ANGELA RALLI (UNIVERSITY OF PATRAS)

Morphology in language contact: verbal loanblend formation in Asia Minor Greek (Aivaliot)[*]

Abstract

The purpose of this paper is to investigate how Turkish verbs are accommodated in Aivaliot, a Greek-based Asia Minor dialect, which belongs to a different typology from the donor language: Aivaliot is fusional, like Greek, while Turkish is agglutinative. The paper demonstrates that loan verbs are adapted to the Aivaliot morphology following specific constraints of Greek word formation, but they are also affected by features innate to Turkish. In particular, it deals with certain base-driven morphological characteristics, such as stem-based derivation and stem allomorphy, which play a major role in Greek derivation and inflection, and make Aivaliot a good candidate as a case study for language-contact morphological considerations. Finally, with the help of the Aivaliot data, and in accordance with recent findings in relevant literature, it shows that it is not particularly difficult for verbs to be borrowed, provided that certain structural/morphological conditions are met.

1. Assumptions and premises

In language-contact studies, the simplest borrowing[1] is usually considered to be lexical, according to which the lexicon of the recipient language is changed with the addition of the incorporated words (see, among others, Moravçsik 1975, 1978, Thomason 2001, Field 2002, Haspelmath 2008). Haugen (1950) distinguishes three kinds of borrowed lexical items: *loanwords,* whose form and meaning are copied in the recipient language,

---

[*] The paper is an extended version of a talk which was given at the conference *Morphologies in Contact* (Bremen: October 1–3 2009). I thank the audience for feedback and most constructive remarks. I am particularly grateful to Metin Bağrıaçık for his assistance with the Turkish data.

[1] In this paper, I use the common term 'borrowing' to refer to the replication of a lexical item bearing a morphological structure. Note, however, that Johanson (2002) has proposed the term 'copying'.

loanblends, i.e. words consisting of a copied part and a native part, and *loanshifts*, where only the meaning is copied.

In this paper, I deal with the 'accommodation' of loan verbs within a recipient language, which is typologically different from the donor. To this end, I examine the verbs of Turkish origin which have been introduced into a Greek Asia Minor dialect, the so-called Aivaliot, as a result of a socio-political contact of almost three centuries, between the two languages, the fusional Modern Greek (hereafter Greek) and the agglutinative Turkish. The verbs that I investigate are loanblends in that they contain a copied part from Turkish, basically the past tense stem, and a Greek part, which consists of a verbalizer for a considerable number of these verbs, and the person/number inflectional ending. Crucially, these formations present a major challenge to morphological theory, since, among other things, they serve to show that morphological issues and approaches can be tested in contact situations, where languages of distinct morphological typologies may affect each other.

According to Wichmann & Wohlgemuth (2008) languages can borrow verbs following different strategies. They can insert a verbal root in their morphology, may use a light verb, whose function is to integrate the loan verb (see also Jäger 2004), or, in certain rare cases of unadapted loan verbs, they borrow the entire inflectional paradigm along with the verb (see the loan verbs of Agia Varvara Romani, as described by Bakker 1997). There are two ways according to which a verbal root can be inserted in the target's morphology: either by direct or by indirect insertion. In direct insertion (Wichmann & Wohlgemuth 2008: 99), verb roots of the donor are plugged directly into the verbal morphology of the recipient, and there may be only slight phonological modifications. In indirect insertion, as Wichmann & Wohlgemuth (2008: 97) state, an affix is usually required in order for the verb to inflect according to the inflectional pattern of the recipient. They specify that this affix may be a verbalizer, which flags the part-of-speech membership, or defines the class of the verb. The Aivaliot loanblend verbs, which are of Turkish origin, represent cases of both indirect and direct insertion. As shown below, a big number of these formations contain a Turkish stem, a Greek derivational affix (verbalizer), and a Greek inflectional ending. Nevertheless, there are also verbs where the Turkish stem is followed only by the Greek inflectional ending. These verbs, in accordance with Matras (2009: 176), will be considered here as cases of direct insertion, since the original verb root is not modified, but only assigned to a specific inflection class.

On the basis of the Aivaliot data, I demonstrate that the morphological properties of the recipient language are crucial for the final outcome of loan verbs. I argue that the structural patterns which are associated with verbal loanblends are determined by certain major features of the Aivaliot (the recipient language) native morphology. More specifically, these features are: a) the property of Aivaliot (and generally Greek) word formation to be stem based, b) a stem allomorph, which appears in the past perfective paradigms and usually serves as a base to deverbal formations, and c) the presence of a systematic stem allomorphy pattern, which is widely spread in a considerable number of

Greek verbs and makes them inflect according to a particular inflection class (see Ralli 2006, 2009). I also argue that the accommodation of Turkish loan verbs to these structural patterns is also facilitated by the phonological similarity of the stem-final vowel between the Turkish and the Greek verbal stems in the context of the past tense.

It should be noticed that the adoption of the verbal stem allomorph cancels the need for another strategy of loan-verb accommodation, for example, the use of light verbs, and shows a high degree of integration in the recipient language: verb stems of Turkish origin appear to adopt the same patterns as the native Greek ones as far as their inflectional and generally morphological behavior is concerned. For instance, as shown in section 3, these verbs are inflected according to the common inflection classes of Greek, and may become the base for further deverbal derivation.

Finally, the investigation of verbal loanblends in Aivaliot demonstrates that verbs are not more difficult than nouns to be borrowed, provided that certain conditions are met, as opposed to opposite claims that have been put forward by Whitney (1881), and Moravçsik (1978). Thus, it brings support to similar and more recent claims, such as those by Campbell (1993), Winford (2003), Matras (2007, 2009), Wichmann & Wohlgemuth (2008), and Melissaropoulou (2009).

The paper is structured as follows: after the assumptions and premises, which are exposed in section 1, a brief description of the Aivaliot basic linguistic features is given in section 2. Section 3 constitutes the core of the paper, where the accommodation of Turkish verbs in the Aivaliot morphology is investigated, and certain proposals are put forward with respect to their morphological structure. The paper concludes with a summary of the main issues dealt with, where the crucial role of morphology is emphasized for the formation of verbal loanblends.

2. Aivaliot: a brief description

Aivaliot is a Greek dialect, which was spoken in Northwest Asia Minor (Turkey) till 1922. It consists of two sub-varieties, the dialect of the town of Kydonies (today's Ayvalik) and its surroundings, and that of Moschonisi (today's Cunda), the main island of a clump of islands in the gulf of Ayvalik. With the end of the war between Greece and Turkey in 1922, the vast majority of Aivaliotophones (more or less 30.000 people) moved to Greece, following the Lausanne treaty in 1923, and the exchange of Muslim and Christian populations between the two countries. Today, Aivaliot is still in use in certain dialectal enclaves of the Aegean island of Lesbos, which are inhabited by circa 4000 speakers, consisting of first, second, and third generation refugees (see Ralli in preparation).

For more than three centuries (end of 16th century – beginning of 20th century), Aivaliot speakers had been exposed to an intense contact with Turkish, as subjects of the Ottoman Empire, but Aivaliot had never undergone a heavy cultural pressure, since, in the area where it was spoken, Greek was the dominant language. Aivaliots had mainly a

Greek education, because of a relative administrative and religious autonomy, which was attributed to them by a Sultan's decree in the 17th century. As a result, Aivaliot women learned Greek and French at school, while men were educated in Greek and Turkish. Very few women knew how to speak Turkish, and men used it in trade and, to some extent, in administration. Even among men, very few people were fully bilingual, as opposed to speakers of Cappadocian, another Asia Minor dialect of Greek origin, where bilingualism was spread among men and women.[2]

Structurally, Aivaliot resembles the neighboring Lesbian Greek dialect in many respects, but has also considerable differences from it. On phonological grounds, it is usually classified as belonging to the group of Northern Greek Dialects, since it shares with them two major phonological characteristics, high vowel deletion and mid-vowel raising in unstressed position. As an illustration, compare the following examples in Standard Modern Greek (SMG) and Aivaliot:[3]

(1a)   SMG   (1b)   Aivaliot (and Northern Greek Dialects)
       kutí   *kti*   'box'
       xéri   *xer*   'hand'
       ónoma   *ónuma*   'name'
       kerí   *kirí*   'wax, candle'

In syntax, there are only slight differences between SMG and Aivaliot, as opposed to morphology, where Aivaliot differs from SMG significantly, although not as much as Cappadocian, where certain agglutinative structures are found in inflection (Dawkins 1916, Janse 2004, forthcoming, Ralli 2009). For instance, as shown by Ralli (in preparation), Aivaliot displays a productive use of several derivational suffixes of foreign origin, mostly Turkish, and has a rather simplified nominal inflection, as compared to that of SMG, consisting of the loss of the nominative case of the masculine definite article and its levelling with that of the feminine form, the loss of genitive plural, and the levelling of certain plural endings of masculine nouns across inflection classes. As far as the verbal morphology is concerned, the set of active endings of the singular number in the imperfect tense (past imperfective) is considerably different from that of SMG (2), but there are also verbs which are unknown in SMG, either because some of them still keep their Ancient Greek roots, or because they involve foreign elements (3), Turkish roots for the most part:

(2a)   SMG   (2b)   Aivaliot

---

[2]   Cappadocian was spoken in about 32 Greek-speaking settlements in central Asia Minor before 1923, when the exchange of populations between Greece and Turkey took place. Today, there are few remaining native speakers, in certain parts of Northern Greece (in the areas of Karditsa, Volos, Kilkis, Larisa, Thessaloniki, Chalkidiki, Kavala, and Alexandroupoli), all of them descendants from Cappadocian refugees. For details about Cappadocian, see Dawkins (1916) and Janse (forthcoming).

[3]   Greek and Aivaliot examples will be given a broad phonological transcription. Stress will be indicated only when is relevant for the argumentation.

aɣap-usa/aɣapa-ɣa[4]   *aɣap-umna*
love-IMP.PAST.1SG
'I was loving'
aɣap-uses/aɣapa-jes[5]   *aɣap-as*
love-IMP.PAST.2SG
'you were loving'
aɣap-use/aɣapa-je   *aɣap-a*
love-IMP.PAST.3SG
'(s)he was loving'

(3a) SMG   (3b) Aivaliot
xano δinamis, peθeno   *karonu*
'to lose forces, die'   (Ancient Greek *karoo:*)
sinanastrefome   *kunustizu*
'to keep company, consort'   (Turkish *konuşmak*[6] 'to talk, have a con-
                                      versation')

3. Formation of verbal loanblends

In Aivaliot, loan verbs of Turkish origin are created either from nominals or from verbs. Both formation patterns are particularly common in the language. Their output is subject to the Greek phonological laws – for instance no Aivaliot verbal form undergoes the Turkish vowel harmony – but in most cases, the meaning is transparently linked to that of the Turkish base.

Verbs originating from nominal items are typical cases of loanblends, in that they show a verbalizer added to the Turkish nominal root, which is one of the common derivational suffixes that are also used to transform a native Greek noun into a verb. For instance, in Aivaliot, there are verbs showing a variety of derivational suffixes, i.e. *-on-,-evɣ-, -iaz-,* and *–iz-,* which are attached to bases of native (4) or Turkish origin (5).[7] These verbalizers are followed by the inflectional ending *–u,* denoting the first person singular:[8]

---

[4]   The forms in *–us-* and *–ɣ-* are alternating in SMG. See Ralli (2005) for a detailed analysis of the Greek verbal inflection.
[5]   /ɣ/ is palatalized before a high front vowel.
[6]   *-mak* is the infinitival marker in Turkish.
[7]   There are also few occurrences of Romance origin, which are relics of a Genovese occupation of the area that lasted for almost two centuries (13th–15th c. AD). E.g. *skuduro* 'to strike, bump against' (Italian *scontrare*), *dalavirizumi* 'to deal, be in business' (Italian *dare-avere* 'to give-have/receive').
[8]   Greek verbs have lost the formal expression of the infinitival form in the Hellenistic period (ca 3rd c. BC–3rd c. AD), see Horrocks (1997). By convention, Greek verbal forms are listed in the first person singular of the present tense.

(4)   Aivaliot verb   Aivaliot nominal item[9]   Greek/Aivaliot suffix
       psar-evγ-u[10]   *psar(i)*[11]   *-evγ-*[12]
       'to fish'   'fish'
       zuγraf-iz-u   *zuγraf(us)*   *-iz-*
       'to paint'   'painter'
       kiramδ-on-u   *kiramiδ(i)*   *-on-*
       'to put tiles on the roof' 'tile'
       psir-iaz-u   *psir(a)*   *-iaz-*
       'to get lousy'   'louse'

(5)   Aivaliot verb   Turkish nominal item   Greek/Aivaliot suffix
       xazir-evγ-u   *hazır*   *-evγ-*
       'to make ready'   'ready'
       xabar-iz-u   *haber*   *-iz-*
       'to be aware'   'news'
       tulum-iaz-u   *tulum*   *-iaz-*
       'to hit somebody   'utricle'
       and make him look'
       like an utricle'
       batak-on-u   *batak*   *-on-*
       'to sink'   'mud, slush'

The selection of a specific suffixal form is rather ad hoc, since it is not subject to specific criteria: these verbalizers produce equally transitive or intransitive verbs, and, with some exceptions, their presence is not conditioned by the phonology or the meaning of the nominal base.

It is of crucial importance to notice that denominal formations of Turkish origin, like those in (5), contrast with verbal loanblends, since the latter show only the verbalizer *-iz-,* as the following examples demonstrate:

(6)   Aivaliot verb   Turkish verb   Greek/Aivaliot suffix
       burdizu   *bur(mak)*   *-iz-*
       'to twist'   'to twist'
       davrandizu   *davran(mak)*
       'to behave badly'   'to behave'

---

9   The examples will be transcribed according to the Aivaliot pronunciation (see also section 2).

10 For clarity reasons, hyphens separate derivational suffixes from roots and inflectional endings.

11 Greek (and Aivaliot) derivation is stem based. Thus, word segments which do not participate in derivation are included in parentheses. Note that a stem in Greek is the part of the word which involves the root and additional material (thematic vowels, and/or derivational affixes), but is stripped of the paradigmatic inflectional ending marking agreement features.

12 In Standard Modern Greek, the corresponding suffix is *–ev-*.

daldizu	*dal(mak)*
'to be absent-minded'	'to dive, plunge,
	be absent-minded'
kudurdizu	*kudur(mak)*
'to be particularly active' (pej.)	'to go mad'
kazadizu	*kazan(mak)*
'to earn, profit, become rich'	'to earn, profit'
furladizu	*fırla(mak)*
'to burn from anger'	'to dash, flounce, pop up'
zurladizu	*zorla(mak)*
'to force, stretch'	'to force, stretch'

In an effort to find a plausible explanation why the other verbalizers are not used in verb-based loanblends, one could appeal to the high productivity of *–iz-* in Greek and most of its dialects, as compared to the other formatives (see Ralli 2005).[13] However, this hypothesis does not explain why *–iz-* is not the only choice of denominal verbs as well, as shown by the examples in (5).

In what follows, I argue that the factors which are operative in the process of forming verbal loanblends are primarily language-internal, pertaining to the word-formation properties of the recipient language (in our case, Aivaliot and Greek in general), and not only language external, referring to the degree of exposure to the source language as well as to the degree of bilingualism among the speakers of the target, as claimed by Thomason & Kaufman (1988). I further show that the matching of certain features (morphological and/or phonological) between the donor and the recipient languages may also play a role in the formation of loanblends.

A closer look at the structure of the Aivaliot verbs (6) reveals that there is a –d– between the verbal root and the person/number ending. Since we deal with verbs of Turkish origin, this segment reminds of the Turkish past tense marker *–dI-*, suggesting that the verbal form which is borrowed is that of the past tense. For an illustration, consider the past tense paradigm of the Turkish verb *sevmek*[14] 'to love':

(7)   Turkish
        sev-di-m   'I loved'
        sev-di-n   'you loved'
        sev-di-Ø   '(s)he loved'
        sev-di-k   'we loved'
        sev-di-ni   'you loved'

---

[13] With the exception of the Pontic dialect, which is spoken in Northern Turkey (Offitic Pontic in the Pontus area) and in several dialectal enclaves in Greece, where the derivational suffix *–ev-* is more productively used (see, among others, Papadopoulos 1955 and Melissaropoulou 2009).

[14] *-mek* is the infinitive marker in Turkish.

sev-di-ler   'they love

Moreover, since the verbal loans do not display any Turkish personal endings but appear combined with the Aivaliot ones (6), one may assume that this form is either a bare past tense stem, ending in *–DI-*, or the fully inflected type of the third person singular (3SG) of the past tense, which, in Turkish, does not have any overt ending and coincides with the stem (compare *sev-di-m* 'I loved' with *sev-di* '(s)he loved' in (7)). The first assumption presumes that the Aivaliot speakers accomplish a word-internal analysis of the borrowed verbal types, by stripping them of their personal ending (overt or non-overt) in order to use them only as stems. In addition, one may also suppose that by reanalysis, these tensed-marked stems have turned into non-tensed ones, feeding further word formation. In fact, the Turkish formative *–DI-*, as used in the Aivaliot verbs, is deprived of the past tense feature, since the stems which bear it can appear in all tenses – not only in the past – as illustrated by (8):

(8)	Present tense:	*kaza-d-íz-u*[15]
		'I become rich'
	Imperfect:	*kazá-d-(i)z-a*
		'I was becoming rich'
	Simple past tense (aorist):	*kazá-d-(i)-sa*
		'I became rich'
	Simple future:	*θa kaza-d-í-su*
		'I will become rich'
	Future continuous:	*θa kaza-d-íz-u*
		'I will be becoming rich'

In other words, the structure [root+DI-] of the Turkish verbs has lost its transparency in Aivaliot; it has become a non-analyzable base, and being deprived of any tense value, it accepts the addition of the verbalizer *–iz-*.

The second assumption does not presuppose any structural analysis from the part of the speakers, and is further supported by examples of other languages showing that borrowability of a word form in the third person singular is not rare, as stated by Matras (2009: 158). If this hypothesis holds, the 3SG word form also undergoes a reanalysis into a non-tensed stem in order to be combined with the Aivaliot inflectional endings, following the requirements of Greek morphology, where a stem is a bound element which becomes a word with the addition of an inflectional ending.[16] Crucially, diachrony provides support to these suggestions. As noted by Kiparsky (2009: 7), in Greek, the verbal stem is an innovative category of the Hellenistic times (ca 3rd c. BC–3rd c.

---

[15] The clash of two identical vowels results into a vowel reduction, e.g. /di+iz/ -> /diz/ in *kazadizu*. Moreover, the *–iz-* is realized as *–i-* before the /s/ of the ending (e.g. *kazád-(iz)-sa -> kazád-(i)-sa*)

[16] Cf. footnote 11.

AD); it gave rise to the formation of deverbal derivative words, while till that period, verbs entered derivation as roots.

In this paper, I will not opt for the first or the second hypothesis, since in both cases the output of the borrowing is always a stem.[17] To the question now why the stem plays such a crucial role for the formation of the loan verbs, I suggest that this peculiarity is due to the fact that the highly flectional Aivaliot is a stem-based language, like Greek, as shown by Ralli (2005). Under this assumption, a further explanation is needed why verbal loans make use of the specific past tense stem. Again, this may also derive from the fact that deverbal word-formation in Greek is usually based on the so-called 'aorist stem', that is on a stem form, which serves to build the simple past, i.e. the paradigm denoting the past tense and the perfective aspect.[18] In Greek and Aivaliot verbs, this form is lexically specified as an allomorphic variation of the so-called 'present stem', which usually appears in the context of the imperfective aspect, as for instance, in the paradigms of the present tense and the imperfect (see Ralli 2006, 2009 for more details). Consider the following examples, where deverbal nouns and adjectives are created on the basis of the stem allomorph appearing in the past perfective context:

(9)   Greek/Aivaliot verb   Greek/Aivaliot deverbal noun/adjective
(9a)   *funáz-u*[19]
       call/shout-PRES.1SG
       'I call/shout'
       fónak-sa   *funax-tós*[20]
       call/shout-PERF.PAST.1SG   shout-ing.NEU.NOM.SG
       'I called/shouted'   'shouting, loud'
(9b)   *p(i)δ-ó*
       jump-PRES.1SG
       'I jump'
       píδ(i)-sa   *píδ(i)-ma*
       jump-PERF.PAST.1SG   jump-ing.NEU.NOM.SG
       'I jumped'   'jump, bound'
                                    p(i)δí-mat-a
                                    jump-ing.NEU-NOM.PL
                                            'jumps, bounds'

---

[17] It should be noticed that another Asia Minor dialect, Cappadocian, makes use of the past tense stem for its verbal loans, as noticed by Dawkins (1916: 42) and Janse (2001: 477).

[18] According to Mackridge (1985: 106) and Janse (2001: 477) this is the basic and unmarked stem of the Greek verbal system.

[19] As mentioned in section 2 and illustrated in (1), in northern Greek dialects (among which Aivaliot), unstressed mid-vowels are raised and high vowels do not surface in unstressed position. In (9), deleted elements are included in parentheses.

[20] By dissimilation, the –continuous /k/ becomes the +continuous /x/ before the –continuous /t/.

To sum up, external factors triggered by high exposure to another language may lead to the need of borrowing verbs in Aivaliot, but the decisive factor for the shape of these loan verbs is heavily affected by language-internal factors, referring to the type of the base (i.e. a particular stem allomorph) that is operative in the Greek language for word-formation purposes.

Nevertheless, the basic question about the adoption of the specific verbalizer *-iz-* is still open. I would like to propose that the exclusive use of *–iz-* could be elucidated by looking at its form. Generally, native Greek verbs in *–iz-* have a stem ending in −i in the context of the perfective past tense, as shown in (10b). As such, they can be easily compared with the correspondent Turkish stems (10a), which also end in -i:

(10a) Turkish   (10b) Greek/Aivaliot
      sev(mek)   'to love'   *xurizu*   'to separate'

      Past tense   Aorist (past perfective)
      sev-di-m   'I loved'   *xór(i)-s-a*   'I separated'
      sev-di-n   'you loved'   *xór(i)-s-is*   'you separated'
      sev-di-Ø   '(s)he loved'   *xór(i)-s-i*   '(s)he separated'
      sev-di-k   'we loved'   *xurí-s-ami*   'we separated'
      sev-di-niz   'you loved'   *xurí-s-ati*   'you separated'
      sev-di-ler   'they loved'   *xurí-s-an*   'they separated'

Where *–di-* is the past tense marker and *–m, -n, -ø, -k, -niz, -ler* the person/number endings in Turkish, while in Aivaliot Greek, *–s-* expresses the perfective aspect and *–as, -is, -i, -ami, -ati, -an* are the tense/person/number markers.

I suggest that the outcome of this phonological similarity has triggered a process of analogy (Kuryłowicz 1949), which contributed to the emergence of loanblend verbs in *–iz-,* and thus, excluding the creation of loanblends containing another suffix, such as *–evγ-, -on-* or *–iaz-,* whose simple past tense stem does not end in *–i*:

(11)	*-iz-*	*-evγ-*	*-on-*	*-iaz-*
Present tense	*xur-íz-u*	*xur-évγ-u*	*laδ-ón-u*	*param(i)θ-iáz-u*
	'I separate'	'I dance'	'I oil'	'I tell stories/lie'
Simple past tense	*xór-(i)-sa*	*xór-ip-sa*	*láδ-u-sa*	*paramíθ-ia-sa*
	'I separated'	'I danced'	'I oiled'	'I told stories/lied'

Where *–i-, -ip-, -o-,* and *–ia-* are the phonologically-motivated allomorphic variations of the derivational suffixes *–iz-, -evγ-, -on-,* and *–iaz-,* respectively.

Thus, Aivaliot provides evidence in favor of the classical views expressed by Meillet (1921), Sapir (1921) and Jacobson (1938) (see also Thomason 2001 for relevant discussion) that a language accepts foreign structural elements (in our case the Turkish marker

–*dI*-) only when they fit its structure, or correspond to its own tendencies and development.[21]

    Additional support to the hypothesis that the almost identical stem-final vowel in both languages (/i/ in Aivaliot is not subject to vowel harmony though) had an impact on the form of loanblends, by triggering selection of a particular derivational formative –*iz*-, comes from the existence of another set of loanblends, which also originate from Turkish verbs, but do not display a verbalizer. These verbs consist of the Turkish part and the Greek-based inflectional ending, and thus, constitute cases of direct insertion, in Wichmann & Wohlgemuth's (2008) terms. Consider the following examples:

(12)   Aivaliot verb   Turkish verb
          katsirdo   *kaçır(mak)*
          'to escape'   'to take away, kidnap'
          axtardo   *aktar(mak)*
          'to overturn'   'to transfer, mix'
          sakindo   *sakın(mak)*
          'to stand back/aside'   'to beware, avoid'
          dajado   *dayan(mak)*
          'to bear, endure'   'to bear, endure, rely on'
          savurdo   *savur(mak)*
          'to throw'   'to throw'
          sasirdo   *şaşır(mak)*
          'to be at a loss'   'to wonder, be at a loss, be surprised'

Structurally, these verbs differ from those of (6) in two points. First, as already pointed out, they lack the verbalizer –*iz*-. Second, they inflect according to the second inflection class, while the verbs of (6) belong to the first inflection class. For native verbs, the basic difference between the two classes relies on the presence of a systematic stem allomorphy pattern *X(a)* ~ *Xi,* which demarcates the verbs of the second class, while its absence defines those of the first (cf. Ralli 2006, 2009). This pattern is particularly frequent in the Aivaliot verbal system, characterizes a considerable number of verbs, and relates two allomorphic stem variations, one ending in –a, and appearing in the paradigms of the -perfective context, and another in –i, which characterizes the paradigmatic forms of the +perfective context. Consider the paradigms of present tense (-

---

[21] Nevertheless, structural closeness cannot be considered as an indispensable requirement for morphological transfer to take place. As noted by an anonymous reviewer, in the Maltese verbal morphology, recent verbal loans are not anymore adapted through the native schema (root and pattern) but follow a concatenative morphology where the verbalizer is a regularization of an allophonic alternation of the donor language (in this case a Sicilian dialect), reinterpreted as a verbalizer (Mifsud 1995).

perfective) and simple past tense (+perfective) of the native verbs *ravu* 'to sew' (13a) and *aɣapo* 'to love' (13b).

(13a) Inflection class 1 (absence of systematic stem allomorphy):

Present		Past	
ráv-u	'I sew'	*é-rap-sa*	'I sewed'
ráv-(i)s[22]	'you sew'	*é-rap-sis*	'you sewed'
ráv-(i)	'(s)he sews'	*é-rap-si*	'(s)he sewed'
ráv-umi	'we sew'	*ráp-sami*	'we sewed'
ráv-iti	'you sew'	*ráp-sati*	'you sewed'
ráv-in	'they sew'	*ráp-sa*	'they sewed'

where *e-* preceding the stem in the past tense is the so-called 'augment'. It appears with verbs beginning with consonant and is a stress carrier (Babiniotis 1972, Ralli 1988).

(13b) Inflection class II (presence of systematic stem allomorphy X(a) ~ Xi, where X=part of the stem)

Present imperfective		Past perfective	
aɣap-ó	'I love'	*aɣáp(i)-sa*	'I loved'[23]
aɣapá-s	'you love'	*aɣáp(i)-sis*	'you loved'
aɣapá	'(s)he loves'	*aɣáp(i)-si*	'(s)he loved'
aɣapá-mi	'we love'	*aɣapí-sami*	'we loved'
aɣapá-ti	'you love'	*aɣapí-sati*	'you loved'
aɣap-ún	'they love'	*aɣapí-san*	'they loved'

As seen above, verbs belonging to inflection class II have their stem ending in –i, in the +perfective context. In this respect, they resemble the verbs in *–iz-* (14), which although they belong to inflection class I, have also a stem-final vowel /i/ in the paradigms of the +perfective context:

(14) Present imperfective   Past perfective

arxíz-u	'I begin'	*árx(i)-sa*	'I sewed'
arxí(j)-s[24]	'you begin'	*árx(i)-sis*	'you sewed'
arxíz-(i)	'(s)he begins'	*árx(i)-si*	'(s)he sewed'
arxíz-umi	'we begin'	*arxí-sami*	'we sewed'
arxíz-iti	'you begin'	*arxí-sati*	'you sewed'
arxíz-in	'they begin'	*arxí-san*	'they sewed'

The fact to have an /i/ as stem-final vowel in the past perfective for both types of native verbs, i.e. for class I verbs in *–iz-* and for those belonging to class II, eliminates the

---

[22] Unstressed /i/ is deleted, as explained in section 2.
[23] See footnote 22.
[24] Underlying form /arx-íz-is/.

formal difference between the two types of stems.[25] Therefore, it should not be particularly surprising that the accommodation of verbs borrowed from Turkish could occur not only by indirect insertion (with the help of the verbalizer –*iz*-), but also by direct insertion, following the pattern of inflection-class II verbs.

A last question that needs an answer is whether it is possible to predict which verbs are subject to indirect insertion and which verbs undergo the direct one. The existence of several alternating types suggests that there is a random selection between the two strategies. In fact, there are Turkish-based verbs which implement both strategies, and both dialectal types are equally productive. For an illustration, consider the following examples:

(15) | Class I verbs in –iz- | Class II verbs | Turkish verb |
|---|---|---|
| *axtard-iz(u)* | *axtard(o)* 'throw' | *aktar(mak)* 'transfer/mix' |
| *sakind-iz(u)* | *sakind(o)* 'stand back' | *sakın(mak)* 'beware/avoid' |
| *psxurd-iz(u)* | *psxurd(o)* 'sprinkle' | *püskürt(mek)* 'sprinkle/spray' etc. |

The existence of two integration strategies which pertain to morphological properties, and not to the degree to which the Aivaliot speakers are exposed to Turkish, prove that language-internal factors with respect to the recipient may sometimes overrule the language-external ones related to the degree of bilingualism and the intensity of exposition to the donor. In fact, it is worth pointing out that the high integration of Turkish verbs in Aivaliot contrasts with the low verb integration in Greek–American (also Greek-Canadian). In spite of the fact that Greek-American speakers are fully bilingual, they frequently adopt the so-called 'light-verb strategy', when borrowing English verbs. Consider the use of the light verb *kano* 'to do' for the accommodation of the English verbs *fry* and *wake up*:[26]

(16a) *kano frai*
     lit. 'to do fry
     'to fry'

(16b) *kano γueikap*
     lit. 'to do wake up
     'to wake up' etc.

---

[25] Hints of a similar interpretation is found in Janse (2001: 477), who examines the Cappadocian loan verbs, which also display the two forms of conjugation.

[26] However, long-established loans, like the verbs 'to park' or 'to film', display the indirect strategy with the presence of the verbalizer –*ar-,* which is of an Italian origin, and is usually attached to nominal stems of Romance origin.

(i)   a. *park-ar-o*
       park-ar-PRES.1SG
       'I park'
      b. *film-ar-o*
       film-ar-PRES.1SG
       'I film' etc.

My explanation to this problem is highly tentative. Without ignoring the crucial role of the degree of bilingualism for the adoption of loan verbs in Greek, I believe that the outcome of a given verb loan is heavily affected by the degree that certain structural features of the donor match those of the recipient language. In the case of contact between Greek and Turkish, the two languages are typologically different, Turkish is agglutinative while Greek is fusional. However, they share a rich verbal inflection, with markers denoting the morpho-syntactic features of aspect, tense, person, and number. Therefore, once Turkish verbal stems are borrowed, it is not difficult for the Greek speakers to use either an indirect strategy, implying the presence of a verbalizer, or a direct one which involves a mere combination of these stems with the Greek inflectional endings. In contrast, English is inflectionally poor, although it belongs to the same family as Greek, i.e. Indo-European. I would like to suggest that poor inflection makes English loan verbs to enter Greek preferably by means of a light verb, usually *kano* (the most frequent case), because according to this strategy the borrowed item remains uninflected, while inflection is realized by the native light verb.

4. Concluding remarks

This paper brings forward an investigation of the factors that are operative in the process of integrating Turkish verbs in Aivaliot, a Greek dialect of Asia Minor. By examining a number of loanblends, I have argued that verbs are not particularly difficult to be borrowed, provided that a number of requirements are met, which mainly relate to the morphological properties of the recipient language, and to a lesser extent to those of the donor. More specifically, I have shown that Turkish verbs enter the Greek-based Aivaliot as past tense stems, because Greek/Aivaliot word formation is stem-based, and deverbal formations are created on the basis of a stem allomorph which appears in the context of the past perfective tense (aorist). Moreover, I have provided an explanation why the only verbalizer that is used in the formation of loanblends is *–iz-,* while Greek displays a series of verbalizers for its native verbs. I have proposed that the exclusive use of *–iz-* is due to a certain phonological similarity between the past tense stem in Turkish and that of the Greek verbs in *–iz-,* since both types end in /i/. The data in this paper seems to confirm the classical views expressed by Meillet (1921), and in a way by Sapir (1921) and Jakobson (1938), that grammatical interference (morphological interference in this case) is possible if it fits well with the structure of the receiving language.

   In previous literature, it has been repeatedly stated that nouns are easier to be borrowed than verbs (see, among others, Whitney 1881, Dawkins 1916, Myers-Scotton 2002). On the basis of the Aivaliot verbal loanblends, I would like to suggest that this may occur because nouns are usually morphologically simpler, in that they have a poorer inflection compared to that of verbs, and poor inflection does not need any particular

adaptation strategy in the target language.[27] As seen in this paper, verbs can also be borrowed on condition that a number of morphological properties of the target language are met and certain features (morphological and/or phonological) of both languages can match. Therefore, for languages with a rich morphology, the previous statement could be reformulated into 'the items which are easily borrowed are not necessarily nouns, but those whose morphology can be easily adapted to the morphology of the target language'.

The important role that is played by the morphology of the target language (Aivaliot), in combination with certain morphological properties of the source language (Turkish) for the formation of verbal loanblends, does not confirm Wichmann & Wohlgemuth's (2008: 107) doubts on this matter. As seen in section 3, Aivaliot integrates Turkish verbs in its system by making use of two strategies at the same time, indirect and direct insertion, while the choice between them is rather ad hoc, since the adopted Turkish stems may equally fit two different inflection classes, i.e. class I with the verbalizer *–iz-* and class II without a verbalizer. Generally, the accommodation of Turkish verbs in Aivaliot reveals a high degree of integration of loan verbs in the recipient language, since the borrowed verbal stems seem to adopt the same patterns as the Greek ones for their inflectional and general morphological behavior.[28]

Additional proof about the crucial role of morphology is also provided by the absence of the light-verb strategy for the accommodation of loan verbs. I have proposed that this is related to the fact that Aivaliot and Turkish share a rich inflectional system, which renders possible the integration of loan verbs. On the contrary, as seen above, the inflectionally poor English loan verbs are adapted to Greek with the help of the light verb *kano* 'to do', a strategy which is used even by fully bilingual speakers. This position also contradicts views such as that expressed by Whichmann & Wohlgemuth (2008: 109) that there is more bilingualism involved in the adoption of the indirect and direct strategies, as compared to that of the light-verb use.

Finally, loanblends involving two typologically distinct languages, in this case the agglutinative Turkish (donor) and the fusional Greek (recipient), help us confirm theoretical hypotheses about the importance of certain morphologically-proper issues, as for instance the crucial role of stem allomorphy in word formation.

Abbreviations

1   first person

---

[27] This position is not different from that taken by Winford (2003: 52) and Matras (2007: 47), who state that the borrowing of verbs is possible, but in some languages it is made more cumbersome because verbs tend to be morphologically more complex.

[28] A more or less similar remark about the role of morphology into forming verbal loans can be found in Matras (2009: 184), with respect to contact between Turkish and Romani.

2	second person
3	third person
IMP	imperfect tense
MASC	masculine
NEU	neuter
NOM	nominative
PAST	past tense
PERF	perfective aspect
PL	plural
PRES	present tense
SG	singular

References

Bakker, Peter (1997): Athematic morphology in Romani: the borrowing of a borrowing pattern, in: Matras, Yaron; Bakker, Peter & Kyuchukov, Hristo (eds.), *The typology and dialectology of Romani.* Amsterdam: John Benjamins, 1–21.

Babiniotis, George (1972): *To rima tis Ellinikis* [The Greek verb]. Athens: Sophia Saripolou Foundation.

Campbell, Lyle (1993): On proposed universals of grammatical borrowing, in: Aertsen, Henk & Jeffers, Robert J. (eds.), *Historical linguistics 1989*. Amsterdam: John Benjamins, 91–109.

Dawkins, Richard (1916): *Modern Greek in Asia Minor.* Cambridge: Cambridge University Press.

Field, Fredric W. (2002): *Linguistic borrowing in bilingual contexts*. Amsterdam: John Benjamins.

Göksel, Aslı & Kerslake, Celia (2005): *Turkish. A comprehensive grammar*. London/New York: Routledge.

Haspelmath, Martin (2008): Loanword typology: steps toward a systematic cross-linguistic study of lexical borrowability, in: Stolz, Thomas; Bakker, Dik & Salas Palomo, Rosa (eds.), *Aspects of language contact. New theoretical, methodological and empirical findings with special focus on Romancisation processes*. Berlin/New York: Mouton de Gruyte, 43–62.

Haugen, Einar (1950): The analysis of linguistic borrowing, in: *Language* 26, 210–231.

Horrocks, Geoffrey (1997): *Greek: a history of the language and its speakers.* London: Longman.

Jäger, Andreas (2004): The cross-linguistic function of obligatory 'do'-periphrasis. Paper presented at the 2004 Conference of the Australian Linguistic Society.
  <http://ses.library.usyd.edu.au/bitstream/2123/111/1/ALS-20050630-AJ.pdf>

Jakobson, Roman (1938): Sur la théorie des affinités phonologiques entre les langues, in: *Actes du Quatrième Congrès International de Linguistes*. Copenhagen: Munksgaard, 48–59.

Janse, Mark (2001): Morphological borrowing in Asia Minor, in: Aggouraki, Yoryia; Arvaniti, Amalia; Goutsos, Dionysis; Davy, John; Karyolemou, Marilena; Panagiotou, Anna; Papapavlou, An-

dreas; Pavlou, Pavlos & Roussou, Anna (eds.), *Proceedings of the 4th international conference of Greek linguistics*. Thessaloniki: University Studio Press, 473-479.

Janse, Mark (2004): Animacy, definiteness, and case in Cappadocian and other Asia Minor dialects, in: *Journal of Greek Linguistics* 5, 3–26.

Janse, Mark (forthcoming): Cappadocian, in: Tzitzilis, Christos (ed.), *Modern Greek dialects*.

Johanson, Lars (2002): *Structural factors in Turkic language contacts*. Richmond: Curzon.

Kiparsky, Paul (2009): Verbal co-compounds and subcompounds in Greek. Proceedings of the Workshop in Greek Syntax and Semantics at MIT, June 2007. *MIT Working Papers in Linguistics 57*.

Kuryłowicz, Jerzy (1949): *The inflectional categories of Indo-European*. Heidelberg: Carl Winter Universitaetsverlag.

Mackridge, Peter (1985): *The Modern Greek language*. Oxford: Oxford University Press.

Matras, Yaron (2007): The borrowability of structural categories, in: Matras, Yaron & Sakel, Jeanette (eds.), Grammatical borrowing in cross-linguistic perspective. Berlin: Mouton de Gruyter, 31–74.

Matras, Yaron (2009): *Language contact*. Cambridge: Cambridge University Press.

Meillet, Antoine (1921): *Linguistique historique et linguistique générale*. Paris: Champion.

Melissaropoulou, Dimitra (2009): Loan verb adaptation: evidence from Greek dialectal variation. Paper read at the *4th international conference of Modern Greek dialects and linguistic theory*. Chios: June 2009.

Mifsud, Manwel (1995): *Loan Verbs in Maltese. A descriptive and comparative study*. Leiden/New York/Köln: E.J. Brill.

Moravçsik, Edith (1975): Verb borrowing, in: *Wiener Linguistische Gazett*e 8, 3–30.

Moravçsik, Edith (1978): Universals of language contact, in: Greenberg, Joseph; Ferguson, Charles & Moravçsik, Edith (eds.), *Universals of human language*. Stanford: Stanford University Press, 93–122.

Myers-Scotton, Carol (2002): *Language contact: bilingual encounters and grammatical outcomes*. Oxford/New York: Oxford University Press.

Papadopoulos, Anthimos (1955): *Istoriki grammatiki tis Pontiakis dialektou* [Historical grammar of the Pontic dialect]. Athens: Society for Pontic Studies.

Ralli, Angela (1988): *Eléments de la morphologie du grec moderne*. Ph.D. Dissertation. Université de Montréal.

Ralli, Angela (2005): *Morphologia* [Morphology]. Athens: Patakis.

Ralli, Angela (2006): On the role of allomorphy in inflectional morphology: evidence from dialectal variation, in: Sica, Giandomenico (ed.), *Open problems in linguistics and lexicography*. Milano: Polimetrica, 101-120.

Ralli, Angela (2009): Morphology meets dialectology: insights from Modern Greek dialects, in: *Morphology* 19 (1), 87–105.

Ralli, Angela (in preparation): *The Asia Minor dialect of Kydonies (Aivaliot) and Moschonisia*.

Sapir, Edward (1921): *Language*. New York: Harcourt.

Thomason, Sarah G. (2001): *Language contact. An introduction*. Edinburgh: Edinburgh University Press.

Thomason, Sarah & Kaufman, Terrence (2008): *Language contact, creolization, and genetic linguistics.* Berkeley: University of California Press.

Wichmann, Sören & Wohlgemuth, Jan (2008): Loan verbs in a typological perspective, in: Stolz, Thomas; Bakker, Dik & Salas Palomo, Rosa (eds.), *Aspects of language contact. New theoretical,*

methodological and empirical findings with special focus on Romancisation processes. Berlin/New York: Mouton de Gruyter, 89–121.

Whitney, William, Dwight (1881): On mixture in language, in: *Transactions of the American Philosophical Association* 12, 1–26.

Winford, Donald (2003): *An Introduction to contact linguistics*. Oxford: Blackwell.

Winter, Werner (1973): Areal linguistics, in: Sebeok, Thomas A. (ed.), *Current trends in linguistics,* vol 11. The Hague: Mouton, 35–147.