo	7
	Dasenech	4
Qafar-Saho group	Qafar	> 300
	Saho	> 430

Hayward and Orwin suggest that the expansion of the prefix conjugation in Qafar and Saho, as compared to the rest of East Cushitic, was motivated by borrowing from neighboring Semitic languages. They report a case study from Irob, a Christian community of Qafar-Saho speakers whose members are mostly bilingual in Irob and Tigrinya. Their preliminary fieldwork on the Irob language has uncovered 215 prefix verbs, about half of which – namely, 108 – were Tigrinya loan verbs. All Tigrinya verbs have been adapted to the prefix conjugation, which has considerably expanded as a consequence; the authors analyze this development in terms of a “paradigm revival”. The conversion routine between the inflection classes of the Tigrinya verbs and the receiving subclasses of the prefix conjugation in Irob can only partially be explained in terms of phonetic similarity. The prefix conjugation was, and still remains, a minor inflection class in the recipient language.

4.2. Weak-final verbs in Maltese

Adaptation of Romance loan verbs in Maltese illustrates how a marginal inflection class can acquire a significant gain in productivity through accommodation of loans. The account below is based on Mifsud (1995, 1996), where the process of loan verb integration is analyzed as both embedded in, and contributing to, the larger shift in Maltese toward concatenative morphology.

The Arabic linguistic foundation of Maltese was established between the Arab conquest of Malta in 870 and the Muslim expulsion in 1249 (Mifsud 1996: 117). Developing in comparative isolation from other Arabic vernaculars,⁸ Maltese has been in intensive contact with Italo-Romance languages (Sicilian, Southern Italo-Romance, and Standard Italian), absorbing a large number of Romance verbs and creating new

verbs from borrowed Romance nouns and adjectives.

Verbs from Romance sources are integrated into Maltese morphology in one of two ways. A comparatively small group of Romance verbs are fully integrated into the derivational and inflectional morphology of Semitic Maltese (SM) sound verbs, which represent the regular verb type in SM. This integration is achieved by “dehydrating” (Mifsud 1996: 118) the borrowed stem of its vowels and treating the consonants as forming a Semitic-type consonantal root. Most verbs in this group derive from nominal or adjectival stems. In Table 4, the conjugation pattern of a borrowed verb is compared with that of a native sound verb. This type of loan verb integration is no longer productive.

Table 4. Conjugation of *f-s-r* ‘explain’ and *p-t-r* ‘paint’ in Maltese (Mifsud 1996: 127)

	SOUND NATIVE VERB	ROMANCE LOAN VERB
Root	<i>f-s-r</i>	<i>p-t-r</i>
Perfect		
1s.	<i>fissir-t</i>	<i>pittir-t</i>
2s.	<i>fissir-t</i>	<i>pittir-t</i>
3s.m.	<i>fisser</i>	<i>pitter</i>
3s.f.	<i>fissr-et</i>	<i>pittr-et</i>
1p.	<i>fissir-na</i>	<i>pittir-na</i>
2p.	<i>fissir-tu</i>	<i>pittir-tu</i>
3p.	<i>fissr-u</i>	<i>pittr-u</i>
Imperfect		
1s.	<i>n-fisser</i>	<i>n-pitter</i>
2s.	<i>t-fisser</i>	<i>t-pitter</i>
3s.m.	<i>y-fisser</i>	<i>y-pitter</i>
3s.f.	<i>t-fisser</i>	<i>t-pitter</i>
1p.	<i>n-fissr-u</i>	<i>n-pittr-u</i>
2p.	<i>t-fissr-u</i>	<i>t-pittr-u</i>
3p.	<i>y-fissr-u</i>	<i>y-pittr-u</i>
Imperative		
2s.	<i>fisser</i>	<i>pitter</i>
2p.	<i>fissr-u</i>	<i>pittr-u</i>

A much larger group of Romance-origin verbs are integrated into what originally was a marginal class of verbs with a [w] or [j] final radical in their root (weak-final verbs). This conjugation is “the only one which offers a substantial deviation from the sound verb of SM” (Mifsud 1995: 80). As seen in Table 5, the inflectional suffixes of this verb class differ from those of sound verbs. The weak-final class is divided into two verb categories, those in which the imperfect singular ends in *-a* and those in which it ends in *-i*. The form of the Romance verb that served as the basis for the loans is hypothesized to have been the third person singular present indicative and/or second person singular imperative; both forms end in *-a* in first-conjugation Romance verbs, and either *-e* or *-i* in other conjugations (Mifsud 1995: 115). This accidental formal similarity between the donor and recipient languages was exploited in the borrowing process by adapting first-conjugation Romance verbs to the *-a* category and verbs from the other conjugations to the *-i* category (Mifsud 1996: 121). The examples in Table 5 illustrate this for the borrowed verbs *k-n-t-j* (< It. *canta* ‘sings’) and *f-l-j* (< It. *falla* ‘fails’). When present, the Romance consonant clusters are squeezed into a single consonantal slot in the Semitic-type Maltese root. In polysyllabic verbs, the verbal patterns of SM affect only the last two syllables of the inflected form, with the preceding syllables interpreted as a prosodic and morphological “adjunct” (Mifsud 1996: 125).

Table 5. Conjugation of *ʔ-r-j* ‘read’, *ħ-l-j* ‘leave’, *k-n-t-j* ‘sing’, and *f-l-j* ‘fail’ in Maltese (Mifsud 1996: 127)

	WEAK-FINAL NATIVE VERBS		ROMANCE LOAN VERBS	
	-A	-I	-A	-I
Root	<i>ʔ-r-j</i>	<i>ħ-l-j</i>	<i>k-n-t-j</i>	<i>f-l-j</i>
Perfect				
1s.	<i>ʔr-ajt</i>	<i>ħall-ejt</i>	<i>kant-ajt</i>	<i>fall-ejt</i>
2s.	<i>ʔr-ajt</i>	<i>ħall-ejt</i>	<i>kant-ajt</i>	<i>fall-ejt</i>
3s.m.	<i>ʔar-a</i>	<i>ħall-a</i>	<i>kant-a</i>	<i>fall-a</i>
3s.f.	<i>ʔr-āt</i>	<i>ħall-īt</i>	<i>kant-āt</i>	<i>fall-īt</i>
1p.	<i>ʔr-ajna</i>	<i>ħall-ejna</i>	<i>kant-ajna</i>	<i>fall-ejna</i>
2p.	<i>ʔr-ajtu</i>	<i>ħall-ejtu</i>	<i>kant-ajtu</i>	<i>fall-ejtu</i>
3p.	<i>ʔr-aw</i>	<i>ħall-ew</i>	<i>kant-aw</i>	<i>fall-ew</i>
Imperfect				
1s.	<i>n-aʔr-a</i>	<i>n-ħall-i</i>	<i>n-kant-a</i>	<i>n-fall-i</i>
2s.	<i>t-aʔr-a</i>	<i>t-ħall-i</i>	<i>t-kant-a</i>	<i>t-fall-i</i>

3s.m.	<i>j-aʔr-a</i>	<i>j-ħall-i</i>	<i>y-kant-a</i>	<i>j-fall-i</i>
3s.f.	<i>t-aʔr-a</i>	<i>t-ħall-i</i>	<i>t-kant-a</i>	<i>t-fall-i</i>
1p.	<i>n-aʔr-aw</i>	<i>n-ħall-u</i>	<i>n-kant-aw</i>	<i>n-fall-u</i>
2p.	<i>t-aʔr-aw</i>	<i>t-ħall-u</i>	<i>t-kant-aw</i>	<i>t-fall-u</i>
3p.	<i>j-aʔr-aw</i>	<i>j-ħall-u</i>	<i>j-kant-aw</i>	<i>j-fall-u</i>
Imperative				
2s.	<i>aʔr-a</i>	<i>ħall-i</i>	<i>kant-a</i>	<i>fall-i</i>
2p.	<i>aʔr-aw</i>	<i>ħall-u</i>	<i>kant-aw</i>	<i>fall-u</i>

Prior to incorporating Romance loan verbs, the weak-final verb class had fully or partially incorporated other anomalous native verb classes, including verbs with identical second and third radicals and verbs with a defective final radical (i.e. a glottal stop, voiced pharyngeal fricative, or voiced velar fricative). After absorbing a large number of loans, this “originally defective and marginal verb-class has [...] become the most important in modern M[altese], its members by far outnumbering those of the regular type” (Mifsud 1996: 126). This development was also “a crucial step in the passage from the root-based forms of SM (non-concatenative morphology) to a type of inflexion in which a stem-base which is of undefined length and practically invariable is augmented by inflexional affixes as in R[omance] conjugations (concatenative morphology)” (Mifsud 1996: 120). Mifsud notes that the inherent structural ambiguity of forms like *baššejt* ‘I lowered’ (< It. *bassa*), which may be given both a non-concatenative interpretation in terms of a tri-consonantal root (*b-š-j*), stem pattern (CVCCVC), and inflectional suffix (*-t*), and a concatenative interpretation in terms of a stem (*bašš*) and inflectional suffix (*-ejt*), converts them into an important “channel for the introduction of further loans” (p. 123). The shift from templatic to concatenative morphology in the verb system is matched by a similar drift in the nominal system, as seen in the gradual transition from internal to external pluralization in nouns, cf. *art* ‘land’ > plural *artġjīt* (for Old Maltese *irādi*) (Mifsud 1995: 256).

4.3. Slavic conjugation’ in Romanian

The creation of a ‘Slavic conjugation’ in Romanian, as analyzed by Schulte (2005), provides an example of loan verb adaptation that is sensitive not only to the nonnative status of the verbs but also to their (real or perceived) etymological source.

In Romanian, the front vowels /i/ and /e/ were centralized to /i/ and /ə/, respectively, after a trilled /r/, which formerly used to contrast

with a tapped /ɾ/. Following the Romanian orthography, the high central vowel is spelled below as <î> or <â>, and the mid central vowel as <ă> (see the examples in (15), from Schulte 2005: 312).

- (15) Latin > Romanian
rivum *râu* ‘river’
reum *rău* ‘bad’

The above change affected the common, high-frequency verb *a urî* ‘to hate’ (< Lat. **horrire*), causing it to acquire a centralized theme vowel. The conjugation of *a urî* in the present tense is contrasted below with that of *a folosi* ‘to use’.

- (16) *a folosi* *a urî*
1s *folos-e-sc* *ur-ă-sc*
2s *folos-e-ști* *ur-ă-ști*
3s *folos-e-ște* *ur-ă-ște*
1p *folos-i-m* *ur-î-m*
2p *folos-i-ți* *ur-î-ți*
3p *folos-e-sc* *ur-ă-sc*

As in other Romance languages, the theme vowel in Romanian serves as the basis for dividing verbs into inflection classes (conjugations). Centralization of the theme vowel has effectively created a new subclass within the fourth conjugation, which initially consisted of the single verb *a urî* (see Table 6). Subsequently, the conjugation pattern of *a urî* was extended to selected other verbs that ended in the sequence *-ri* in the infinitive; most of these are of Slavic origin. The majority of the verbs in *-ri* that have retained the front vowel are non-Slavic.

Table 6. Inflection classes in Romanian (after Costanzo 2011: 97)

	CLASS 1	CLASS 2	CLASS 3	CLASS 4	
Latin	<i>-āre</i>	<i>-ēre</i>	<i>-ere</i>	<i>-īre</i>	
Romanian	<i>-a</i>	<i>-ea</i>	<i>-e</i>	<i>-i</i>	<i>-î</i>
	<i>ajuta</i> ‘help’ <i>lucra</i> ‘work’	<i>vedea</i> ‘see’	<i>spune</i> ‘say’	<i>auzi</i> ‘hear’ <i>dori</i> ‘wish’	<i>omorî</i> ‘kill’ <i>urî</i> ‘hate’

Schulte (2005: 318) proposes an analysis of the above development in terms of “exploitation as loanword marker of a structural pattern that is in principle possible, but nevertheless extremely rare”. The vowel /i/ has restricted phonological and morphological distribution in Romanian, and some theorists have suggested that its origin may be due, at least

in part, to the introduction of Slavic loans. Nevertheless, even in some Slavic loans “/i/ cannot be explained by phonology alone” (Renwick 2011: 30). These and similar considerations have led Schulte to hypothesize that this vowel may have been perceived by Romanian speakers as a “typical” feature of Slavic loans, facilitating the creation of a “Slavic conjugation” in *-î*.⁹ This conjugation subclass is marked both phonologically, since word-final stressed /i/ is not found outside the infinitives of this conjugation, and morphologically as a rare inflection pattern.

In hypothesizing about the reasons for the emergence of the ‘Slavic conjugation’, Schulte draws on a probable sociolinguistic motivation, namely the recipient language community’s need to assert its cultural identity, and emphasizes that such developments are typical of contexts involving “at least passive familiarity with the source language”:

By pronouncing a loanword in such a way that it sounds slightly marked within the structure of his own language, a speaker shows that he is aware of its foreignness. In how far this can be considered deliberate, or perhaps a “semi-deliberate” process, is unclear. (Schulte 2005: 319)

After the sociolinguistic motivation that had prompted this adaptation pattern ceased to be relevant, the pattern lost its productivity. At present, no new verbs are being assigned to this conjugation.

4.4. Biaspectual verbs in Russian

In Russian, several loanword integration patterns illustrate the conspiracy of internal and external factors operating in LM. The patterns to be considered in this paper are biaspectual verbs (discussed in this section), indeclinable nouns (to be discussed in §5.2), and [N[N]] compounds with an uninflected first member (to be discussed in §5.3).

The majority of verbs in Russian have two aspectual forms, imperfective and perfective. These are related derivationally via prefixation or suffixation (see (17)).

(17)	Imperfective	Perfective	
	<i>pisat'</i>	<i>napisat'</i>	‘write’
	<i>zvat'</i>	<i>pozvat'</i>	‘call’
	<i>tolkat'</i>	<i>tolknut'</i>	‘push’
	<i>davat'</i>	<i>dat'</i>	‘give’
	<i>razbivat'</i>	<i>razbit'</i>	‘smash’

There is also a marginal class of biaspectual verbs that express the different aspects with the same morphological form. Table 7, which is

an abbreviated version of the corresponding table in Mučnik (1966: 62), contrasts selected forms of the biaspectual verb *restavrirovat'* 'restore' with those of the synonymous aspectual pair *vosstanovit'* 'restore (pf.)' ~ *vosstanavlivat'* 'restore (impf.)'. The aspectual meaning of the infinitive, past tense, and imperative forms of *restavrirovat'* needs to be inferred from context.

Table 7. Selected forms of *restavrirovat'* 'restore'

	PERFECTIVE	PERFECTIVE IMPERFECTIVE	IMPERFECTIVE	
Infinitive	<i>vosstanovit'</i>	<i>restavrirovat'</i>	<i>vosstanavlivat'</i>	
Past tense	<i>vosstanovil</i>	<i>restavriroval</i>	<i>vosstanavlivail</i>	
Imperative	<i>vosstanovi</i>	<i>restavriruj</i>	<i>vosstanavlivaj</i>	
Future tense	<i>vosstanovl'u</i>	<i>restavriruju</i>	<i>budu restavrirovat'</i>	<i>budu vosstanavlivat'</i>

The class of biaspectuals is composed of two subclasses of unequal size. The smaller consists of Slavic (Russian and Old Church Slavic) verbs, such as *velet'* 'order' and *kaznit'* 'execute'. Some of these are archaic, bookish, or low-frequency, and as a whole this subclass is no longer productive. Mučnik (1966: 62) estimates its size at about 50 verbs (or less than half this number if the verbs with the productive suffix *-ova* are not included).

The second subclass is much larger, comprising about or over 90% of all biaspectual verbs (based on the calculations reported in Mučnik 1966: 63 and Čertkova & Čang 1998: 14) and consisting predominantly of borrowings from Western European languages. Morphologically, these are integrated into Russian by means of the suffix *-ova*, which may be combined with interfixes, resulting in the allomorphs *-izova*, *-irova*, *-izirova*, and *-ficirova* (see (18); the number of verbs with each allomorph is given in Mučnik 1966: 63). Mučnik (1966: 66) observes that, even though the suffix *-ova* is native to Russian, its use for loan verb integration was activated under the influence of a homophonous suffix in Polish. The interfixes are of French and/or German origin (Karcevskij 1923: 57; Gardani 2016: 232f). The allomorphs vary in productivity, *-irova* being the most productive in Mučnik's corpus (1966: 63-64). Čertkova & Čang (1998: 14) confirm, and report that about 60% of borrowed biaspectuals use this allomorph.

- (18) *atak-ova-t'* 'attack' (40 verbs)
paster-izova-t' 'pasteurize' (35 verbs)

<i>inform-irova-t'</i>	'inform'	(370 verbs)
<i>avtomat-izirova-t'</i>	'automate'	(120 verbs)
<i>personi-ficirova-t'</i>	'personify'	(35 verbs)

Literary Russian began borrowing verbs from Western European languages at the end of the seventeenth / beginning of the eighteenth century. Mučnik (1966) sees one of the reasons for these verbs' failure to take on aspectual affixes in the fact that the bilingual agents of borrowing strove to preserve the surface form of the loan verbs due to their knowledge of the source languages. In reaching this conclusion, he draws an explicit parallel with the treatment of borrowed indeclinable nouns (to be discussed in §5.2):

Of course in this case, as in the adaptation of indeclinable nouns, an important role was played by the fact that the main strata of speakers of literary Russian of the period, who knew Western European languages, tried to maximally preserve the surface form of the borrowed verbs. (Mučnik 1966: 66; author's translation)

Mučnik views the unwieldy length of the integration suffixes as a contributory factor, given that the creation of aspectual partners for the loan verbs would have entailed further lengthening the verbs by an additional affix. Another proposed contributing factor is the general tendency toward analyticity in Russian morphosyntax, including in the expression of aspectual distinctions (Mučnik 1966: 66-67).

Unlike the first, this subclass of biaspectuals remains open and productive in modern Russian. A large number of the verbs became part of the language after the October 1917 revolution:

A number of verbs in the literary language, such as *atakovat'*, *abonirovat's'a*, *angažirovat'* etc. have the meaning of both aspects, perfective and imperfective; *my atakujem* means both present and future tenses. Such double aspectual meaning is in glaring contradiction with the spirit of the Russian language, which requires every verb to have only one aspectual meaning. It follows from this that such verbs are perceived as foreign. (Karcevskij 1923: 56; author's translation)

Although following the revolution both the societal ideology and the knowledge of the source languages had changed, the Soviet period was likewise characterized by the tendency to preserve the surface form of these internationalisms¹⁰ while at the same time increasing their frequency. In substandard or informal speech, their perceived deficiency

leads to their ‘nativization’ through creation of ‘missing’ aspectual counterparts:

But popular language, since it uses such verbs, immediately Russifies them and creates prefixal perfects *zaangaževat’s’a*, *zaarestovat’*, *zaatakovat’* and the corresponding imperfective *zaarestovyvat’* or *arestovyvat’*, *organizovyvat’* and so on. In this way, the language uses suffixes and prefixes, and word formation more generally, for the Russification of foreign words. (Karcevskij 1923: 56; author’s translation)

Some of the aspectual partners so created, such as *arestovyvat’* (imperfective to *arestovat’* ‘arrest’) and *proinformirovat’* (perfective to *informirovat’* ‘inform’), have become part of the normative language. At present, the class of biaspectuals continues to absorb new members and has grown considerably since the time of Mučnik’s study: while Mučnik (1966: 62-63) estimated the number of biaspectuals at about 650, a more recent estimate, Gorobec (2009: 39), raises their number to about 1,400 verbs.

In its treatment of borrowed verbs, Russian differs markedly from Western Slavic languages, like Polish and Czech, which tend to assimilate such verbs to their aspectual systems; compare, for example, Ru. *adresovat’* ‘address (impf. and pf.)’ and *demoralizirovat’* ‘demoralize (impf. and pf.)’ with Po. *adresować ~ zaadresować* and *demoralizować ~ zdemoralizować* (Mučnik 1966: 65; Krysin 2008: 191-192). The number of biaspectuals in these languages is consequently much smaller than in Russian: according to Perlin (2010: 166), a standard Polish dictionary labels only 73 verbs as biaspectual; only 8 of these are native.

What makes the history of borrowed biaspectual verbs in Russian especially interesting is the fact that, initially, these verbs were subjected to morphological perfectivization or imperfectivization, with many such derived forms recorded during the eighteenth and nineteenth centuries. These forms were not retained in the normative language, however, and the verbs eventually settled on biaspectual morphology (Mučnik 1966: 65). Mučnik (1971) and Krysin (2008) interpret this development, together with a similar developmental trend in the history of borrowed indeclinable nouns (see §5.2), as evidence of a general drift in Russian toward a more analytic morphosyntax. Brandner (2002), who offers a similar analysis, additionally connects this drift with the ongoing “internationalization” of Russian, which intensified in the second half of the nineteenth century and involves a certain preference for analytic structures, presumably under the influence of the more analytic Western European languages.

In summary, adaptation of verbs from Western European languages to the marked preexistent class of biaspectuals in Russian is analyzable as a way “to preserve the foreign flavor of borrowed verbs” (Janda 2007: 87). By failing to participate in the morphological aspectual alternations, and by relying on non-morphological means for signaling the aspectual distinctions, these verbs also contribute to the growing morphosyntactic analyticity of the receiving language.

5. Nouns

5.1. Indeclinable nouns in Italian

Italian nouns are traditionally divided into inflection classes based on the final segment of the singular form (the word marker;¹¹ see (19)). This division is etymological, with the classes shown below as 1, 2, and 3 largely corresponding to the first three declensions of Latin (Grandgent 1927: 124-126). Traditional grammars also distinguish various ‘irregular’ nouns. The irregular noun type of interest to this study is indeclinables, nouns that have the same form in the singular and plural (shown in (19) as class 4). The number (and gender) of indeclinable nouns are inferred from their syntactic agreement; compare, for example, *la virtù* ‘the virtue’ (feminine singular) with *le virtù* ‘the virtues’ (feminine plural) (Patota 2006: 56).

(19) Inflection classes of Italian nouns based on the singular form

1	<i>casa</i>	‘house’	(-a)
2	<i>ragazzo</i>	‘boy’	(-o)
3	<i>cane</i>	‘dog’	(-e)
4	<i>virtù</i>	‘virtue’	(indeclinables)

Repetti (2006), based on D’Achille & Thornton (2003) and related publications, presents a more nuanced organization of Italian declension classes which takes into account both the final segment of the singular form and the plural suffix. To make Repetti’s classification compatible with the traditional classification in (19), the noun classes below are numbered differently than in the original publication.

(20) Inflection classes of Italian nouns based on the singular and plural forms

1a	<i>casa</i>	<i>case</i>	‘house(s)’	(-a / -e)
1b	<i>problema</i>	<i>problemi</i>	‘problem(s)’	(-a / -i)
2a	<i>ragazzo</i>	<i>ragazzi</i>	‘boy(s)’	(-o / -i)
2b	<i>uovo</i>	<i>uova</i>	‘egg(s)’	(-o / -a)
3	<i>cane</i>	<i>cani</i>	‘dog(s)’	(-e / -i)

4a	<i>virtù</i>	<i>virtù</i>	'virtue(s)'	(indeclinables (stressed vowel))
4b	<i>euro</i>	<i>euro</i>	'euro(s)'	(indeclinables (unstressed vowel))
4c	<i>tram</i>	<i>tram</i>	'tram(s)'	(indeclinables (consonant))

D'Achille & Thornton (2003) show that the proportion of nouns in each inflectional class has changed over time, and characterize the changes to the classes labeled above as 3 (-e / -i) and 4 (indeclinables) as the most significant (p. 218). Their study shows that between the thirteenth century (the earliest period examined) and the second half of the twentieth century (the latest period examined), the proportion of indeclinables in the studied texts grew from 2.4% to 8.6%, whereas the proportion of nouns in -e / -i dropped from 30.2% to 24%. They find that the two changes are related, and demonstrate that the growth of class 4 was due, at least in part, to in-migration of class 3 nouns, including invariable nouns in -e and apocopated nouns like *virtù* (< *virtude*) (p. 223-224).

A closer look at the internal composition of class 4 reveals that the oldest stratum is composed of native words, including monosyllabics, invariable nouns in -e, and nouns ending in a stressed vowel because of apocopation. D'Achille and Thornton's analysis shows that subsequent growth of this class was due to the influx of vowel-final loans, such as *ipotesi* 'hypothesis'; neologisms, such as clippings; and, starting in the twentieth century, consonant-final loans, such as *sport*. Thornton (1996) observes that clippings tend to be invariable because the vowel they end in often conflicts with their gender: while the majority of Italian nouns end in -a if feminine and -o if masculine, clippings, which inherit the gender of their base nouns, often violate this tendency, cf. *mitra* 'machine gun' (masculine), *moto* 'motorbike' (feminine). D'Achille and Thornton also stress the tendency toward invariability of nouns in -e, masculine nouns in -a, and feminine nouns in -o, and see it as evidence of the general tendency in modern Italian to organize nouns into just three inflection classes (p. 227). Both D'Achille & Thornton (2003) and Repetti (2006) view the -o / -i, -a / -e, and indeclinables as the only productive noun inflection classes in modern Italian.

In the synchronic grammar of Italian, all class 4 nouns are marked morphologically in that the nouns are indeclinable, while the subclasses 4a and 4c are additionally marked phonologically in that the former ends in a stressed vowel and the latter in a consonant. Thornton (1996: 85) indicates that consonant-final words represent under 1% of the words in the Italian Basic Vocabulary (Thornton *et al.* 1994) and under 3% of the words in an about 45,000 word reverse index of the Italian lexicon. Words ending in a stressed vowel are also phonologi-

cally marked, as most Italian words (about 80% according to an estimate cited in Krämer 2006: 129) are stressed on the penult and only a small minority (about 2%) are stressed on the ultima. From among the disyllabic words in the Italian Basic Vocabulary, only 3.2% are iambic (Thornton 1996: 85).

An interesting way in which the marked features of final stress and indeclinability are exploited for LM has been described for American Italian, the varieties of Italian spoken by Italian immigrants in North America. According to Repetti (2006), American Italian crucially differs from standard Italian in that it has not developed the 4b and 4c subclasses of indeclinables, which results in differences in how borrowed nouns ending in consonants and unstressed vowels are handled in the two varieties.¹² Standard Italian typically assigns borrowed nouns ending in an unstressed vowel to class 4b (e.g. *coyote*, *bikini*) and consonant-final nouns to class 4c (e.g. *boutique*, *bazar*). In American Italian, consonant-final nouns borrowed from English instead acquire a word marker and are completely integrated among classes 1 through 3 (see (21)).

(21)	Class 1		Class 2		Class 3
	[rágga]	(< <i>rug</i>)	[bríkko]	(< <i>brick</i>)	[strítte] (< <i>street</i>)
	[túppa]	(< <i>tip</i>)	[bíllo]	(< <i>bill</i>)	[ámme] (< <i>ham</i>)

The loan nouns that end in an unstressed vowel undergo a shift of stress to the final vowel and are assigned to class 4a (see (22a)). The stress shift is specific to nominal loans and does not affect borrowings belonging to other parts of speech (see (22b)).

(22) a.	English	>	American Italian
	<i>nephew</i>		[nifjú]
	<i>fellow</i>		[falú] ~ [faló]
	<i>window</i>		[windó]
	<i>welfare</i>		[wofé]
	<i>aunt</i>		[entí]
	<i>money</i>		[muní]
	<i>Tommy</i>		[tomí]
	<i>Polly</i>		[palí]
b.	<i>easy</i>		[ísi]
	<i>funny</i>		[fáni]
	<i>never</i>		[néva]
	<i>tomorrow</i>		[tumárró]

The pattern in (22a) illustrates how a marked inflectional class that arose language-internally is exploited for LM. The loan nouns assigned to this class are marked morphologically by not taking plural inflec-

tion and phonologically by the shift of stress to a marked position. In Standard Italian, nominal loans ending in a consonant are similarly marked both morphologically and phonologically. Although consonant-final nouns are a recent innovation, consonant-final words are not new to the structure of Italian as they can result from various postlexical rules (e.g. *quel bel ragazzo* < *quello bello ragazzo* ‘that beautiful boy’) and some are found among prepositions, articles, interjections, acronyms, blends, and onomatopoeic words (e.g. *per* ‘for’, *il* ‘the (m.s.)’, *TAC* ‘CAT scan’, *colf* ‘domestic help’ < *collaboratrice familiare, tic-tac*) (Thornton 1996: 85). In both varieties, the assignment of borrowed nouns to the class of indeclinables is also interpreted as being symptomatic of, and as contributing to, the larger drift within Italian morphology toward a three-class system of nominal inflection in which indeclinables form an increasingly productive class.

5.2. *Indeclinable nouns in Russian*

The vast majority of nouns in Russian are declined for six cases and two numbers, with the case and number categories indicated via portmanteau suffixes (Timberlake 2004: 130). There is also an estimated two thousand indeclinable nouns that include both native and borrowed words. The majority of borrowed indeclinables are vowel-final (see (23)).¹³ Their number, case (and gender) need to be inferred from their syntactic agreement; compare, for example, *moskovskoe metro* ‘Moscow subway’ (nominative/accusative, singular, neuter) with *moskovskij žigolo* ‘Moscow gigolo’ (nominative, singular, masculine).

(23)	<i>buržua</i>	‘bourgeois’	<i>kéčua</i>	‘Quechua’
	<i>kafé</i>	‘cafe’	<i>kófe</i>	‘coffee’
	<i>taksi</i>	‘taxi’	<i>víski</i>	‘whiskey’
	<i>b’uró</i>	‘bureau’	<i>kakáo</i>	‘cocoa’
	<i>ragú</i>	‘ragout’	<i>íglu</i>	‘igloo’

The alien feel of these nouns within the morphological system of Russian is emphasized by Karcevskij:

The literary dialect of Russian does not allow declension of the words *pal’to, kakao, kofe, kakadu, kolibri, radio* etc. while *all* nouns in the Russian language are declined; therefore, these words are considered and perceived as foreign elements. (Karcevskij 1923: 55; author’s translation)

The history of morphological integration of these nouns follows, in broad strokes, that of borrowed verbs (see §4.4). During the eighteenth

and nineteenth centuries they tended to be morphologically integrated, with such inflected forms as *kakaom* ‘cocoa’ (instrumental, singular) and *[n]a b’ure* ‘on the bureau’ (prepositional, singular) attested in contemporary sources. Their use as indeclinables began to be recorded from the second quarter of the nineteenth century, with the competing inflected and uninflected forms sometimes used side by side. These nouns continued to be inflected by speakers of normative Russian until as late as the beginning of the twentieth century, however, the literary norm eventually fixed them as invariable, while inflected forms of these nouns began to be viewed as uneducated and were reallocated to special expressive stylistic functions (Mučnik 1971: 184-185; Krysin 2008: 227f). At present, inflected forms of indeclinable nouns may be found, e.g., in the language of the Internet, where the humorous or other expressive effects are sometimes emphasized by the use of special graphic devices. Krysin (2008: 234), for example, notes that the form *v taks’ax* ‘in taxis’ (prepositional case) is often used as a hyperbolic plural. Table 8, which contains some of the forms assembled by Krysin (2008: 231-232), presents additional examples; the noun *pianino* ‘piano’, shown there, is indeclinable in normative usage.

Table 8. Inflected forms of the noun *pianino* ‘piano’

	SINGULAR	PLURAL
Nominative	<i>pianino</i>	<i>pianiny</i>
Genitive	<i>pianina ~ pianiny</i>	<i>pianin</i>
Dative	<i>pianine</i>	<i>pianinam</i>
Accusative	<i>pianinu</i>	<i>pianiny</i>
Instrumental	<i>pianinom ~ pianinoj</i>	<i>pianinami</i>
Prepositional	<i>pianine</i>	<i>pianinax</i>

Krysin (2008) notes that the number of indeclinable nouns grew in Russian in several spurts, particularly in the post-revolutionary period, in the 1960s, and then again in the 1980s and 1990s, as a result of socially-conditioned increases in the number of borrowings and neologisms, such as abbreviations. During the Soviet period, the literary language definitively adopted the invariable form of these nouns as the only correct form. Also during this period, the invariability of indeclinables ceased to be a sign of their foreignness, establishing them as an etymologically-independent class in the Russian inflectional system. This assessment is supported by the

questionnaire-based study conducted in the 1960s in which 97% of the 1,500 Russian speakers from different social strata and educational backgrounds indicated that the impossibility to decline nouns like *pal'to* 'coat' (< Fr. *paletot*) and *depo* 'depot' (< Fr. *dépôt*) in accordance with the pattern of neuter nouns in *-o* was due to deviation from the literary norm rather than because of these words' foreign origin (Mučnik 1971: 265-267; Krysin 2008: 229).

In its treatment of borrowed vowel-final nouns, Russian differs markedly from other Slavic languages, in which all or most borrowed nouns tend to be morphologically integrated (Unbegaun 1947: 141-144; Mučnik 1971: 256; Krysin 2008: 230). Borrowed indeclinables had a number of native precedents in Russian, including indeclinable surnames derived from genitives (e.g. *Živago*, *Belago*, *Blagovo*, *Durnovo*, *Černyx*), women's surnames ending in a hard consonant (e.g. *Begun*, *Rubec*), and nouns derived from other parts of speech (e.g. *prosti* 'sorry') (Mučnik 1971: 250, 260). Interestingly, in the beginning, nineteenth-century Russian grammarians tended to formulate the rule about indeclinability of foreign-origin nouns ending in vowels with consistency only with respect to personal and place names, such as *G'ugo* and *Korfu*, which Mučnik (1971: 260-261) takes as evidence that, at the time, the number of proper nouns of this type was far larger than that of common nouns, and that the latter were likely to have been treated more variably.

The proposed reasons for keeping intact the surface form of borrowed vowel-final nouns include both internal and external factors. The proposed internal factor is the difficulty of adapting vowel-final nouns, other than those ending in an unstressed *-a*, to the native system of nominal inflection. The proposed external factors flow from the upper-class basis of literary Russian and are explained by the openness of the Russian elite to Western influences and the deference accorded to foreign words in the speech of the nineteenth-century salons.¹⁴ Since the second half of the nineteenth century, these external influences were bolstered by the process of 'internationalization' of Russian, which includes a drift toward a more analytic morphosyntax (Unbegaun 1947; Mučnik 1966, 1971; Brandner 2002). The existence of a drift toward greater analyticity is confirmed by the growth of indeclinables in the second half of the twentieth century by the addition of such new categories as Ukrainian surnames ending in *-ko* (e.g. *Korolenko*) and of native toponyms in *-ovo* / *-evo* and *-yno* / *-ino* (e.g. *Voroncovo*, *Tušino*) (Krysin 2008: 236-239).

5.3. NN compounds in Slavic languages

In recent decades, East and South Slavic languages have developed a significant number of compounds consisting of an uninflected attributive noun followed by a head noun (see the Russian examples in (24); the following discussion is based mainly on Kapatsinski & Vakareliyska 2013). In Russian, such compounds are particularly common in print, especially in the fields of business, technology, media, politics, and entertainment. The productivity of this construction was stimulated by exposure to English compounds of the type [N[N]]. The first (attributive) constituent¹⁵ is typically a recent borrowing from English, whereas the second (head) constituent is either a native noun or an established loan. In the names of businesses, for example, such older, established loans include *bar* ‘bar’, *klub* ‘club’, and *servis* ‘service’.

- | | | | | |
|------|---------------------|-------------------|-------------------------|-------------------|
| (24) | <i>striptizklub</i> | ‘strip club’ | <i>piar-xod</i> | ‘PR move’ |
| | <i>art-galereja</i> | ‘art gallery’ | <i>pank-greben</i> | ‘punk ridge’ |
| | <i>tatu-biznes</i> | ‘tattoo business’ | <i>pop-tusovka</i> | ‘pop insiders’ |
| | <i>rok-kul'tura</i> | ‘rock culture’ | <i>lajting xudožnik</i> | ‘lighting artist’ |

The [N[N]] compounds are unusual within the morphosyntactic typology of Slavic in that the attributive constituent carries no inflectional marking. However, such structures are not entirely alien to Slavic, and Kapatsinski and Vakareliyska point to a number of “somewhat established” preexisting models in Russian. These include invariable native modifiers, such as *lže-* ‘false’ and *čudo-* ‘wonder’ (e.g. *lže-nauka* ‘pseudoscience’, *čudo-mašina* ‘wonder-car’); “prefixoids”, such as *radio-* ‘radio’ and *psevdo-* ‘pseudo’; clipped adjectives, as in *rajsovet* ‘regional administration’ and *gorzal* ‘city hall’ (*raj-* < *rajonnyj* ‘regional’, *gor-* < *gorodskoj* ‘city (adj.)’); classifiers derived from abbreviations and letter names, as in *SKČ-dvigatel* ‘SKC-engine’ and *gamma-izlučenie* ‘gamma-radiation’; and isolated examples of authentic native compounds of the [N[N]] type, such as *Tulaugol* ‘Tula coal’ (see related discussion in Babanov 2011: 43).

In another publication, Vakareliyska & Kapatsinski (2014) emphasize the importance of preexistent structural matches in the recipient languages for the establishment of the [N[N]] compounding pattern. They show that such compounds have not developed in Baltic languages, which are closely related to Slavic genetically and typologically. Instead, these languages adapt the attributive constituent of an English [N[N]] compound as an adjective or a genitive, cf. Lith. *internet-išk-as juok-as* ‘Internet joke’, *internet-o adresas* ‘Internet address’. These authors attribute the absence of [N[N]] compounds in Latvian and Lithuanian to the

absence of antecedent constructions in these languages. On the other hand, they note that Bulgarian is considerably ahead of the other Slavic languages with respect to the frequency, productivity, and semantic range of the [N[N]] constructions, and attribute this to a greater range of antecedent constructions in that language. These include not only the construction types shared with other Slavic languages but also uninflected adjectives and *izafet* constructions borrowed from Turkish (e.g. Blg. *škembe čorba* < Tu. *škembe čorba-sı* ‘tripe soup’) and partitive constructions of the type *čaša kafe* ‘a cup of coffee’. Babanov (2011), similarly, attributes the much higher productivity of [N[N]] compounds in Russian as compared to Polish to the presence of comparable antecedent constructions in the former language.

On the sociolinguistic side of things, Kapatsinski & Vakareliyska (2013: 78) observe that the [N[N]] construction “appears to be perceived by Russians as urban, cosmopolitan and modern”. This establishes a link with NN compounds in Romance languages, examined in the next section, as well as with the other case studies in which a marginal native pattern has acquired productivity as a loanword marker. Within the larger picture of the historical evolution of Russian, absence of morphological marking on the attributive constituent of the [N[N]] compounds is interpreted as contributing to the growth of the recipient language’s morphosyntactic analyticity.

5.4. NN compounds in Romance languages

Modern Romance languages possess a large number of non-coordinate (Scalise & Bisetto 2009: 45; Radomský 2015: 94) compounds that consist of two nouns without any overt marking of the dependency relationship between them. These are illustrated with the Spanish examples in (25) (from Dardel 1999: 183f).

- | | | | |
|------|-------------------|---------------|--------------------------------|
| (25) | aguamanos | ‘pitcher’ | (agua ‘water’, manos ‘hands’) |
| | bocacalle | ‘side street’ | (boca ‘mouth’, calle ‘street’) |
| | casapuerta | ‘hallway’ | (casa ‘house’, puerta ‘door’) |
| | puntapié | ‘kick’ | (punta ‘tip’, pie ‘foot’) |
| | telaraña | ‘cobweb’ | (tela ‘cloth’, araña ‘spider’) |
| | uña gata ~ gatuña | ‘restharrow’ | (uña ‘claw’, gata ‘she-cat’) |

The above constructions are anomalous within the mainstream morphosyntactic systems of both Latin and the Romance languages, where the syntactic relationship between two nouns in a compound or noun phrase is explicitly marked by case endings and/or prepositions; compare, for example, the juxtaposition in It. *acquavita* (as contrasted

with modern *acquavite*) with the explicit marking of the syntactic relation in Lat. *aqua vitae* and Fr. *eau-de-vie* ‘water (of) life’ = ‘brandy’ (Dardel 1999: 181, 187). Dardel explains the anomalous character of the NN compound type by its antiquity:

A la différence des constructions à rection casuelle, qui s’expliquent comme vestiges de systèmes flexionnels [...] et à la différence des constructions à rection prépositionnelle, qui reflètent une tendance panromane, la rection implicite ne correspond à aucune tendance reconnue des parlers romans, même les plus anciens, et constitue par conséquent une anomalie, ce qui est l’indice de son ancienneté et de son origine protoromane. (Dardel 1999: 187)

In addressing the origin of Romance NN compounds, Dardel (1999) divides their sources into three diachronic layers. The earliest is hypothesized to go back to Proto-Romance and to ultimately derive from a Proto-Indo-European model. In this layer, the dependence relationships between the compound members display a wide semantic range, while the compounds themselves express concrete notions, such as names of plants, animals, persons, places, and everyday objects; by contrast, “[I]es composés désignant des notions abstraites brillent [...] par leur absence” (p. 184). The second and third layers are hypothesized to have developed out of constructions in which the relationship between the two nouns was shown by case marking, the Latin genitive in the second layer and the Proto-Romance genitive-dative in the third. In these later layers, the semantic relationship between the compound members is more restricted. Examples corresponding to Dardel’s second layer are given below in (26) (the reconstructed forms are cited after Bourciez 1967: 203).

- (26) *vinum melae > It. *vinomele* ‘cider’
*pedis ungula > Sp. *pezuña* ‘hoof’
*auri faber > Fr. *orfèvre* ‘goldsmith’

The prevailing constituent order in the NN compounds is head-first, though the opposite order is also found, cf. It. *ragnatela* ~ *telaragna* ‘cobweb’ and the pair *uñagata* ~ *gatuña* in (25). The head-first order predominates in compounds that reflect the popular tradition, whereas the modifier- or complement-first order is found in compounds that continue the word order of Classical Latin, as in Sp. *pezuña* (< **pedis ungula(m)*); in certain geographically restricted later coinages, as in Sp. *gatuña* (< **catta(m) ungula(m)*); and in more recent formations that reflect the influence of English or German.¹⁶ Dardel (1999: 198) sees the introduc-

tion of prepositions into NN compounds as a later development: “la rection prépositionnelle est en général postérieure à la rection implicite, dont elle sert à expliciter les relations syntaxiques”.

Beginning in the nineteenth century, this atypical and, up to that point, marginal compounding pattern was reinvigorated in response to the growing prestige and international importance of English. This development has percolated to different Romance languages at different times. For French, the awakening of this compounding pattern was noted already in the second half of the nineteenth century, with *timbre-poste* ‘postage stamp’ and *train-poste* ‘mail train’ given by Darmesteter (1874) as examples of compounds patterned after English models (p. 139, fn. 1). The alien feel of these constructions in nineteenth-century French did not impede their steady numerical growth:

Le génie de la langue a paru jusqu’ici contraire à ce procédé de formation, qui cependant de nos jours semble reprendre faveur, sous diverses influences. [...] A l’imitation des composés anglais, on a créé des expressions plus simples et plus rapides exigées par les besoins du commerce et des affaires, amenées par les relations avec nos voisins d’outre-Manche ou introduites par la mode et la fashion. [...] [S]i l’on remarque que ces divers procédés de formation, grâce à leur ressemblance extérieure et à l’oubli des constructions anciennes, tendent maintenant à se confondre dans une même construction, si l’on ajoute à cela l’imitation anglaise, il ne paraît pas invraisemblable que la composition avec génitif doive profiter de toutes ces circonstances, pour prendre racine dans la langue. Qu’on procède avec mesure et sagesse, et peut-être ferait-on revivre cette formation simple et pittoresque de mots. Ce serait un heureux enrichissement de la langue. (Darmesteter 1874: 133, 138-139)

The influence of English on the resurgence of this construction type in Romance languages; its connection with business, commerce, and fashion; its alien feel; and the notion of its expressive economy, present in Darmesteter’s analysis of the French situation in the late nineteenth century, are all mentioned in the more recent studies as well. Another aspect of these constructions commented upon in later studies is the role of the media and written language in their origin and spread. For example, Giurescu (1975: 60) writes, with reference to NN compounds in four major Romance languages: “C’est surtout dans la langue littéraire [...] qu’apparaissent de tels synthèmes”. For Italian, Radimský (2015: 237), basing himself on Dardano (2009), notes that NN compounds “began to emerge in the 1970s, especially in newspaper headlines and in articles dealing with economic and commercial subjects” and that some of

them “still have a connotation related to the style of journalism or new media”. Grossmann & Rainer (2004: 37) write that in Italian NN compounds “[s]ono abbastanza diffusi a tutti i livelli di lingua, ma soprattutto nello scritto dei giornali”. Lepschy & Lepschy (1992: 189-190) emphasize their alien feel in Italian: “The productive use of juxtapositions is very common in English, whereas in Italian it is more limited, and is felt to be a bold innovation often retaining the harshness of a telegraphic style and not very satisfactorily integrated into Italian syntactic patterns”. For Spanish, Lang (1990: 83) notes that “[s]uch structures, in which nouns are accumulated in the manner of English or German, reflect a sort of modern streamlined language which tends to dispense with prepositions (*de, a, con*) in the interests of economy of expression”. For Romanian, an analysis of a range of constructions consisting of two juxtaposed nouns in the newspaper *Evenimentul Zilei* for the period 1999-2003 has revealed

a clear economization tendency in late 20th- early 21st-century Romanian written styles. By adopting English-specific items and construction patterns, the “Evenimentul” journalists deliberately and explicitly intend to achieve a nearness to the western (if not American) ideal of success and prosperity, be it technological, material or otherwise. Constructions having a foreign non-integrated common noun, a proper noun or an initialism as N₂, and where a preposition or a genitive is left out, are perceived as being modern, fashionable and prestigious. (Trașcă 2012: 96)

Important evidence of the productivity of the NN compound type in modern Romance languages is furnished by the creation of compounds that have no direct foreign models, as is clearly articulated in the following analysis of the Spanish situation:

The productivity of this type of compounding is synchronically extremely high. [...] Its expansion has been widely attributed to the undoubted current influence of English terminology and syntax through the mass media and technology, encouraging noun accumulations without observing the normal syntactic links. However, the direct model of English may be overstressed, given the large number of idiosyncratic formations designating novel objects and concepts with no obvious immediate inspiration in foreign models:

bandeja aeroplano
dibujo robot
jugador promesa

oferta lanzamiento
cena homenaje
gente noticia

These are just a few of the many examples which reflect native originality and lexical inventiveness. [...] The conclusions regarding this type of formation are as important for syntax as for the lexis, involving the increasing use of nouns in an adjectival function, and the relegation in importance of the preposition in syntagmatic structure. (Lang 190: 84)

Lang's observations regarding the impact of the NN construction on morphosyntax are fully applicable to Romanian, where recent written styles attest the use of noun juxtaposition instead of the expected constructions with prepositions or genitives (see the barred examples in (27), from Trașcă 2012). Re-activation of the noun juxtaposition pattern in Romanian has been attributed to the combined impact of pre-existing internal drifts (the 'wooden language' of the communist regime) and external factors (borrowing from English as a sign of "modernization and occidentalization [...] of language, technology and lifestyle after 1989") (Trașcă 2012: 85, 89).

- | | | |
|---------|---|---|
| (27) a. | <i>acces la internet</i> | 'access to the Internet' |
| | a'. <i>acces internet</i> | 'Internet access' |
| | b. <i>cabinetul lui Năstase</i> | 'Năstase's cabinet' |
| | b'. <i>cabinetul Năstase</i> | 'the Năstase cabinet' |
| | c. <i>reprezentantul casei de pariuri</i> | 'the representative of the booking house' |
| | c'. <i>representant casa pariuri</i> | 'booking house representative' |

5.5. 'Emergency plural' in German¹⁷

The final pattern of LM to be briefly examined here is pluralization of borrowed nouns by means of the suffix *-s* in German. The following account is based on Marcus *et al.* (1995).

German plural suffixes include *-(e)n*, *-e*, *-er*, zero, and "the very infrequent" suffix *-s* (Marcus *et al.* 1995: 217, 226). Janda (1991) has determined that *-s* is not used with nouns on the Swadesh list and, on the basis of a corpus study involving 600,000 words in taped interviews, has established that only 2 of the 200 most common nouns take the *-s* suffix regularly and five more as a nonstandard alternative. Marcus *et al.*'s (1995) own study, based on a much larger corpus, confirmed the minority status of this suffix (under 5% if measured by tokens) (p. 229). These authors note that *-s* occurs both in words that are phonologically noncanonical, like the finally-stressed *Café*, and in those that rhyme with existing irregular nouns (p. 209) (see (28)).

(28)	A. Plurals in -s	B. Other plurals
	<i>Schecks</i> 'checks'	<i>Flecken</i> 'spots'
	<i>Labels</i> 'labels'	<i>Kabel</i> 'cables'
	<i>Tiefs</i> 'lows'	<i>Briefe</i> 'letters'
	<i>Riffs</i> 'reefs'	<i>Kniffe</i> 'tricks'
	<i>Reelings</i> 'railings'	<i>Ringe</i> 'rings'

Referencing Köpcke (1988), Marcus *et al.* (1995) note that about half of 182 recent German borrowings are pluralized with -s and observe that this suffix “trumps the other plurals” “in a wide variety of special grammatical circumstances”, including such categories as surnames, product names, and titles of plays and movies that are homophonous with irregular nouns (p. 229-230) (see (29)).

(29)	A. Plurals in -s	B. Other plurals
	<i>Wiese / Wieses</i>	(name) <i>Wiese / Wiesen</i> 'meadow(s)'
	<i>Faust / Faustus</i>	(play) <i>Faust / Fäuste</i> 'fist(s)'
	<i>Kadett / Kadetts</i>	(car) <i>Kadett / Kadetten</i> 'cadet(s)'

The plural in -s is also used with other noncanonical words, including onomatopoeic nouns, acronyms, truncations, quoted nouns, and nouns derived from other parts of speech or formed from verb and adjective phrases. In an experiment in which the participants were asked to rate the plurals of novel monosyllabic nouns it was found that the -s suffix was used “for the more unusual-sounding roots, for borrowings, and for names (with both usual and unusual sounds) (Marcus *et al.* 1995: 238). These word categories align the German plural inflection by means of -s with the case studies examined earlier (see also Aronoff 2013: 88).

6. Summary

The purpose of this study is to examine the synchronic motivation and diachronic impact of a pattern of loanword integration in which the loans are assigned to a marked word class in the recipient language. Several common themes emerge from the assembled case studies; these may simultaneously serve as interim results and help point the directions for future work.

The immediate outcome of incorporating loanwords into a marked pre-existent word class is flagging these words as loans. The motivation behind this type of loanword integration may involve the recipient language community’s desire to assert its cultural identity, as hypoth-

esized by Schulte (2005) with respect to Slavic verbs in Romanian; the attempt of the bilingual elite to preserve the surface shape of the foreign words out of deference and/or because of the knowledge of the source languages, as suggested by Mučnik (1966) and Brandner (2002) with respect to borrowings from Western European languages in Russian; or the speakers' and/or writers' wish to project an image of prestige and modernity, as noted by Trașcă (2012) and Kapatsinski & Vakareliyska (2013) with respect to English-influenced NN constructions in Romanian and Russian, respectively. It is likely that future research will uncover additional motivating factors for LM. The case studies assembled in this paper also point to the importance of bilinguals, or at least of persons with a passive competence in the source language, as the agents of the observed loanword integration patterns (Mučnik 1966; Hayward & Orwin 1991; Brandner 2002; Schulte 2005).

Additional synchronic motivation for integrating loanwords into a marginal native word class may be provided by surface similarity between the borrowed and native words (“linguistic *appui*”). The similarity may be accidental, as between Romance loan verbs and weak-final verbs in Maltese, or it may derive from deep genetic connection between the languages, as in the case of the prefix conjugations in Tigrinya and Irob.

The anomalous word classes selected for the integration of loans belong to some of the most distinctive aspects of the recipient languages' grammars. These include the conspicuously deviant prefix conjugation in Qafar-Saho and weak-final conjugation in Maltese; the distinctive prosodic patterns of Cèmuhi, Zaniza Zapotec, and Israeli Hebrew; “[t]he hallmark property of the Russian verbal system” (Zinova & Filip 2015: 310) in the form of a morphologized aspect distinction; and the morphosyntactically deviant NN compounds in Romance and Slavic languages. These structural features are highly accessible to native speaker consciousness, and this accessibility is necessarily heightened in contact situations that invite contrast and comparison between the donor and recipient languages. The linguistic structures involved in the observed loanword integration patterns are so conspicuously characteristic of the recipient languages that any deviation from the norm can be consciously exploited for LM.

The marginal word classes may also be used for certain atypical non-loans, including proper nouns, nouns derived from other parts of speech, neologisms (blends, acronyms, clippings), expressive vocabulary (swear, emotional, game, and/or onomatopoeic words), and low-register (informal/familiar) words. In languages for which this has been described, the marking initially used for such atypical non-loans is naturally extended to loans.

The languages in the assembled case studies productively exploit for LM phonological gaps and/or morphological irregularities that arise as a result of diachronic change. These include a rare tone and tone pattern in Cèmuhi, a rare stress pattern in Italian, a rare conjugation type in Qafar-Saho, marginal declension classes in Italian and Russian, and a rare type of compound in Slavic and Romance languages. The diachronic change whereby a marginal structural pattern is exploited as a loanword marking device may be conceptualized by using the notion of exaptation. After membership in the marginal word class ceases to function as a loanword marker, for example with the loss of the relevant sociolinguistic conditioning, the respective word classes become established as etymologically-independent prosodic and/or inflectional classes.

Diachronically, the assignment of loans to an atypical word class may lead or contribute to far-reaching structural shifts in the receiving languages. For example, adaptation of Romance-origin verbs to a marginal native verb class in Maltese not only alters the structural balance of its verb system but also contributes to its transition from templatic to concatenative morphology (Mifsud 1995, 1996). The increase in the number of fixed-stress nominals in Israeli Hebrew simultaneously contributes to the shifting of its stress system away from the mobile-stress norm and regularization of its nominal morphology by increasing the transparency of the base in inflection and derivation (Bolzky 2000; Schwarzwald 2013). The assignment of borrowed nouns to the class of indeclinables in Italian contributes to its diachronic drift toward a three-class system of nominal inflection (D'Achille & Thornton 2003; Repetti 2006). The growing productivity of non-coordinate NN compounds increases the adjectival use of nouns and decreases the syntactic importance of prepositions in Romance languages (Lang 1990). Adaptation of foreign-origin nouns to the class of indeclinables and of foreign-origin verbs to the class of biaspectuals in Russian increases its reliance on non-morphological means of signaling nominal number and case and verbal aspect. Elimination of this essential morphological information from borrowed nouns and verbs, together with the absence of morphological marking on the attributive constituent of the [N[N]] compounds, contributes to increasing the recipient language's morphosyntactic analyticity (Brandner 2002, 2010).

An interesting but still unanswerable question is whether LM may be described as deliberate (Thomason 2007) or semi-deliberate (Schulte 2005) change. What is clear is that it provides a good illustration of the confluence of internal and external factors in propelling change in language. To take one example, some researchers point out that non-assimilation of foreign verbs to the aspectual morphology of Russian, and of

most vowel-final nouns to its declension system, were motivated by the desire of bilinguals with the knowledge of the source languages to preserve the surface shape of these words (Mučnik 1966, 1971; Brandner 2002). This ‘external’ factor is supplemented by such proposed ‘internal’ factors as the unwieldy length of the borrowed verbs and the misfit between the phonological shape of most vowel-final nouns and the morphophonemic norms of Russian (Mučnik 1971: 249-250; Corbett 1991: 72; Brandner 2002: 195). The treatment of these loans, predominantly from Western European languages, is also to be evaluated against the background of the ongoing ‘internationalization’ of Russian that involves a drift toward greater analyticity under the influence of analytic Western European languages (Brandner 2002: 194). The receptivity of Russian to indeclinable nouns and biaspectual verbs is thus simultaneously a result of, and a contributor to, this ongoing structural drift.

Finally, though the present study has selected prosody and inflection as its focus, even a cursory survey of the literature shows that these are not the only structural patterns that may be utilized for LM. For example, definiteness in nouns and derivational morphology can both be used for flagging loans. Future research may uncover yet other patterns of LM, paving the way for a fuller understanding of this phenomenon and of its impact on language change.

Notes

¹ I would like to thank the anonymous reviewers for their valuable comments and suggestions.

² The following abbreviations are used: 1 = first person, 2 = second person, 3 = third person, ACC = accusative, adj. = adjective, AOR = aorist, Blg. = Bulgarian, CPL = complementizer, Eng. = English, f = feminine, Fr. = French, Gm. = German, impf = imperfect(ive), INF = infinitive, It. = Italian, KP = Korlai Portuguese, Lat. = Latin, Lith. = Lithuanian, LM = loanword marking via assignment of loanwords to a marked word class in the recipient language, m = masculine, Mar. = Marathi, MCA = Moroccan Colloquial Arabic, OPT = optative, p = plural, pf = perfect(ive), Po. = Polish, Ptg. = Portuguese, Ro. = Romanian, Ru. = Russian, s = singular, SM = Semitic Maltese, Sp. = Spanish, tr. = transitive, Tu. = Turkish, VN = verbal noun, Yid. = Yiddish.

³ “In going from such a structurally different language as Fr to MCA, it is likely that getting the foot in the door is the major problem; once a particular borrowed form can occur in what looks like a fairly good MCA shape, generation of further MCA inflectional or derivational forms is relatively unproblematic. Moreover, once a reasonable set of “vanguard” borrowings have entered MCA, bilingual speakers can develop standardized routines for bringing in new borrowings” (Heath 1989: 35). The role of accidental similarities in the initial or final segments in the assignment of a gender or inflection class to loan nouns is, of course, well known, cf. Corbett (1991:

74), Rabeno & Repetti (1997) (Italian), Demuth (2000) (Bantu), Ralli *et al.* (2015) (Modern Greek).

⁴ A reviewer notes that this is a substandard and infrequent variant.

⁵ Words beginning with fricatives are subject to a different conversion routine (Rivierre 1994: 501-502).

⁶ Mel'čuk & Podolsky (1996: 186-187), Bolozky (2000: 60-61) and Schwarzwald (2013: 45) discuss leftward shift of stress as a means of deriving proper nouns and "game or emotional words", as well as for differentiating between formal and informal registers. Examples include *jafá* 'pretty' ~ *Jáfa* (city name), *dvorá* 'bee' ~ *Dvóra* (forename), *bubá* 'doll, mannequin' ~ *búba* '(childish) dolly', *davká* (formal) ~ *dávka* (informal) 'specifically'.

⁷ "Only words that were borrowed beginning from the 20th century are considered authentic loan words" (Schwarzwald 2013: 43).

⁸ But see, e.g., Dakhlia (2008: 298-299) and the references cited therein on the likely impact on Maltese of the large numbers of Arabic-speaking slaves and captives held in Malta during the period of piracy.

⁹ The perception of 'typicality' associated with a particular foreign language has also been described for the prosodic domain. For example, Bafile (1999) notes the spontaneous shift of stress to antepenult in English words as pronounced by many Italian speakers, as in [íimportant] (*important*), [kontínental] (*continental*), and [vokabjúlari] (*vocabulary*). One of the explanations for these pronunciations is that they "stem from the desire to perform an accentual pattern that is perceived as typically English" (p. 211).

¹⁰ "It is obvious that adding a prefix to a verb distances it from the international lexicon" (Mučnik 1966: 74; author's translation).

¹¹ See Harris (1992) for the term.

¹² These observations do not concern loanwords ending in an unstressed *-a*, which are assigned to class 1 in both varieties (Repetti 2006).

¹³ As in Italian, most nouns ending in an unstressed *-a* are morphologically integrated.

¹⁴ "On est donc en droit de supposer *a priori* que plus une langue littéraire slave est fondée sur l'usage populaire, moins elle tolérera les indéclinables" (Unbegaun 1947: 141; see also Mučnik 1971: 256).

¹⁵ The attributive member is also referred to in the literature as "analytic adjective" (see Edberg 2014 and Gorbov 2015).

¹⁶ On the potential influence of German on this construction type see, e.g., Iliescu (1968).

¹⁷ I would like to thank an anonymous reviewer for drawing my attention to this pattern and for the reference to Aronoff (2013).

Bibliographical References

- Aronoff, Mark 2013. Varieties of morphological defaults and exceptions. *Revista Virtual de Estudos da Linguagem* (special issue) 7. 84-97.
- Babanov, A. V. 2011. Vopros ob analitičeskix prilagatel'nyx v svete nominacnojoj paradigmatiki slav'anskix jazykov [The question of analytic adjectives in the light of Slavic nominal paradigms]. *Vestnik Nižegorodskogo Universiteta* 6,2. 40-44.
- Bafile, Laura 1999. Antepenultimate stress in Italian and some related dialects: metrical and prosodic aspects. *Rivista di Linguistica* 11,2. 201-229.

- Bolozky, Shmuel 2000. Stress placement as a morphological and semantic marker in Israeli Hebrew. *Hebrew Studies* 41. 53-82.
- Bolozky, Shmuel & Becker, Michael 2006. Living lexicon of Hebrew nouns. Manuscript, University of Massachusetts, Amherst.
- Bourciez, Édouard 1967. *Éléments de linguistique romane*. 5th ed. Paris: Librairie C. Klincksieck.
- Brandner, Aleš 2002. Process internacionalizacii v ruskom jazyke [The process of internationalization in Russian]. *Litteraria Humanitas* 11. 185-209.
- Brandner, Aleš 2010. Projavlenija analitizma v sovremennom ruskom jazyke [Analyticity phenomena in modern Russian]. *Lingvistyčni Studiji* 20. 8-17.
- Caballero, Gabriela & Carroll, Lucien 2013. Procesos de adaptación prosódica en préstamos del español al rarámuri (tarahumara) de Choguita y al tu'un savi (mixteco) de Ixpantepec Nieves. In *Memorias del VI Congreso de Idiomas Indígenas de Latinoamérica*. <http://www.ailla.utexas.org/site/cilla6/Caballero_Carroll_CILLA_VI.pdf>
- Campbell, Lyle 1987. Syntactic change in Pipil. *International Journal of American Linguistics* 53. 253-280.
- Clements, Clancy J. & Luís, Ana R. 2015. Contact intensity and the borrowing of bound morphology in Korlai Indo-Portuguese. In Gardani, Francesco; Arkadiev, Peter & Amiridze, Nino (eds.), *Borrowed Morphology*. Berlin / Boston: De Gruyter. 219-240.
- Cohen, Evan-Gary & Ussishkin, Adam 2013. Stress: Modern Hebrew. In Khan, Geoffrey (ed.), *Encyclopedia of Hebrew Language and Linguistics*. Leiden / Boston: Brill. 979-981.
- Coffin, Edna Amir & Bolozky, Shmuel 2005. *A Reference Grammar of Modern Hebrew*. Cambridge: Cambridge University Press.
- Corbett, Greville G. 1991. *Gender*. Cambridge: Cambridge University Press.
- Costanzo, Angelo Roth 2011. *Romance conjugational classes: learning from the peripheries*. Ph.D. dissertation. The Ohio State University.
- Čertkova, Marina Yur'jevna & Čang, Pej-Či 1998. Evolucija dvuidovovyh glagolov v sovremennom ruskom jazyke [Evolution of biaspectual verbs in modern Russian]. *Russian Linguistics* 22. 13-34.
- D'Achille, Paolo & Thornton, Anna M. 2003. La flessione del nome dall'italiano antico all'italiano contemporaneo. In Maraschio, Nicoletta & Poggi Salani, Teresa (eds.), *Italia linguistica anno Mille – Italia linguistica anno Duemila. Atti del XXXIV congresso internazionale di studi della Società di Linguistica Italiana*. Rome: Bulzoni. 211-230.
- Dakhliya, Jocelyne 2008. *Lingua Franca: histoire d'une langue métisse en Méditerranée*. Paris: Actes Sud.
- Dardano, Maurizio 2009. *Costruire parole*. Bologna: Il Mulino.
- Dardel, Robert de 1999. Composés réactionnels nominaux nom + nom en proto-roman. *Probus* 11. 177-208.
- Darmesteter, Arsène 1874. *Traité de la formation des mots composés dans la langue française comparée aux autres langues romanes et au latin*. Paris: Librairie A. Franck.
- Davis, Stuart; Tsujimura, Natsuko & Tu, Jung-Yueh 2012. Toward a taxonomy of loanword prosody. *Catalan Journal of Linguistics* 11. 13-39.
- Demuth, Katherine 2000. Bantu noun class systems: loanword and acquisition evidence of semantic productivity. In Senft, Gunter (ed.), *Systems of*

- Nominal Classification*. Cambridge: Cambridge University Press. 270-292.
- Edberg, Bjørg Helene 2014. *Analičeskije prilagatel'nye i analitizm v sovremennom ruskom jazыke* [Analytic adjectives and analyticity in modern Russian]. M.A. thesis. The University of Tromsø.
- Gardani, Francesco 2016. Allogenuous exaptation. In Norde, Muriel & Van De Velde, Freek (eds.), *Exaptation and Language Change*. Amsterdam / Philadelphia: John Benjamins. 227-260.
- Giurescu, Anca 1975. *Les mots composés dans les langues romanes*. The Hague / Paris: Mouton.
- Gorbov, Andrej A. 2015. Attributivnye komponenty sočetanij tipa *biznes-plan*: analičeskije prilagatel'nye? [Attributive components in *biznes-plan* type combinations: analytic adjectives?] *Vestnik Sankt-Peterburgskogo Gosudarstvennogo Universiteta* 9,3. 36-48.
- Gorobec, E. A. 2009. Dvuvidovye glagoly: količestvennyj sostav [Biaspectual verbs: the quantitative composition]. *Almanach Sovremennoj Nauki i Obrazovanija* 2,21. 37-40.
- Grandgent, Charles H. 1927. *From Latin to Italian: An Historical Outline of the Phonology and Morphology of the Italian Language*. Cambridge: Harvard University Press.
- Grossmann, Maria & Rainer, Franz 2004. *La formazione delle parole in italiano*. Tübingen: Max Niemeyer.
- Hafez, Ola 1996. Phonological and morphological integration of loanwords into Egyptian Arabic. *Égypte/Monde Arabe* 27-28. 383-410.
- Harris, James W. 1992. The form classes of Spanish substantives. *Yearbook of Morphology* 2. 65-88.
- Hayward, Richard J. & Orwin, Martin 1991. The prefix conjugation in Qafar-Saho: the survival and revival of a paradigm – Part 1. *African Languages and Cultures* 4. 157-176.
- Heath, Jeffrey 1989. *From Code-Switching to Borrowing: Foreign and Diglossic Mixing in Moroccan Arabic*. London / New York: Kegan Paul International.
- Hill, Jane H. & Hill, Kenneth C. 1986. *Speaking Mexicano: Dynamics of Syncretic Language in Central Mexico*. Tucson, AZ: University of Arizona Press.
- Iliescu, Maria 1968. Une particularité syntaxique romanche d'origine obscure: le groupe nominal formé par deux substantifs juxtaposés. *Revue Roumaine de Linguistique* 13. 433-437. Reprinted in Iliescu, Maria 2012. *Pan- und raeto-romanica: von Lissabon bis Bukarest, von Disentis bis Udine*. Stuttgart: ibidem-Verlag. 363-367.
- Janda, Laura A. 2007. What makes Russian bi-aspectual verbs special? In Divjan, Dagmar & Kochańska, Agata (eds.), *Cognitive Paths into the Slavic Domain*. Berlin / New York: De Gruyter. 83-109.
- Janda, Richard D. 1991. Frequency, markedness, and morphological change: on predicting the spread of noun-plural -s in Modern High German and West Germanic. In No, Yongkyoon & Libucha, Mark (eds.), *ESCOL '90: Proceedings of the Seventh Eastern States Conference on Linguistics*. Columbus, OH: The Ohio State University. 136-153.
- Johanson, Lars 2002. Contact-induced change in a code-copying framework. In Jones, Mari C. & Esch, Edith (eds.), *Language Change: The Interplay of Internal, External and Extra-Linguistic Factors*. Berlin / New York: De

- Gruyter. 285-313.
- Johanson, Lars 2012. Mood meets mood: Turkic versus Indo-European. In Vanhove, Martine; Stoltz, Thomas; Urdze, Aina & Otsuka, Hitomi (eds.), *Morphologies in Contact*. Berlin: Akademie Verlag. 195-203.
- Kapatsinski, Vsevolod & Vakareliyska, Cynthia M. 2013. [N[N]] compounds in Russian: a growing family of constructions. *Constructions and Frames* 5. 69-87.
- Karcevskij, Sergej Isifovič 1923. *Jazyk, voina i revolucija* [Language, war and revolution]. Berlin: Rus. Univers. Izd-vo.
- Kay, Gillian 1995. English loanwords in Japanese. *World Englishes* 14. 67-76.
- Köpcke, Klaus-Michael 1988. Schemas in German plural formation. *Lingua* 74. 303-335.
- Kossmann, Maarten 2010. Parallel system borrowing: parallel morphological systems due to the borrowing of paradigms. *Diachronica* 27. 459-487.
- Krämer, Martin 2009. Main stress in Italian nonce nouns. In Torck, Danièle & Wetzels, W. Leo (eds.), *Romance Languages and Linguistic Theory 2006*. Amsterdam / Philadelphia: John Benjamins. 127-142.
- Krysin, L. P. (ed.) 2008. *Sovremennyj russkij jazyk: aktivnye processy na rubeže XX-XXI vekov* [Modern Russian: active processes on the border of the XX and XXI centuries]. Moscow: Jazyki Slav'anskix Kul'tur.
- Lang, Mervyn F. 1990. *Spanish Word Formation: Productive Derivational Morphology in the Modern Lexis*. London / New York: Routledge.
- Lass, Roger 1990. How to do things with junk: exaptation in language evolution. *Journal of Linguistics* 26. 79-102.
- Lepschy, Anna Laura & Lepschy, Giulio 1992. *The Italian Language Today*. 2nd ed. London / New York: Routledge.
- Marcus, Gary F.; Brinkmann, Ursula; Clahsen, Harald; Wiese, Richard & Pinker, Steven 1995. German inflection: the exception that proves the rule. *Cognitive Psychology* 29. 189-256.
- Mel'čuk, Igor & Podolsky, Baruch 1996. Stress in Modern Hebrew nominal inflection. *Theoretical Linguistics* 22. 155-194.
- Mifsud, Manwel 1995. *Loan Verbs in Maltese: A Descriptive and Comparative Study*. Leiden: Brill.
- Mifsud, Manwel 1996. The loanverb in Maltese: a Romance-Arabic crossbreed. In Lüdtke, Jens (ed.), *Romania Arabica: Festschrift für Reinhold Kontzi zum 70. Geburtstag*. Tübingen: Gunter Narr. 117-128.
- Mučnik, I. P. 1966. Razvitie sistemy dvuvidovykh glagolov v sovremennom russkom jazyke [The development of biaspectual verbs in modern Russian]. *Voprosy Jazykoznanija* 15. 61-75.
- Mučnik, I. P. 1971. *Grammatičeskie kategorii glagola i imeni v sovremennom russkom jazyke* [The grammatical categories of verb and noun in Modern Russian]. Moscow: Nauka.
- Norde, Muriel & Van de Velde, Freek (eds.) 2016. *Exaptation and Language Change*. Amsterdam / Philadelphia: John Benjamins.
- Operstein, Natalie 2016. Phonological adaptation of Spanish loanwords in Zaniza Zapotec. *International Journal of American Linguistics* 82. 211-238.
- Operstein, Natalie 2017a. Sociolinguistic factors in loanword prosody. In Dakin, Karen; Parodi, Claudia & Operstein, Natalie (eds.), *Language Contact and Change in Mesoamerica and Beyond*. Amsterdam / Philadelphia: John

- Benjamins. 105-124.
- Operstein, Natalie 2017b. Loanword evidence for dialect mixing in colonial American Spanish. In Dakin, Karen; Parodi, Claudia & Operstein, Natalie (eds.), *Language Contact and Change in Mesoamerica and Beyond*. Amsterdam / Philadelphia: John Benjamins. 171-186.
- Operstein, Natalie 2017c. Review of Muriel Norde & Freek Van de Velde (eds.) 2016, *Exaptation and Language Change*, Amsterdam / Philadelphia: John Benjamins. *LINGUIST List* 28.811 <<https://linguistlist.org/issues/28/28-811.html>>
- Pariante, Itsik & Bolozky, Schmuël 2014. Stress shift and trochaic structures in the nominal system of Modern Hebrew. *Brill's Journal of Afroasiatic Languages and Linguistics* 6. 1-26.
- Patota, Giuseppe 2006. *Grammatica di riferimento dell'italiano contemporaneo*. Novara: Garzanti Linguistica.
- Perlin, Jacek 2010. Ile jest we współczesnej polszczyźnie czasowników dwuaspektowych? *Linguistica Copernicana* 3. 165-171.
- Rabeno, Angela & Repetti, Lori 1997. Gender assignment of English loan words in American varieties of Italian. *American Speech* 72. 373-378.
- Radimský, Jan 2015. *Noun + Noun Compounds in Italian: A Corpus-Based Study*. České Budějovice: Jihočeská Univerzita.
- Ralli, Angela 2012. Romance verbal loans in Modern Greek dialects. *Modern Greek Dialects and Linguistic Theory* 5. 430-444.
- Ralli, Angela; Gkiouleka, Marianna & Makri, Vasiliki 2015. Gender and inflection class in loan noun integration. *SKASE Journal of Theoretical Linguistics* 12,3. 422-460.
- Ratliff, Martha 2002. Timing tonogenesis: evidence from borrowing. *Berkeley Linguistics Society* 28. 29-41.
- Recht, Tom 2010. Surface faithfulness phenomena and the consonantal root in the Modern Hebrew verb system. *Berkeley Linguistics Society* 36. 322-337.
- Renwick, Margaret E. L. 2011. On the origins of /i/ in Romanian. In Herschensohn, Julia (ed.), *Romance Linguistics 2010: Selected Papers from the 40th Linguistic Symposium on Romance Languages (LSRL), Seattle, Washington, March 2010*. Amsterdam / Philadelphia: John Benjamins. 17-31.
- Repetti, Lori 2006. The emergence of marked structures in the integration of loans in Italian. In Gess, Randall & Arteaga, Deborah (eds.), *Historical Romance Linguistics: Retrospective and Perspectives*. Amsterdam / Philadelphia: John Benjamins. 209-235.
- Rivierre, Jean-Claude 1994. Contact-induced phonological complexification in New Caledonia. In Dutton, Tom & Tryon, Darrell T. (eds.), *Language Contact and Change in the Austronesian World*. Berlin / New York: De Gruyter. 497-522.
- Scalise, Sergio & Bisetto, Antonietta 2009. The classification of compounds. In Rochelle, Lieber & Štekauer, Pavol (eds.), *The Oxford Handbook of Compounding*. Oxford: Oxford University Press. 34-53.
- Schulte, Kim 2005. Vowel centralization in Romanian verbs of Slavic origin: deliberate exploitation of an indigenous sound change? In Geerts, Twan; Van Ginneken, Ivo & Jacobs, Haike (eds.), *Romance Languages and Linguistic Theory 2003: Selected Papers from 'Going Romance' 2003, Nijmegen, 20-22*

- November. Amsterdam / Philadelphia: John Benjamins. 311-325.
- Schwarzwald (Rodrigue), Ora 1998. Word foreignness in Modern Hebrew. *Hebrew Studies* 39. 115-142.
- Schwarzwald (Rodrigue), Ora 2013. The typology of nonintegrated words in Hebrew. *SKASE Journal of Theoretical Linguistics* 10,1. 41-53.
- Serianni, Luca 1989. *Grammatica italiana: italiano comune e lingua letteraria*. Turin: Utet Libreria.
- Thomason, Sarah G. 2007. Language contact and deliberate change. *Journal of Language Contact* 1. 41-62.
- Thornton, Anna M. 1996. On some phenomena of prosodic morphology in Italian: accorciamenti, hypocoristics and prosodic delimitation. *Probus* 8. 81-112.
- Thornton, Anna M.; Iacobini Claudio & Burani, Cristina 1994. *BDVDB: una base di dati per il vocabolario di base della lingua italiana*. Rome: Istituto di Psicologia del CNR.
- Timberlake, Alan 2004. *A Reference Grammar of Russian*. Cambridge: Cambridge University Press.
- Trașcă, Luminița-Irinel 2012. Noun + noun constructions in written Romanian: what do *escrocii internet*, *tribunalul Timiș* and *președintele SIF* have in common? *Linguaculture* 2. 85-99.
- Unbegaun, Boris O. 1947. Les substantifs indéclinables en russe. *Revue des Études Slaves* 23. 130-145.
- Vakareliyska, Cynthia M. & Kapatsinski, Vsevolod 2014. An Anglo-Americanism in Slavic morphosyntax: productive [N[N]] constructions (with focus on Bulgarian). *Folia Linguistica* 48. 277-311.
- Van de Velde, Freek & Norde, Muriel 2016. Exaptation: taking stock of a controversial notion in linguistics. In Norde, Muriel & Van de Velde, Freek (eds.), *Exaptation and Language Change*. Amsterdam / Philadelphia: John Benjamins. 1-35.
- Wohlgemuth, Jan 2009. *A Typology of Verbal Borrowings*. Berlin / New York: De Gruyter.
- Zinova, Yulia & Filip, Hana 2015. Biaspectual verbs: a marginal category? In Aher, Martin; Hole, Daniel; Jeřábek, Emil & Kupke, Clemens (eds.), *Logic, Language, and Computation: 10th International Tbilisi Symposium on Logic, Language and Computation, Tbilisi 10, Gudauri, Georgia, September 23-27, 2013*. Berlin / Heidelberg: Springer. 310-332.
- Zuckermann, Ghil'ad. 2003. *Language Contact and Lexical Enrichment in Israeli Hebrew*. New York: Palgrave MacMillan.