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Evangelia Adamou

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EVANGELIA ADAMOU (LACITO PARIS)

# Verb morphologies in contact: evidence from the Balkan area\*

## Abstract

This paper examines verb morphologies in contact based on first hand data from the Balkans. Following some of the most recent language contact typologies, such as Heine & Kuteva (2005), Matras & Sakel (2007) and Matras (2007), it establishes a sub-typology of verb morphologies in contact ranging from replication, borrowing, loan verb markers, to novel creations.

## 1. Introduction

Studies in contact linguistics quite early pointed out the fact that bound morphemes are less prone to borrowing than free morphemes, i.e. Weinreich (1953), Moravcsik (1978), and, for a review of the literature on this point, Wilkins (1996). Likewise, for Field (2002) function words are more easily borrowed than both agglutinating affixes and fusional affixes. It is also widely admitted that derivational morphology (bound morphemes that furnish lexical information or change the lexeme's class) is more likely to be borrowed than inflectional morphology (bound morphemes with grammatical information), i.e. Moravcsik (1978), Thomason & Kaufman (1988), Matras (2007). Extra-linguistic parameters interfere as well in the behaviour of bound morphology in language contact. Trudgill (2009: 101) distinguishes two types of contact settings that have different effects on morphology. On the one hand, high-contact settings involving adult speakers, e.g. settings in which pidgins are produced, have proved to lead to a simplification of the morphology. On the other hand, stable, long-term contact settings, involving child bilingualism, seem to favour complexification via borrowing of additional morphology.

This paper focuses on inflectional verb morphology and on how it behaves in language contact. We here define verb morphology in a broad, typological manner that

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applies to “the grammatical categories like tense, voice, or agreement [...] expressed by affixes attached to some other word (or the stem of a word)” (Bickel & Nichols 2008). Bickel & Nichols distinguish morphological from syntactic relations in that the morphological ones “imply fixed order, the parts involved are unable to appear on their own [...] and cannot be focused individually”.

Verb morphologies in contact will be illustrated in this paper by present-day data from the Balkan area. The Balkan Sprachbund has long been at the center of studies on language contact, and its interest continues to be confirmed by new data on contact-induced changes. The Balkans have had a long multilingual tradition during the Roman, Byzantine and Ottoman Empires, resulting in the convergence of linguistic structures of distantly related languages –most of them Indo-European however. The earliest works on the similarities between Balkan languages appeared in the late nineteenth and early twentieth centuries (i.e. Kopitar 1829, Miklosich 1861, Sandfeld 1926 and Trubetzkoy 1928). In the modern literature, the existence of a “convergence area” (Weinreich 1958 for the term) applies to South Slavic (Macedonian, Bulgarian, and Serbian) as well as to Balkan Romance, Albanian and to some extent Greek, Balkan Turkish, Romani and Judezmo. Alongside examples drawn from previous studies, this paper contributes new evidence based on first hand data from the author’s fieldwork<sup>1</sup> in Greece, on South Slavic varieties in contact with Greek or/and Turkish, as well as on Romani in contact with Turkish and Greek (see map 1).



Map 1: Greece (1: Komotini – 2: Xanthi – 3: Liti -Aivato during the Ottoman period)

<sup>1</sup> Fieldwork funded by the Lacito-CNRS in 2005, 2006, 2007 and 2009.

## 2. A sub-typology of verb morphologies in contact

The data presented in this paper are better understood when integrated in a typology of verb morphologies in contact (see table 1). This sub-typology is based on broader language contact typologies as well as on relevant sub-typologies, such as the one suggested for loan verb integration (see Wichmann & Wohlgemuth 2008).

*Borrowing* of verb morphology, that is transfer of sound and form-meaning units (Heine & Kuteva 2005), is illustrated here by the extreme case of so-called “paradigm transfer” where entire paradigms of verb morphology are transferred along with their function (cf. §3).

*Replication*, and more specifically *grammatical replication* (Heine & Kuteva 2005), applies here to verb morphology in cases where the forms are not borrowed but the functions and structure of two languages in contact coincide (cf. §6).

Next to the well known borrowing and replication, one also finds the category of the so-called *loan verb markers* referring to tense-mood-aspect markers (henceforth TMA markers) or derivational morphemes accompanying the loan verb without maintaining their original function. In Wohlgemuth (2009: 98) loan verb markers are treated as a kind of “indirect insertion”, in which an affix is used to accommodate the loan verbs (cf. §5).

Moreover, recent studies such as Chamoreau (in press) emphasize the possibility of assigning borrowed morphemes to a new function that didn’t exist in the recipient language (an innovative process that Chamoreau distinguishes from ‘partial copy’ described in Heine & Kuteva 2005). I illustrate in this paper (cf. §4) the possibility of creative contact-induced changes with an example of the transfer of a grammatical morpheme, namely an evidential marker, as a lexeme with a different meaning.

Verb morphologies in contact				
Type of outcome	grammatical replication (meaning & structure) i) contact induced grammaticalization ii) restructuring: (loss, rearrangement)	borrowing (form & meaning) & paradigm transfer	loan verb marker (form without meaning)	innovation (lexicalization for different meaning)
Literature	Heine & Kuteva (2005)	Heine & Kuteva (2005) Wohlgemuth (2009)	Bakker (1997) Wohlgemuth (2009)	Chamoreau (in press): “innovating activity”
Examples in this paper from first hand data	§6 Nashta < Greek	§3 Romani < Turkish	§5 Pomak < Turkish & Greek Romani < Greek	§4 Romani < Turkish (evidential)

Verb morphologies in contact				
<b>Type of contact in this paper</b>	shift after century-long casual contact	intensive and extensive century-long contact with language maintenance	century long casual contact	intensive and extensive century-long contact with language maintenance

Table 1: A typology of verb morphologies in contact

### 3. Paradigm transfer

Weinreich’s hypothesis (1953) that entire paradigms of bound morphology cannot be transferred has since been infirmed by rich evidence from a number of Romani varieties. Romani is indeed one of a handful of languages that are known to borrow the verb together with the TMA and person markers from Turkish as can be seen in the following example from Komotini Romani in Greece (Turkish in bold type):

- Komotini Romani < Turkish *emret-iyo-lar*
- (1) *e patišaja ep emred-ijo-lar*  
 the kings all the time give orders-PROG-3PL  
 ‘The **kings, they are giving orders all the time.**’ [Adamou 2010]  
 [Excerpt from the tale “The Louse and the Rom” (Sentence 3), Sound, annotation and translation of the complete texts are available online:  
[http://lacito.vjf.cnrs.fr/archivage/languages/Romani\\_fr.htm](http://lacito.vjf.cnrs.fr/archivage/languages/Romani_fr.htm)]

This is a characteristic of many Romani varieties, though the extent of paradigm transfer varies from one to another: in the Balkans many Vlax and Balkan Romani varieties in contact with Turkish use paradigm transfer (e.g. Muzikanta, Nange, Varna Kalajdži, for a more complete list see Friedman in press) but also Crimean Romani, Lithuanian Romani (see Elšik & Matras 2006: 135) as well as North Russian Romani in contact with Russian (Rusakov 2001):

- North Russian Romani < Russian (in bold)
- (2) *pisem po romanes*  
 write.2PL in Romani  
 ‘**We write** Romani.’ [Rusakov 2001: 324, glosses by Adamou]

The borrowing of TMA markers together with the loan verb in Romani is named “paradigm transfer”. In a cross-linguistic perspective Wohlgemuth (2009) notes that this strategy represents only 1% of his sample and is localized in the Eastern Mediterranean area, including Romani and Kormatiki (an Arabic language heavily influenced by Greek). Paradigm transfer should remain distinct from code-switching insertions: it is

better understood as a mechanism constitutive of a *fused lect* (Auer 1998), in which code-switching is somehow “grammaticalized”, meaning that it is produced when possible by monolingual speakers (as in Ajia Varvara Romani, Igla 1996) and constitutes the default community’s usual form of expression (Adamou 2010).

I will contribute to this study with data from two Romani varieties of the Vlach branch, spoken in two cities in Greek Thrace: one is spoken by a small Muslim group (of approx. 200 people) settled in the suburbs of the city of Komotini (close to a larger Roma neighbourhood, Ifestos, that is not examined here); the second by a larger Muslim group (of approx. 4 000) settled in the suburbs of the city of Xanthi. Both varieties have been heavily influenced by contact with Turkish since the Ottoman times (Adamou 2010). The speakers of these varieties are typically trilingual in Romani, Turkish and Greek with differing degrees of competence in the three languages. They use Turkish and Greek for trade and other professional activities, and Romani mainly at home and as a community language. Most of the Komotini Roma have received practically no formal education in any of their languages and are not literate in Romani. The two groups have close links with each other and intermarry. They are among the groups in the Balkans who term themselves *xoraxane roma* “Muslim, Turkish Rom”, as opposed to the *dasikane roma* name for the “Christian Rom, Greek Rom” in the area.

### 3.1. Paradigm transfer along with the original loan verbs

Paradigm transfer with Turkish loan verbs is a very frequent strategy in the Komotini and Xanthi Romani varieties. A great number of Turkish verbs are borrowed, among others motion (*koyul-* ‘to approach’) and posture verbs (*uzan-* ‘to lie’), perception-cognition verbs (*düşün-* ‘to think’, *alna-* ‘to understand’, *konuş-* ‘to talk’), emotion verbs (*begen-* ‘to like’, *aci-* ‘to pity’), and several action verbs (*oku-* ‘to read’, *yaz-* ‘to write’). The Turkish loan verbs are sometimes used in variation with their inherited equivalent though no pragmatic or other factors can explain such variation. Variation rather seems to be linked to the speakers’ active knowledge of other, less heavily influenced, Romani varieties.

In Komotini and Xanthi Romani, all Turkish loan verbs are transferred with the entire paradigm of Turkish person markers and, as we will see in detail, with most of the Turkish TMA markers. Turkish phonology is generally respected, including non-inherited phonemes accompanying the borrowed item such as /y/, /ø/, and /u/. Phonological adaptation might take place in some cases, i.e. metathesis of /nl/ to /ln/, as in the Turkish verb *anlamayacak* > Komotini Romani [alnamadʒak] ‘he will not understand’. Contrary to the Turkish verb-final canonical order, the borrowed verbs follow the Romani verb-initial word order, as can be seen in the example 7, though object and subject fronting are possible for topicalization and focus (Adamou & Arvaniti 2010).

A prerequisite for paradigm transfer to take place is sociolinguistic in nature. Comparison to neighbouring multilingual communities such as the Pomak (Slavic) community in Thrace, code-switching with Turkish, as well as the scarcity of paradigm transfer worldwide suggest that this mechanism takes place in very specific sociolinguistic backgrounds. As argued in Adamou 2010, it would seem that intensive and extensive bilingualism in a tightly-knit community, with no language shift but with a well established bilingual identity is required for such a process to take place.

Nevertheless, structural, formal and functional similarities may play a facilitating role. As Weinreich (1953) had noted, for a transfer of inflectional morphemes to take place, a systemic equivalence between the two languages is required (Field 2002 also refers to *compatibility*). We will examine below the typological similarities and divergences of Romani and Turkish in order to better understand the attested paradigm transfer.

Typologically, both languages have synthetic verb morphology: Romani (Indo-Aryan) shows mainly fusional and sometimes agglutinative patterns, whereas Turkish (Altaic) is a prototypical agglutinative language. In both languages most verb morphemes follow the verbal stem and agreement markers tend to come last, with occasional formal similarities, as between the Turkish first singular preterit, *-dim*, and the inherited Romani first singular preterit, *-dom*.

The Romani and Turkish verb causative affix is such an example, showing similarities in function, structure and form. Many Romani varieties use an inherited transitivizing affix *-ar-* on the preterit stem (see Matras 2002: 121 and references therein). Turkish also has a causative affix which attaches to transitive and intransitive verbs, *-dır/-tır-*. The influence of Turkish as a catalyst for the productivity of the causative in the Romani varieties having been in contact with it has been claimed (Matras 2002: 120, also for Romani varieties in contact with Hungarian, another agglutinative language with a highly productive causative *-tet-*, Hübschmannová & Bubeník 1997).

In the Komotini and Xanthi Romani varieties, the Turkish causative *-dır-* is highly frequent for the numerous Turkish loan verbs, as can be seen in the examples below:

Komotini Romani < Turkish

- (3) *jaz-dər-ijor*                      *kaj*    *kəlatfi*  
 write-CAUS-PROG.3SG            to    sword  
 ‘He has him writing on the sword...’

Xanthi Romani < Turkish

- (4) *epsini*    *deinkle-di-m*                      *jerlef-tir-di-m*  
 all            arrange-PRET-1SG            settle-CAUS-PRET-1SG  
 ‘I arranged everything, I settled it.’

In these two varieties we observe as well a productive Romani causative. The causative of the inherited verbs is produced with the [preterit stem + causative *-ar-*]. For a number of transitive inherited verbs the preterit stem ends in *-d-*, as in *bjan-d-as* ‘(she) gave birth’. Therefore the verb’s causative often takes the form *-d-ar-*, i.e. *te bjan-d-ar-el* ‘to

make someone give birth'. For others, a transitive verb is formed on a nominal or adjectival root with the transitivizer *-av-* or *-ar-*, i.e. *dar* 'fear' > *te dar-av-el* 'to frighten'. A causative verb is formed with the preterit stem of the transitive verb (ending in *-d-*) to which is added a second causative affix *-ar-* as can be seen in the examples below:

- Komotini Romani
- (5) *ka darad-ar-elas le*  
 will fear.PRET-CAUS-IPRF.3SG him.ACC  
 '...it would have frightened him.'  
 [Excerpt from the tale "The Man-Snake" (Sentence 41)  
[http://lacito.vjf.cnrs.fr/archivage/languages/Romani\\_fr.htm](http://lacito.vjf.cnrs.fr/archivage/languages/Romani_fr.htm)]
- Komotini Romani
- (6) *tumen trafad-ar-da*  
 you.ACC scare.PRET-CAUS-PRET.3SG  
 'He got you scared.'  
 [Excerpt from the tale "The Coward and the Giant" (Sentence 99)  
<http://lacito.vjf.cnrs.fr/archivage/languages/Romani.htm>]

The formal similarity of the inherited Romani causative, *-d-ar-*, with the Turkish causative *-dır-* (see example 7) acts most probably as a catalyst for the high productivity of the Romani causative and for the transfer of the Turkish causative:

- Xanthi Romani
- (7) *barad-ar-dom len me*  
 grow.PRET-CAUS-PRET.1SG them.ACC me.NOM  
*evlen-tar-da-m len me*  
 marry-CAUS-PRET-1SG them.ACC me.NOM  
 'I raised them, I **married** them.'

Despite those similarities, the two languages do not always show such a perfect match. For instance in Romani the (modal) future particle (*ka*) or the negation particle (*in* or *ne*) are cliticized to the verb, while in Turkish they are infixes (future *-AcAk*, negation *-mA-*). As the following example shows, in Komotini and Xanthi Romani, the Turkish loan verbs take the Turkish infix whereas inherited verbs take the clitic *ka*:

- Xanthi Romani < Turkish
- (8) *tu tfaľuf-ad3a-n da ka dikhes amen*  
 you work-FUT-2SG and FUT look.2SG us  
 'You'll work and you'll look after us.'

In other varieties, such as Ajia Varvara Romani, the inherited future particle *ka* coexists with a Turkish loan verb while Turkish TMA inflection is kept with the present and the past tense:



- Ajia Varvara Romani < Turkish
- (9) *ka jazarum*  
 FUT write.1SG  
 ‘I will write.’

[Iglă 1996: 218]

In Komotini and Xanthi Romani variation between an inherited clitic and a borrowed affix exists in some cases, as for the expression of the optative: the Romani complementizer *te* occurs with some Turkish loan verbs (i.e. with the present in *te bekler* ‘to wait’; *te konuſur* ‘to talk’; with the progressive in *te japiſtijorlar* ‘to stick’), while, for other Turkish loan verbs, the Turkish optative marker *-(y)A-* is to be found (i.e. *uzanayim* ‘to lie down’).

### 3.2. Backward diffusion

In most cases, borrowed verb inflection is restricted to the loan verbs, though instances of borrowed person morphemes for inherited verbs (additional to the existing inherited person morphemes) have been discussed (i.e. Gardani 2008 for Bulgarian 1SG and 2SG in Meglenite Romanian). Matras (2009: 209) suggests a close look at “backward diffusion”, for cases where the borrowed morphology is expanded to the inherited items, and at “forward diffusion”, for cases where the borrowed morphology is expanded to new borrowings of a different contact language.

In the Xanthi and Komotini Romani varieties, paradigm transfer is indeed limited to the Turkish loan verbs. Nevertheless, in other Romani varieties we find cases where the Turkish morphology is used for a loan verb of a different origin. This is the case of the Sepečides Romani variety where the Slavic origin verb *vurtinava* ‘to turn’, inflects in the preterit singular like a Turkish verb and in the preterit plural like a Romani verb (Cech & Heinschink 1996: 23–24):

	SG	PL
1	<i>vurt-<b>um</b></i>	<i>vurtindam</i>
2	<i>vurt-<b>un</b></i>	<i>vurtinde</i>
3	<i>vurt-<b>u</b></i>	<i>vurtinde</i>

Table 2: Sepečides Romani < Slavic, Turkish (in bold type)

Contrary to Komotini and Xanthi Romani where almost all TMA and all person markers are transferred from Turkish, split of inflections depending on the person and the TMA markers is a phenomenon mentioned for other Romani varieties by Elšik & Matras (2006).

## 4. Novel creations

Chamoreau (in press) has drawn attention to the possibility of innovative activity due to language contact based on a case study in Purepecha, a language of Mexico in contact with Spanish. Chamoreau shows an example of borrowed forms being assigned to a different function in the recipient language, namely to the pre-existing superiority comparative constructions. I will illustrate here a case of innovative borrowing by an example of the Turkish evidential marker lexicalized in Romani with a different meaning.

As shown in §3, paradigm transfer takes place more easily when both languages distinguish the same TMA categories. What happens though when the loan verb carries grammatical morphemes of a category that does not apply in the recipient language? This is the case of evidentiality for Romani in contact with Turkish.

In Turkish, speakers must specify for all verbs in the past tense whether the event was experienced directly (*-di*) or indirectly (*-miş*):

- Turkish
- (10) *Ahmet*                      *gel-*                      *miş*  
        *Ahmet*                      come                      *miş*  
        ‘Ahmet came / must have come.’                      [Aksu-Koç & Slobin 1986: 159]

According to Aksu-Koç & Slobin (1986), *-miş* has the basic meanings of inference and hearsay and is used in everyday discourse as well as in myths, folktales, and jokes.

In most Romani varieties evidentiality is not grammaticalized. There are at least three possible scenarios: the first possibility is that the morpheme will be transferred without its meaning (not attested for Romani as far as I know); the second possibility is that the morpheme will not be transferred at all (i.e. Ajia Varvara Romani). The third possibility is that the morpheme will be transferred and a new grammatical category will be created in the recipient language. This is the case of Sliven Romani that borrowed the Bulgarian evidential *-l* using it as a particle *li* suffixed to the verbs in past (Kostov 1973). Moreover, the Futadži Romani variety, using paradigm transfer for Turkish loan verbs, is reported to have adopted as well this strategy: speakers of Romani Futadži use the Turkish *-miş* with the Turkish loan verbs and the particle *berim*, probably also of Turkish origin, with inherited verbs (see Friedman in press). Cases of replication have also been observed in Kalderaš and Lovari Romani, with the creation of a new grammatical category with inherited material, namely case and person agreement for simple past (Matras 1995).

I will now examine a fourth case, which can be described as an innovative process. Xanthi Romani speakers have borrowed *miş*, not as a bound morpheme suffixed to the verb, but as a free morpheme, phonetically realized [muʃ], and either preceding or following the verb. It reports on the truth of the statement, rather than inference and hearsay as it does in Turkish, and is attested with both native verbs and Turkish loan verbs:

Xanthi Romani < Turkish

- (11) *phendas muf i fatma*  
 said.3SG allegedly the PN  
*oti e xurd-es voj lja sas pe-sa*  
 that the.OBL child-ACC she took.3SG with herself-INSTR  
 ‘Fatma said, allegedly, that she took the child with her.’

Xanthi Romani < Turkish

- (12) *me dea ka marel muf*  
 my.OBL mother.ACC will beat.3SG allegedly  
 ‘He will, supposedly, beat my mother.’

The function of the Xanthi Romani *muf* is probably influenced by the second contact language, Greek. Greek, like Romani, has no obligatory or grammatical expression for evidentiality but can use, among other possibilities, prosody or optional expressions such as *taha*, ‘it seems’, related to the truth of the statement (Ifantidou 2002), *lei* ‘says’ or *demek* from Turkish ‘say’, that either follow or precede the verb. *Muf* is added to existing lexical means in Xanthi Romani, where speakers are using like in Greek, *demek* in the sense of ‘allegedly’ together with the Turkish first meaning ‘say, you mean’ (in other varieties *demek* has a different meaning ‘almost’ in Ajia Varvara Romani, Igla 1996). Compare the example (11) (*muf* in Romani) with (13a) (*demek* in Romani) and (13b) (*demek* in Greek):

Xanthi Romani < Greek < Turkish

- (13a) *phendas demek i fatma*  
 said.3SG allegedly the PN

Greek < Turkish

- (13b) *ipe demek i fatma*  
 said.3SG allegedly the PN  
 ‘Fatma said, allegedly ...’

The use of *muf* in Xanthi Romani is most probably a case of mixed influence from the two contact languages: the Turkish L2 verb morpheme *mış* is borrowed and used as an adverb in the same way and with the same meaning as the Greek L3 language does. This is particularly frequent for the younger speakers, while the elder ones are more likely to use the Greek equivalent *demek*, as in (13b).

The Balkan Sprachbund is also qualified by a significant number of Greek lexical borrowings. Greek loan verbs in Pomak, as in most Balkan Slavic, are borrowed with the Greek aorist marker *-s-* without it maintaining its function, therefore as a loan verb marker (Greek in bold type):

Xanthi area Pomak < Greek *ʿkendisa* (Aorist)

- (15) *aʿgato*      *bjex*      *ʿmifka*      *ʿjatse*      ***kenʿdi-s-vax***  
 when.PST      was.1SG      little      a lot      embroider-LVM-IPRF.1SG  
 ‘When I was young I embroidered a lot.’

Xanthi area Pomak < Greek *saʿpunisa* (Aorist)

- (16) *ʃe*      *ti*      ***sapuʿni-sa-m***      *kusuʿo-ta*  
 will      you      soap-LVM-1SG      hair-DEF.A  
 ‘I’ll soap your hair’.

As Breu (1991: 42–43) observes for Arvanitika and Arumanian, the *-s-* loan verb marker is consistently used for Greek loan verbs, even for those verbs whose aorist form does not end in *-s-*. Below is such an example for Pomak:

Xanthi area Pomak < Greek *arʿniθika* (Mediopassive Aorist)

- (17) *ja*      ***arni-ʿsa-x***      *da*      *ubigʿrja-va-m*      *sas*      *tja*  
 I      stop-LVM-AOR-1SG      to      wander-IPFV-1SG      with      them  
 ‘I stopped wandering around with them.’

## 5.2. Forward diffusion

In some cases loan verb markers are restricted to the initial loan verbs (Wohlgemuth 2009: 98), although quite frequently they meet with ‘forward diffusion’ (‘borrowing of accommodation patterns’ Wohlgemuth 2009: 224).

Well described in Romani (Miklosich 1872–1880, Bakker 1997, Elšik & Matras 2006: 324–333), loan verb markers originate from inflectional or derivational affixes which do not keep their grammatical value: such as the forms derived from the Greek aorist *-is/-as/-os-*, very common in the Vlax Romani branch, or those derived from the Greek present tense *-in/-an/-on-* and *-iz/-az/-oz-*. Often borrowed from Greek in Early Romani so as to accommodate the Greek loan verbs, they followed forward diffusion and served to accommodate new loan verbs on several occasions. Here is an example from nineteenth century Angloromani:

Angloromani < English

- (18) *think-is-ava*      *mandi*      *chavi*      *adre*      *odoj*  
 thought-LVM-1SG      1SG.LOC      child      in      there  
 ‘I thought my child was in there’ [Matras et al. 2007]

This is also the case for the Greek *-s-* loan verb marker which in most Balkan languages serves to accommodate loan verbs of various origins, other than Greek (see Breu 1991: 45). Below are some examples from Pomak using a Greek loan verb marker (in bold) for Turkish loan verbs:

Xanthi area Pomak < Turkish *beendi* (Preterit)

- (19) *ben-ʻdi-s-va-m*                      *meriʻem-a*  
 like-LVM1-LVM2-IPFV-1SG          PN-ACC.ANIM  
 ‘I like Meriem.’
- Xanthi area Pomak < Turkish *pisledi* (Preterit)
- (20) *ljastoʻvitse-ne*    *pisle-ʻdi-s-va-t*                      *ʻjatse*    *balkuʻone-ne*  
 swallows-DEF.D    soil-LVM1-LVM2-IPFV-3PL    a lot    balconies-DEF.D  
 ‘The swallows are soiling the balconies a lot.’

## 6. Replication of verb morphology

The third type of verb morphology transfer is replication, or the borrowing of meaning and structure but not of the form. It takes place through various processes, such as contact induced grammaticalization and restructuring, either through loss or rearrangement (Heine & Kuteva 2005). Harder to prove than borrowing, the study of linguistic convergence is nevertheless well developed in contact linguistics and in Balkan studies more specifically. Balkan convergence is admittedly due to a highly complex sociolinguistic situation: various, and sometimes contradictory, processes took place due to both imperfect learning and frequent codeswitching that served as catalysts for a variety of pre-existing states in the languages in contact.

I will illustrate verb morphology replication using the example of Nashta (Slavic) in contact with Greek. We have indeed observed that Nashta has verbal structures that converged toward the Greek verbal structures in such a way that they have become almost identical for the terminal Nashta speakers (see Adamou 2006). This development is partly due to centuries of casual contact, and partly to the modern language contact setting characterized by a shift to Greek (the last remaining fluent speakers at the moment of my study were born between 1910 and 1930).

	Nashta	Greek
<b>volitive</b>	<i>ki</i>	<i>θa</i>
<b>optative</b>	<i>da</i>	<i>na</i>
<b>exhortative</b>	<i>neka</i>	<i>as</i>
<b>imperfective</b>	<i>-uva-</i> or stress	stem morphology
<b>‘have’ perfect</b>	<i>imam Vinv(-no)</i>	<i>exo Vinv.</i>

Table 3: Verb morphology in Nashta and Greek

The rise of a future based on the volitive ‘want’ is among the most well known Balkan features, found in Greek, Tosk Albanian, Rumanian, Macedonian, Bulgarian, Serbian

and Croatian, and Romani (Joseph 1992: 154). In all these languages it followed a similar grammaticalization path from modal verb (inflected for person and number) < auxiliary (free word order) < clitic (fixed word order, phonologically reduced form) to a modal future between the 14th–17th centuries (Assenova 2002).

A more recent convergence with Greek took place for the potential mood. The terminal Nashta speakers use a highly atypical construction for a Slavic language, namely [*ke* + aorist] (Adamou 2006: 59), clearly a case of replication of the Greek equivalent [*tha* + aorist]. (Cf. example (21)):

- Nashta
- (21a) *ʼpetro-to*                      *ki*      *kuʼpi*                      *ʼkola*  
 PN-DEF.N                      FUT      buy.AOR.3SG      car

‘Petros must have bought a car.’

- Greek
- (21b) *o*                                      *ʼpetros*      *tha*      *a ʼyorase*                      *afto kinito*  
 DEF.NOM.M                      PN.NOM      FUT      buy.AOR.3SG      car.ACC

‘Petros must have bought a car.’ [Babiniotis & Clairis 1999: 85, transcription-translation and glosses by Adamou]

Literary Macedonian on the other hand, uses the particle *bi*, for the potential. In a first stage, the Balkan conditional with [*ke* + imperfect] replaced the traditional Slavic conditional [*bi* ‘be’ + V-*l*] in Bulgarian and Macedonian. During the twentieth century, within former Yugoslavia, “the spread of the bi-type conditional to a range of modal contexts in Macedonian is [...] frequently attributed to the influence of Serbo-Croatian” (Hacking 1998: 115). Nashta speakers, in constant contact with Greek during the twentieth century, lacked such an influence from Serbo-Croatian and therefore Nashta also lacks the *bi* potential.

Another general Balkan convergence phenomenon is the use of an optative particle following the loss of the infinitive (Joseph 1983), in Greek [*na* + finite verb], also observed in Nashta [*da* + finite verb].

The grammaticalization of a ‘have’ perfect is a more controversial candidate for the Balkan Sprachbund. Many authors, such as Gołab (1984), Lindstedt (2000), and Tomić (2004), consider the ‘have’ perfect as a Balkan feature; Havranek (1936) and Vasilev (1968) argue for a Romance influence on the Balkan Slavic ‘have’ perfect. Nashta, unlike Bulgarian but like Literary Macedonian, has developed a fully grammaticalized ‘have’ perfect: it is characterized by an invariable verbal form ending in *-no*, based on the neuter past participle, and it is used with intransitive verbs, as in *jima umrjiano* ‘he has died’ (Adamou 2012). Following is an example of the ‘have perfect’ with a transitive verb:

- Nashta
- (22) *ʔjima-x-me*                      *purʔdai-no*                      *ʔkrave-te*  
 have(AUX)-IPRF.1PL      sell-(invariable marker)      cows-DEF.PL  
 ‘We had sold the cows.’

That Greek influence played a part in this development is not at all certain (Adamou 2012) although it seems plausible enough on the surface: Greek has two ‘have’ perfect types with dialectal distribution (Moser 1988, Horrocks 1997). Modern Greek uses [‘have’+non-finite verb] based on a former infinitive:

- Greek
- (23) *ʔex-o*                      *ʔyra-psi*  
 have-1SG      write-invariable marker  
 ‘I have written.’

The second construction, grammaticalized in some varieties as early as the thirteenth century, is composed of [‘have’+verbal adjective]:

- Greek
- (24) *ʔex-o*                      *ʔyraʔmeno*  
 have-1SG      write (non-finite)  
 ‘I have written.’

Nashta speakers today use the standard ‘have’ perfect form in their current Greek productions.

Despite the shared ‘have’ auxiliary perfect in Nashta and in Greek the determining factor for evaluating the role of contact influence depends on the chronology of its grammaticalization (see Adamou 2012). According to Koneski (1965) the grammaticalization of a ‘have’ perfect in the closely related Macedonian varieties dates back to the eighteenth century. In the area of the Prespa and Ohrid lakes (actual borders between Albania, Former Yugoslav Republic of Macedonia -FYRO Macedonia- and Greece, see map), contact with Arumanian was intense and so Romance influence could be posited. In contrast, in the area around Thessaloniki, where the village of Liti is located, such Arumanian presence has not been documented for several centuries and therefore Arumanian influence does not seem plausible. However, Greek influence does not seem plausible either: bilingualism with Greek was neither intensive nor extensive before the late nineteenth-early twentieth centuries (contact was mainly with church Greek). Nevertheless, the date posited by Koneski for Macedonian can be questioned as new manuscripts have come to light. For example, the eighteenth century Konikovo Gospel (Lindstedt et al. 2008), written in a location close to the Liti area, shows no instances of a ‘have’ perfect. If the grammaticalization is to be dated to the nineteenth century, then Greek would be a convincing candidate, given the equivalence of the ‘have’ perfect.

What is more certain is the fact that the grammaticalization of a ‘have’ perfect with the past passive participle led to the loss of the former Slavic ‘be’ perfect as well as to



the remarkable loss of all the *-l* verb forms based on the active participle. I have been able to find only traces of the old perfect form with the ‘be’ auxiliary and *l*-verbs in a folk song that the last fluent speakers still recall but do not otherwise use, thereby supporting the claim of a recent loss:

- Nashta  
 (25) *vlase me sa dof-l-e male*  
       Vlachs 1SG.ACC REFL come-EVID-PL INTERJ  
       ‘Vlachs have come (‘BE’AUX.PERFECT +V-L), oh my!’ [Adamou 2012]

The loss of the *-l* verbal forms is a unique feature within the Slavic phylum, and Greek was probably a catalyst. The gradual loss of the *-l* forms has also been reported for other Slavic varieties in northwestern Greece: Vaillant & Mazon (1938) documented their gradual loss in Sohós (Grk)/Suho; Friedman (1977) and Topolińska (1995) noted rare use in Kastoria (Grk)/Kostur folktales. This loss is most probably due to the grammaticalization of the ‘have’ perfect and contact with Greek since in most Macedonian varieties (having no contact with Greek) the competition created by the grammaticalization of a ‘have’ perfect did not lead to the loss of the former ‘be’+V-*l* perfect. Rather, a variety of combinations of the four forms with a variety of meanings took place, the former perfect having taken over the evidential meaning: [V+*l*], [‘be’ +*l*+V], [‘have’+V+*no*], [‘have’+*l* +V+*no*] (Friedman 1988). Nashta probably did not maintain the V-*l* forms for evidentiality because the Greek verb system does not have a grammaticalized evidential. For narratives, e.g. tales, Nashta consistently uses the aorist or the narrative present, like Greek. Compare the Nashta and the Greek version of a tale narrated by the same speaker:

- Nashta  
 (26a) *i nof ’zexa i i’din bar’dak ’voda*  
       and knife take.AOR.3PL and one jug water  
       ‘And a knife they took, and a jug of water.’ [Adamou 2006: 86]
- Greek  
 (26b) *’piran ’ena ku’va ne’ro ’piran ki*  
       take.AOR.3PL one. ACC bucket. ACC water. ACC take.AOR.3PL and  
       *’ena ma’xeri*  
       one.ACC knife.ACC  
       ‘They took a bucket of water, they also took a knife.’ [fieldwork notes Adamou]

All of these adjustments have given rise to a Nashta verb system which is highly parallel to the Greek verb system and is admittedly exotic from a pan-Slavic perspective.

## 7. Summary and conclusion

This paper has illustrated various types of verb morphologies in contact based on recent data from the Balkans. It has shown the variety of contact induced phenomena affecting verb morphologies and proposed a sub-typology ranging from replication, borrowing - sometimes of complete paradigms- to loan verb markers and to completely new creations.

Replication, a well known phenomenon in the Balkan Sprachbund, was illustrated in this paper by the example of Nashta, a Slavic variety whose speakers shifted to Greek. Next to the well known Balkan convergence phenomena (i.e. future), Nashta also shows some peculiarities in its verbal system, such as the loss of -I verbal forms, the loss of 'be' auxiliary as well as the use of a potential [*ke* + aorist], that can only be understood as contact-induced phenomena.

Borrowing of entire paradigms was exemplified by two Romani varieties in contact with Turkish in Greek Thrace with a close look at formal similarities, i.e. the causative affix, and extreme divergences, i.e. evidentiality.

The possibility of an innovative contact-induced transfer of verbal morphology was shown through the Turkish evidentiality marker that was lexicalized in Romani following the semantics and function of equivalent adverbs in Greek, the speakers' L3 language.

Last, loan verb markers, commonly used in the Balkans, were exemplified for Pomak (Slavic) in contact with Greek and Turkish as well as for Romani in contact with Greek.

The Balkan corpus under study supports the idea that the outcome of language contact on verb morphology is strongly related to the type of contact rather than to typological factors, i.e. Turkish agglutinative verb morphology will be treated differently in fusional Balkan Slavic and Romani because of the differences in contact intensity. Entire verb paradigm transfer (most probably originating in codeswitching) and innovative uses of borrowed verb morphology (when the two languages do not share the same grammatical categories) are found in intensive and extensive language contact settings with language maintenance, such as the one described for Romani and Turkish. The use of loan verb markers seems to be taking place in more casual contact settings (accompanying the borrowing of verbal stems) while grammatical replication is found in both casual contact and shift situations, as illustrated by Balkan Slavic.

## Abbreviations

1	first person	IPRF	imperfect
2	second person	IPFV	imperfective
3	third person	LOC	locative
ACC	accusative	LVM	loan verb marker
ANIM	animate	M	masculine
AUX	auxiliary	N	neuter
AOR	aorist	NEG	negation, negative
CAUS	causative	NOM	nominative
DEF.A	definite addressee's sphere	OBL	oblique
DEF.D	definite not located in the speaker's and addressee's spheres	PL	plural
		PRET	preterit
DEF.S	definite speaker's sphere	PROG	progressive
F	feminine	PST	past
FUT	future	REFL	reflexive
INSTR	instrumental	SG	singular

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