

# Contact Morphology in Modern Greek Dialects



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## FOREWORD

Sustained academic interest in contact-induced language change goes back at least to the late 19<sup>th</sup> century, when neo-grammarians argued that no language is entirely free of influence from other languages (Lucas 2015). Contact is everywhere and no evidence exists that there are linguistic systems which have been developed in total isolation (Thomason 2001). However, language change related to contact has remained an understudied area, partly due to de Saussure's (1972 [1916]) distinction between "external" and "internal" linguistics, and partly to Sapir's (1921) ability of persuading structuralists that there were no really convincing cases of profound influence by diffusion (Danchev 1988). Retardation in integrating structural change with contact has been overcome in the second half of the 20<sup>th</sup> century, when there is a revalorization of the role of contact in language change, a hotly debated issue in recent linguistic research (see, among others, Weinreich 1953; Thomason and Kaufman 1988; Thomason 2001; Heine and Kuteva 2005; Matras 2009; Hickey 2010). Several proposals have been put forward in order to determine different kinds of effects on typologically divergent recipient systems, and borrowability scales have been proposed on the basis of the type of borrowing (lexical and/or structural) and the intensity of contact (Winford 2003).

In this context, morphology offers a privileged, empirical test-bed for the study of this field, as words and word structure are admittedly heavily affected by contact, lexical borrowing being the commonest and most frequent type of transfer in contact situations (Haspelmath 2009). Interestingly, the study of contact-induced morphological change does not include only lexical material ("matter replication" in terms of Sakel 2007), but also grammatical ("pattern replication"), referring to addition, replacement or loss of morphological categories and/or morphological patterns (Gardani et al. 2015). With respect to other grammatical modules, morphology is generally thought of to be more susceptible than syntax to contact-induced change, and less difficult than phonology to deal with in studies involving diachronic research or in those where analysis relies on the help of written sources. However, works on morphological change are far less numerous and standardized than those for other levels of linguistic analysis, probably due to the fact that, in the second half of the 20<sup>th</sup> century, the generative school of linguistics did not develop a specific

model of morphological change as it did for phonological and syntactic change. In addition, in spite of the recent interest in morphology, there are no studies that would test basic morphological issues in language-contact settings and formulate adequate hypotheses with respect to contact-induced morphology.

As far as specific languages are concerned, it is worth noticing that some parts of the world have traditionally formed linguistic whirlpools, and some languages have been exposed more than others to linguistic cross-currents. In Europe, one famous area of multiple language contact has been the Balkan Peninsula, which has served as a storehouse of standard examples of practically every type of interference (Weinreich 1953). Among the different Balkan languages, Greek has experienced particularly multifarious and intimate contacts with other linguistic systems, and substantial information about this contact can be found in historical records dating back to the late Roman period, when the Greek influence on Latin was increasingly pervasive, as the latter took on the role of a world language (Horrocks 1997). Since the Medieval times, other languages, especially Italo-Romance and Turkish have affected Greek, triggering lexical and structural borrowing, mostly seen on Modern Greek dialectal varieties, such as those of Asia Minor, South Italy (Griko in Salento and Greco in Calabria), Chios, Lesbos, Crete, Cyprus, the Dodekanesian and the Ionian islands, while some of the innovations of these varieties have passed into Standard Modern Greek. Nowadays, the structural variation displayed by Modern Greek and its dialects has been shaped through multiple language contact and can give crucial insights into our understanding of language contact, language change and grammatical theory in general.

This volume aspires to bridge contemporary morphological theory with the less studied aspects of language interference and contact-induced variation and change, and aims to increase our understanding of how languages of convergent and divergent typologies can affect each other. On the one hand, it shows that the study of dialects offers new challenges to contact morphology, since dialectal varieties form an important source of morphological phenomena, and dialectal research allows us to shed light on theoretical morphological issues. On the other hand, it argues that morphological theory may provide accurate and interesting tools for the analysis of dialectal data. In addition, the volume shows that dialectal contact morphology can be profitable for historical linguistics and typology, because the study of dialects may illuminate language change and possible language structures. Unluckily, in morphological research, dialects have been accounted for sporadically and rather unsystematically,



since modern morphological theory has been mainly oriented towards the standard form of languages. As a result, several interesting phenomena in spoken varieties of various languages have been left out of consideration, especially those due to contact, and thus, they are overlooked in morphological studies. As noted by Ralli (2009, 2012a,b), dialectal varieties constitute cases par excellence in which linguistic theories and approaches can be tested and evaluated. Moreover, Anderwald & Kortmann (2002: 160) point out that the limitation to standard varieties is problematic, especially in languages with a long literary tradition, where the setting of norms has always played an important role, and certain features do not reflect natural change but more or less arbitrary changes, which are imposed by prescriptivists. This applies to the current situation in Modern Greek, as, sometimes, the standard language gives a false picture of the language evolution and what the grammars of Modern Greek dialects are like.

By examining morphological change in language-contact situations, this volume proposes to inaugurate a scientific field that remains unexplored in Greek linguistics, with the use of dialectal data from three Asia Minor dialects, Pontic, Cappadocian, and Aivaliot, as well as from Cretan, Lesbian, Cypriot, Heptanesian (spoken on the Ionian islands), Italiot, and Greek of South Albania. These dialects have been carefully selected since they have been heavily influenced by typologically divergent and sometimes genetically different languages, i.e. by the Indo-European and semi-fusional Romance - primarily with respect to Italiot and Heptanesian - and by the Altaic and agglutinative Turkish - mainly regarding Asia Minor Greek and Greek of South Albania. Interestingly, there are also varieties which have been affected by more than one language, such as Cretan, Cypriot and Lesbian. Although the study of Modern Greek Dialects has been blooming in the last decade - resulting in the subsequent publication of a respectable number of papers - a profound comparative study on the main axes of language contact affecting Greek and the Greek-based dialects is still a desideratum. In fact, with few exceptions (e.g. Janse 2004; Karatsareas 2011; Ralli 2012a,b), the research on how and to what extent the morphology of the dialects under examination has been influenced by Italo-Romance and/or Turkish is minimal, while linguistic analyses for the Greek dialect of South Albania are practically non-existent.

The volume brings together researchers working on morphology, language contact, and Modern Greek dialectal variation. Emphasis is given on a number of issues which are of major importance to the study of morphology in language-contact situations, such as the role and interplay

of language-internal and language-external factors in linguistic change, borrowing of structure and functional categories, the source and use of integrating elements, reduplication, multiple exponence, and case and gender assignment. More particularly: Marios Andreou examines the process of compounding in Italiot. He reports that the structural make-up of a compound is not amenable to change under system-external pressures, and that a change in the order of morphemes inside compounds is triggered by system-internal factors. The work by Marianna Gkiouleka and Nikos Koutsoukos also comment on possible limits of contact-induced change and argues that both internal and external factors should be taken into consideration with respect to the overt marking of indefiniteness on overly realized case in Pontic and Cappadocian (Gkiouleka) and the reorganization of the Griko verbal paradigms (Koutsoukos). In Angela Ralli's contribution, the vital interplay of these factors is also put forward and investigated with respect to the integration of verbs in a wealth of data drawn from several Modern Greek varieties. Ralli argues that, beside the importance of socio-linguistic parameters, a certain structural compatibility between the systems in contact and the role of the recipient's morphological properties are crucial for the selection of specific integration strategies and patterns. The way the target language accommodates loan nouns is scrutinized by Vasiliki Makri and Dimitra Melissaropoulou. The two papers inform the discussion on adaptation strategies with respect to gender assignment in loan nouns, on the basis of examples selected from the Asia Minor Dialects (Melissaropoulou) and Heptanesian (Makri); both authors claim that gender is interconnected with the feature of inflection class, and gender assignment in language contact is related to various phonological, morphological and semantic factors, as well as to the recipient's inherent tendencies. In their joint paper, Metin Bağrıaçık and Mark Janse explore the way partial reduplication with quasi-fixed segmentism is manifested in contact situations, contrasting Cappadocian with Armenian, another language affected by Turkish. They argue that this is a morphological phenomenon induced by contact with Turkish, and that the reduplicant is a tiered affix whose phonemic melody is not determined by that of the base. Finally, Brian Joseph investigates how and why multiple exponence can arise when languages are in contact, by focusing on an intriguing and unique nominal form, which seems to bear a blend of Turkish and Greek plural suffixes. He discusses ways in which it is similar to, or different from, internally derived cases of multiple exponence, and, among other things, he tackles the issue of language ideology in contact situations.

With the exception of the work by Joseph and Bağrıaçık & Janse, all papers have resulted from research conducted at the *Laboratory of Modern Greek Dialects* ([www.lmgd.philology.upatras.gr](http://www.lmgd.philology.upatras.gr)) of the University of Patras, within the framework of the ARISTEIA project (“Morphology in language-contact situations: Greek in contact with Turkish and Italian”), funded by the European Union and Greek national resources. Draft versions of most of these papers have been presented at the workshop “Language contact in the light of Modern Greek morphological variation”, organized by Angela Ralli, within the frame of the *11th International Conference in Greek Linguistics* (Rhodes, Greece, September 26–29, 2013).

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Angela Ralli  
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# HEADEDNESS AND/IN VARIATION: EVIDENCE FROM ITALIOT-GREEK AND MODERN GREEK DIALECTS<sup>1</sup>

MARIOS ANDREOU

## Abstract

The purpose of the present chapter is to comment on the identification and position of head in morphological configurations, with a focus on the process of compounding. In particular, this chapter enquires into the presence of variation in the position of head inside compounds and comments on whether the presence of left-headed compounds in the Greek dialects of Southern Italy should be considered as a contact-induced change or as a phenomenon which is triggered by system-internal factors.

## 1. Introduction

A basic ingredient in linguistic theory and especially morphology and syntax is the notion *head*. Since the seminal works of Lieber (1980), Williams (1981), Di Sciullo and Williams (1987), and Selkirk (1982), the notion head has been extended from syntax to morphology and words are considered to have heads, just like syntactic phrases do. Much literature has concentrated on two recurrent issues concerning headedness: (a) the identification and (b) the position of head in all morphological configurations i.e. derived words, compounds and inflected forms.

In this chapter, I tackle the questions of identification and position of head focusing on the morphological process of compounding. Arguments and proposals are exemplified with data drawn from Standard Modern

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Greek (henceforth SMG) and its dialects with a focus on Italiot-Greek and Cypriot. Cypriot is particularly rich in compound structures (Andreou and Koliopoulou 2012; Andreou 2014) and Italiot-Greek can greatly inform the discussion on the head-dependent linearization inside compounds.

Cypriot-Greek, is spoken on the island of Cyprus by an approximate number of 800.000 people and also by immigrant communities of Cypriots in the United Kingdom, Australia, and elsewhere.<sup>2</sup>

Italiot-Greek is a Greek-based dialect spoken in Southern Italy restricted in two areas, Puglia (Salento area) and Calabria (Bovese area). The dialect spoken in Puglia is called Griko and the one spoken in Calabria, Bovese. Bovese-Greek, which will concern us in the present chapter, was until recently spoken in nine villages all located in the Bovese area of Calabria.<sup>3</sup>

Before proceeding with the analysis of the notion head, let us give a brief sketch of the main characteristics of Greek compounds which help with understanding the argumentation. According to Ralli (2007, 2009, 2013), Greek compounds are one-word formations which obey the lexical integrity hypothesis (Lapointe 1980), in that their internal structure is never accessible to syntax. More specifically, their structure involves morphologically-proper constituents, i.e. either two stems ([stem stem] compounds) or a stem and a word ([stem word] ones). As illustrated in Table 1, in the first case, stress and inflectional endings are different from those of the second member when taken in isolation, as in the Italiot-Greek *kalámi* vs *imisokálamó*. In the second case, stress and inflection follow the word constituent as in the Cypriot *kapnós* vs *arkokapnós* depicted in Table 2.<sup>4</sup>

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<sup>2</sup> For Cypriot-Greek the reader is referred to Newton (1972a,b), Symeonidis (2006) and literature therein.

<sup>3</sup> Bovese is also attested with the following names in the relevant literature: Greco, Grecanico, and Romaico. It should be noted that Italian scholars often use the term Grecanico (and sometimes Romaico) to refer to both Bovese and Griko. In this chapter, I will use the term Italiot-Greek and not Grecanico to refer to both Greek dialects since for Greek scholars, the term Grecanico is usually used with respect to Bovese only. For Italiot-Greek see amongst others Rohlf's (1924, 1950, 1972), Alessio (1953), Profili (1985), Caracausi (1986), Karanastasis (1997), Katsoyannou (1995, 1999), Ledgeway (1998, 2013), Fanciullo (2001), Manolessou (2005) and literature therein.

<sup>4</sup> Examples will be given a broad phonological transcription and stress will be noted only on word forms. Parts of words which do not appear within compounds will be included in parentheses.

Compound	Comp. Member 1	Comp. Member 2
imisokálamó (Italiot) 'half reed'	imis(o) 'half'	kalam(i) 'reed'
kuklóspitó (SMG) 'doll-house'	kukl(a) 'doll'	spit(i) 'house'

**Table 1. [Stem Stem] compounds**

Compound	Comp. Member 1	Comp. Member 2
arkokapnós (Cypriot) 'wild-tobacco'	ark(os) 'wild'	kapnós 'tobacco'
lemonanθós 'lemon blossom'	lemon(i) 'lemon'	anθós 'blossom'

**Table 2. [Stem Word] compounds**

In addition, Greek compounds are phonological words, i.e. they bear a single stress, independently of the stress of their constituent parts when taken in isolation. They also bear a compound marker, namely *-o-*, between the two constituents which has a compulsory character. For example, in *imis-o-kalam-o*, the compound members are linked together by the element *-o-*. Finally, Greek compounds are inflected at their right edge and their inflectional ending may be different from that of the second constituent, in the case of [stem stem] compounds. By way of example, the [stem stem] *imisokalam-o* belongs to inflection class (IC) 5 despite the fact that its second constituent, *kalam(i)*, inflects according to IC6 (for inflection classes see Ralli 2000, 2005).

The rest of this chapter is as follows: in section 2, I deal with the delimitation of head focusing on the criteria which have been used for the identification of headship. In section 3, I comment on the position of head and focus on whether the presence of left-headed compounds in the Greek dialects of Southern Italy should be considered as a contact-induced change or as a phenomenon which is triggered by system-internal factors. Section 4 concludes this chapter.

## 2. Introducing head

Head was firstly introduced into morphology by Williams (1981: 148) with his Righthand Head Rule that reads as:

In morphology we define the head of a morphologically complex word to be the righthand member of that word.[...] Call this definition the Righthand Head Rule (RHR).

For example, *instruction* and *reinstruct* are headed by their right-most constituents; the suffix *-ion* and the verb *instruct* respectively.

A corollary of the RHR is that elements on the left-hand side are not heads. With respect to affixation, this generalization yields as a prediction that prefixes, contrary to suffixes, are not heads; prefixes appear on the left-hand side that is predicted to be the non-head position.

Another difference between prefixes and suffixes is that the latter can be assigned a category since they determine the category of the base that has undergone suffixation. The derivational suffix *-ion*, for example, could be assigned the category N(oun) since it builds nouns as in  $[[\text{construct}]_V \text{ion}]_N$  and  $[[\text{instruct}]_V \text{ion}]_N$ . Prefixes on the other hand do not seem to be able to change the category of the word they attach to. Rather, in prefixation, the element that determines the properties of the whole formation, including its category, is the base-word and not the prefix. For example, *counterrevolution* is a noun, *countersink* is a verb and *counterproductive* is an adjective like their respective right-most elements which act as heads. The conclusion to be drawn then is that *counter* is category-less and it is not a head.

With respect to compounding which concerns us here, righthandedness is evident in English compounding as *dry dock* and *bar tend* illustrate.

- (1)  $[[\text{dry}]_A [\text{dock}]_N]_N$   
 $[[\text{bar}]_N [\text{tend}]_V]_V$

As we see from the examples in (1), in both compounds, the category is determined by the constituent that is on the right-hand side, thus offering arguments in favour of the RHR. For example, *dry dock* which is composed of an adjective, *dry*, and a noun, *dock*, belongs to the category of its head element, *dock*, and not to the category of its leftmost element, which is the non-head. Similarly, *bar tend* is a verb and not a noun since its head is the verb *tend* and not the noun *bar*.

Of importance to the present study is that Williams's definition of head is inextricably linked to the question of position of head, in that the RHR defines head according to its position in a complex structure. To anticipate later discussion, the identification of head based on positional criteria is called into question by the presence of variation in the position of head in Greek compounds.



## 2.1 Identification of head

In morphological and syntactic theory, there are widely divergent views on what is a head and an unambiguous definition of this notion is still lacking. In fact, head is usually defined in such a broad way that the application of this notion to linguistic analysis is rendered problematic. Consider the following definitions:

- (a) The intuition to be captured with the notion HEAD is that in certain constructs one constituent in some sense “characterizes” or “dominates” the syntactic whole. (Zwicky 1985: 2)
- (b) The term **head** is generally used to refer to the most important unit in complex linguistic structures. (Plag 2003: 135)
- (c) **head** the element in a construction that determines the properties of that construction (Booij 2007: 314)

The first two definitions identify head as the most important element in a complex structure, that is, as the element that dominates the whole. Booij’s definition informs us that the head is the element that is responsible for the properties of the whole. The latter definition raises the question of which and how many these properties are.

A review of the relevant literature (Zwicky 1981; Scalise 1988; Bauer 1990; Lieber 1992; Selkirk 1982; Hall 1992; Hoeksema 1992; Kageyama 2010; Scalise and Fábregas 2010; Ralli and Andreou 2012; Ralli 2013) reveals that there are at least seven head-like notions which are relevant to headship in word formation as follows:

- (a) *Categorial head*: The head is the element which determines the category of the whole.
- (b) *Semantic head*: The head is the element which serves as the hyperonym of the whole. In other words, the whole is a hyponym of its head.
- (c) *Morphosyntactic head*: The head determines the morphosyntactic features of the formation, such as gender and inflection class.
- (d) *Morphosyntactic locus* or *locus inflectionis*: The head is the element which bears the inflectional material which marks the syntactic relations between the formation and other syntactic units.
- (e) *Governor*: The element which determines the form of the governed constituent which appears as its sister.
- (f) *Subcategorizand*: The head is the element which is subcategorized in terms of the bases with which it can co-occur. To put it bluntly, the head is the element which selects the non-head.

(g) *Obligatory constituent*: The head is the element the presence of which is obligatory.

The application of these notions to affixation and compounding reveals that most of them are ill-defined and not relevant to the head-nonhead asymmetry. Consider, for instance the criterion of the obligatory constituent. It is not clear at all whether in a derived word the obligatory constituent is the base or the affix. In addition, the criterion of the subcategorizand is not helpful since prefixes can select the bases they attach to but this does not render them heads; prefixes are generally considered as nonheads since they are deprived of categorial properties.

As far as compounding is concerned, the two tests which are often employed in the literature to identify the head are the categorial test and the semantic test of hyponymy. The Cypriot compound *ayrioliá* ‘wild olive-tree’, for example, which is composed of the stem of the adjective *ayri-* ‘wild’ and the word *eliá* ‘olive-tree’, is headed by its second element, i.e. *eliá*, since the whole formation belongs to the category of noun, which is the category of *eliá* and not to the category of adjective, which is the category of its non-head *ayri-* (categorial criterion), and the compound is a hyponym of *eliá* (semantic criterion). *ayri-* as a non-head serves to specify the subclass *ayrioliá* belongs to; *ayrioliá* is not any kind of *eliá* but a specific subclass of *eliá* which is flagged by the first constituent.

A closer inspection reveals that *eliá* exhibits other head-like properties as well. In particular, the whole exhibits the same morphosyntactic features as *eliá*, i.e. it is feminine and belongs to IC3 (morphosyntactic criterion). *eliá* is the locus inflectionis since it bears the inflectional material which marks the syntactic relations between the entire formation and other syntactic units. In this respect, the inflectional suffixes appear on the head and not on the non-head as illustrated by the plural form *ayri-oli-es* ‘wild-LE-olive.tree-PL’. Finally, *eliá* is the governor, that is, the constituent which determines the form of the governed constituent which appears as its sister. Based on this property, the head imposes a dependency marker on the non-head. The linking element *-o-*, which (at least phonologically) appears on the first member of Greek compounds (e.g. *domato-salata* ‘tomato salad’ *ayrio-elia*) could be analyzed as a marker of dependency, in that the head, as a governor, has the ability to determine the shape of its non-head.<sup>5</sup>

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<sup>5</sup> According to Ralli (2008), the linking element *-o-* is taken to mark the process of compounding and is thus called “compound marker”.

Although the *ayrioeliá* type seems to suggest that the head of a Greek compound exhibits all of the above mentioned properties, there are various types of Greek compounds which militate against this proposal. To adduce an example, several compounds do not exhibit the morphosyntactic features of their head.

Compound	Comp. Member 1	Comp. Member 2
kefalovris-o (SMG) head spring-Neut.IC5	kefal(i) 'head'	vris-i spring-F.IC3
ambelopaxt-on (Cypriot) vineyard tax-Neut.IC5	ambel(i) 'vine'	paxt-os tax-M.IC1

**Table 3. Gender and IC in Greek compounds**

Observe that the SMG *kefalovris-o* is of neuter gender and inflects according to IC5 despite the fact that its head, i.e. *vris-i*, is of feminine gender and belongs to IC3. In a similar vein, the Cypriot *ambelopaxt-on* is also neuter and belongs to IC5, whereas its head is masculine and inflects according to IC1.

A critical overview of the relevant literature by Andreou (2014) reveals that even the well-established hyponymy test runs into problems when one applies this test to Greek compounds of various types. Metonymical, metaphorical, and compounds which have two readings, a literal and a figurative one, fail the hyponymy test despite the fact that they are considered headed by other criteria.

Although it is not the purpose of the present chapter to present a detailed investigation of the application of all head-like notions to all types of Greek compounds and the interaction between them, it should be mentioned that there seems to be a relation between the categorial test and hyponymy. In particular, the element which is responsible for the category of the whole also serves as the hyperonym. This generalization is particularly useful in those cases in which a compound is composed of elements which belong to the same lexical category. Consider the Cypriot *apparopéktis* in (2):

(2) apparopektis < appar(os) pekti(s)  
'gambler in horseraces' 'horse' 'player'

This compound is composed of two nouns and as a result we cannot identify the head based on the categorial test. In this case, we have to

apply the hyponymy test as a complementary one. Based on the semantic criterion, the head of the whole is the second element *pekti(s)* since the compound is a kind of *pekti(s)* and not *appar(os)*. This generalization will be very helpful for the identification of head in the left-headed compounds of the Greek dialects of Southern Italy.

### 3. Variation and the position of head

In the previous section, we mentioned that the introduction of the notion head into morphological theory by Williams (1981) as the right-most element in a complex structure has implications for the way we define the head of the word. In particular, Williams' Right-Hand Head Rule was proposed as a universal which holds across languages and which applies to all morphological processes.<sup>6</sup>

As far as the position of head in compounding is concerned, the idea that Williams' Right-hand Head Rule is a universal must be rejected. Consequently, the proposal that the head could be identified positionally—a proposal that clearly follows from the RHR—must be rejected as well. The fact that there are languages that do not conform to Williams' RHR is evident in much work on linguistic morphology and especially in the work of Scalise (1988, 1992) and Lieber (1980, 1992). In (3), I give examples of left-headed compounds from Italian and Tagalog:

(3) a. Italian

capostazione  
 'stationmaster'  
 camposanto  
 'cemetery'

b. Tagalog

isip-lamok  
 mind mosquito 'weak mind'  
 amoy-isda  
 smelling fish 'fishy smelling'

Observe for instance that the Italian *camposanto*, which is composed of the noun *campo* 'field' and the adjective *santo* 'holy, sacred', is headed by

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<sup>6</sup> By the RHR, inflectional affixes must be considered heads since they appear on the right-most edge of a formation. For a discussion see Selkirk (1982).

its left-most constituent, namely *campo*, since the compound is a noun and denotes a kind of *campo*.

### 3.1 The position of head in Greek compounding

With respect to the position of head, Greek compounds are generally right-headed. Consider the following indicative examples from Standard Modern Greek (Ralli, 2005, 2013) and Cypriot (Andreou, 2010):

Compound	Comp. Member 1	Comp. Member 2
αγριόγατα (SMG) 'wild-cat'	αγρι(a) 'wild'	γat(a) 'cat'
γλικολόκασον (Cypriot) 'sweet-potato'	γlik(o) 'sweet'	kolokas(in) 'kind of potato'
ψαρόβαρκα (SMG) 'fishing boat'	ψsar(i) 'fish'	vark(a) 'boat'
αμπελοπερβολόν (Cypriot) 'vine field'	αμπεl(in) 'vine'	περβολ(in) 'field'

**Table 4. Right-headedness in Greek compounds**

Observe that all compounds in Table 4 are right-headed and that this holds irrespective of the lexical category of the formation or the compound members. For instance, the [A N]N *αγριόγατα* is headed by the noun *γat(a)* and not the adjective *αγρι(a)* since the compound is a noun and not an adjective.

#### 3.1.1 The position of head in Italiot-Greek

Given that Bovesè is of Greek origin, it is expected to exhibit right-headed compounds. Several scholars (Rohlf's 1950; Alessio 1953; Karanastasis 1992, 1997; and recently Andreou 2013), however, report that in this dialectal variety one finds left-headed [N N]N compounds. Consider the following examples:

Compound	Comp. Member 1	Comp. Member 2
fiđđámbelo 'vine leaf'	fiđđ(o) 'leaf'	ambel(i) 'vine'
klonósparto 'twig of sedge'	klon(o) 'twig'	spart(o) 'sedge'
ššulopótamo lit. wood of the river, 'driftwood'	ššul(o) 'wood'	potam(o) 'river'
sporomáratho 'fennel seed'	spor(o) 'seed'	marath(o) 'fennel'

**Table 5. Left-headed compounds in Italiot-Greek**

In order to identify the head in these formations I apply the categorial and hyponymy tests. As argued for in section 2, given that both members of these compounds belong to the lexical category of noun, we have to rely on the semantic test of hyponymy which qualifies the left-most element as the head of each compound in Table 5. For example, the head in *sporomáratho* is *spor(o)* 'seed', since the compound denotes a kind of seed and not a kind of *marath(o)* 'fennel'. In a similar vein, *fiđđámbelo* is a kind of *fiđđ(o)* 'leaf' and not a kind of *ambel(i)* 'vine'.

The structure of these [N N] compounds is particularly striking, since Bovesè, being a dialect of Greek origin, is not expected to exhibit left-headed compounds. In fact, the corresponding compounds in Standard Modern Greek are all right-headed, as expected by headedness considerations in Greek.

Italiot-Greek	Standard Modern Greek
fiđđámbelo	ambelófillo
Klonósparto	spartóklono
Ššulopótamo	potamóksilo
sporomáratho	marathósporos

**Table 6. Comparison between Italiot-Greek and SMG**

Compare the examples in Table 5 to their corresponding SMG right-headed *ambelófillo*, *spartóklono*, *potamóksilo*, and *marathósporos*. It is important to note, though, that the productivity of this phenomenon in Bovesè-Greek has led to the development of compounds such as *xerosikli*

‘handle of tin bucket’, *sakkokreváti* lit. ‘bag of the bed, mattress’, and *rizzáfti* ‘base of the ear’ which are not attested in SMG in any form. For example, there are no compounds such as *siklóxero*, *krevatósakos*, or *aftórizá* in SMG.

### 3.2 A case of Romance influence?

The co-existence of two or more languages and the interaction between them can lead to change, and the term language contact is used to cover all phenomena which are the result of cross-linguistic influence. As defined by Thomason (2001: 1), “In the simplest definition, language contact is the use of more than one language in the same place at the same time”. In cases of contact-induced change we can identify, on the one hand, a source language, that is, the language which acts as the donor and, on the other hand, a recipient language, which is the language which has undergone the change in question. As far as the relation between language interference and language change is concerned, Thomason (2001: 62) argues that “any linguistic change that would have been less likely to occur outside a particular contact situation is due at least in part to language contact”.

As far as Greek is concerned, a number of studies have shown that Greek and its dialects have been influenced by other languages which may also be genetically different from Greek (Ralli 2012; Ledgeway, 2013). The dialects of Asia Minor, for example, have been in constant contact with the agglutinative Turkish.

Contact between languages can lead to change. Contact-induced language change may result in the loss, addition, and replacement of features (Thomason 2001). In the first case, the loss of features is usually associated with the loss of system-internal complexity. In a number of languages, for example, research has shown that language interference has led to the loss of inflectional paradigms. Addition of features involves the transfer of elements, such as words and morphemes from the source to the recipient language. Finally, elements of the recipient language could be replaced by elements of the source language.

As far as morphology is concerned, in several contact situations we witness the introduction of morphemes from the donor to the target-language. These morphemes often belong to the derivational repertoire of a language since inflectional affixes are harder to be borrowed. This is due to a number of factors which govern the borrowing process, since the paradigmatic nature of the organization of inflectional systems tends to make inflectional affixes less amenable to change under the influence of external sources (Hickey 2010; Thomason 2001; Winford 2003, 2010).

The transfer of overt phonemes, morphemes, and words is called *direct transfer*, whereas the term *indirect transfer* or *indirect diffusion* refers to the transfer of structural patterns. In this chapter, we will focus on whether there is direct transfer of a structural pattern.

In this vein, a possible source for the derivation of left-headed compounds in Italiot-Greek is the presence of head-first compounds in Italian. With respect to the position of head in Italian compounding, Scalise and Fábregas (2010: 119) report that Italian compounds display an interesting behaviour, since they are distinguished into left- and right-headed formations as illustrated below:

(4) a. Right-headed compounds

- N+sN<sup>7</sup> insettivoro ‘insectivorous’
- sN+N logoterapeuta lit. ‘therapy of speech’
- sN+sN grafomania ‘graphomania’
- N+N scuola bus ‘school bus’

b. Left-headed compounds

- A+N rosso mattone ‘brick red’
- N+A acqua santa ‘holy water’
- N+N ufficio viaggi ‘travel agency’
- N+N trasporto latte ‘milk transportation’

Observe that Italian has both left-headed and right-headed compounds, and, as a result, one could claim that Italian compounding has no canonical head position. The analysis of the right-headed formations, however, reveals the following. The compounds *insettivoro*, *logoterapeuta*, and *grafomania* belong to the so-called neoclassical compounds, and *scuola bus* is a calque from the English *school bus* and it is therefore not a compound formed according to the Italian pattern. This shows that it is problematic to assert that Italian compounding is right-headed. On the contrary, all left-headed compound types in (4) are very productive and belong to the native Italian compounding patterns.

Based on the language interference hypothesis, N N Italian compounds such as *ufficio viaggi* could serve as models for the creation of left-headed Greek compounds such as *sporomárho* ‘fennel seed’. It should be stressed, however, that no introduction of Italian left-headed Italian compounds into Italiot-Greek is attested. In other words, based on the available sources and previous research (see footnote 2) one does not find

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<sup>7</sup> sX stands for “bound morpheme”.



compounds of the *ufficio viaggi* type in Italiot-Greek. This is of the utmost importance for the study of this phenomenon, since it raises the question of direct rule-borrowing. In particular, in several cases, what seems to be a case of direct rule-transfer is actually a generalization over loanwords (for a discussion see Winford 2003; Thomason 2001). In the case of Italiot-Greek, however, there are no Italian loanwords which could serve as models for the extraction of the left-hand head rule. As a result, we have to assume that we have a case of direct rule-transfer.

### 3.2.1 Direct rule-transfer

In order to test the direct rule-transfer hypothesis, I present some of the criteria that have been proposed in order to test whether a rule has been transferred from a donor to a target-language without the mediation of lexical borrowings (Thomason 2001, 2010; Winford 2010).

- (a) Identify the donor-language. As far as left-headedness in Italiot-Greek is concerned, it is not clear which linguistic system served as the donor. Although Standard Italian exhibits a number of left-headed N N compounds, the Romance varieties of the Calabria area do not exhibit such formations. This will be of great importance to our study since Italiot-Greek has been mainly influenced by (and has influenced) the surrounding varieties and not the official Italian language.
- (b) Consider the recipient language as a whole and try to find other structural changes which could be linked to externally caused change. This factor means that it would be very hard to maintain that a proposed donor-language has influenced Italiot-Greek only with respect to the introduction of one morphological rule.
- (c) Prove that the change in question is a true innovation and that it was not present in the target-language before it came into contact with the proposed donor-language. In addition, show that the change in question is not an innovation in the donor-language and that it was present before any contact between the donor and the target-language was established.
- (d) Even if all of these conditions are met, consider any internal factor which could lead to the change in question.

In what follows, I apply these criteria to the phenomenon of left-headed Bovesese-Greek compounds. To begin with, the fact that it is not clear which is the donor-language has implications for the contact hypothesis since left-headed compounds such as *ufficio viaggi* are not attested in the Romance varieties of the Calabria area. In fact, such formations are

considered as part of the official Standard Italian (Franco Fanciullo p.c.). It should be mentioned that Alessio (1953) who has commented on this phenomenon, states that the left-headed Italiot-Greek *xort-anem-i* grass-wind-Infl., ‘kind of grass’, may have been formed on the basis of *erba di vento* ‘grass of the wind’. Observe that Alessio, in his analysis, uses a syntactic phrase as a model for the derivation of *xortanémi* and does not mention the *ufficio viaggi* type as a possible source for the introduction of the left-hand head rule.

As far as the second condition is concerned, there is no other case of direct transfer of a morphological rule from a proposed donor-language into Italiot-Greek. This militates against the language interference scenario, since it does not seem theoretically judicious to propose that a proposed donor-language has influenced Italiot-Greek only with respect to the direct transfer of a single morphological rule. On the contrary, Italiot-Greek, in general, and the Bovese variant, in particular, which exhibits left-headed compounds have not been heavily influenced by Romance on the level of rules which form part of the core of their morphological system.

The last two conditions concern the historical developments of Italiot-Greek. In particular, it is very difficult to answer whether the left-hand head rule was not present in the Italiot-Greek before it came into contact with the proposed donor-language due to the lack of sources with respect to the historical development of Italiot-Greek. As a result, it is also difficult to show that the change in question is not an innovation in the donor-language and that it was present before any contact between the donor and the target-language was established.

Let us now turn to the examination of any possible system-internal factor which could trigger the change in question. A closer inspection of the historical development of Greek compounding reveals that left-headed compounds of the structure N N are attested in previous evolutionary stages of the Greek language as well as in few other Modern Greek dialects. Consider the following indicative examples (for more data see Andreou 2014):

Compound	C. Member 1	C. Member 2
théoinos (Aeschylus, 6-5 c. BC) 'God of wine'	theos 'God'	oinos 'wine'
karpobálsamon (Galen, 2 c. AD) 'fruit of the balsam'	karpos 'fruit'	balsamon 'balsam'
axnarópodon (Cypriot) 'foot print'	axnarin 'print'	podin 'foot'
kotsiróeyio (Cypriot) 'goat-dropping'	kotsiros 'dropping'	eyia 'goat'
friðómato (Cephalonia) 'eyebrow'	friði 'eyebrow'	mati 'eye'
filoparéthiro (Cephalonia) 'casement'	filo 'leaf'	paraθiro 'window'

**Table 7. Greek left-headed N N compounds**

Observe that a compound such as the Cypriot *axnarópodon* is composed of two nouns, namely *axnar(in)* and *pod(in)*, and is left-headed since it denotes a kind of *axnar(in)* 'print' and not *pod(in)* 'foot'. The compounds in Table 7 show that left-headed compounds of the N N structure are present in all evolutionary stages of the Greek language and in other Modern Greek dialects as well.

The question which arises is whether the presence of left-headed compounds in Italiot-Greek is linked to compounds such as *théoinos* and *friðómato* in Table 7. In order to answer this question, we have to mention that there are certain shared features between the Italiot-Greek compounds and the formations of other areas and/or previous evolutionary stages. First, words such as *rizáfti* are shared between (at least) Italiot-Greek, Cypriot, Pontic, and the dialect of Karpathos. Second, several of these compounds are headed by the same lexeme. To adduce an example, there are several words headed by *filo* 'leaf' (e.g. *filoparéthiro* lit. 'leaf of the window, casement', *filámpelo* 'vine-leaf') and *riza* 'root' (e.g. *rizáfti* 'base/root of the ear', *rizovúni* 'base/root of the mountain') in Italiot-Greek and other dialects.

The presence of left-headed formations in previous evolutionary stages as well as in other Modern Greek dialects suggests that this phenomenon may not be triggered by system-external factors, although one cannot exclude the possibility of multiple-causation or that language interference may have facilitated the process of formation of left-headed compounds (Joseph 1982).

## 4. Conclusions

The purpose of this chapter was to comment on the identification and position of head in morphological configurations, with a focus on the process of compounding.

The presentation of the various headship criteria in section 2 revealed that it is not always an easy task to identify the head of a compound. In addition, the presence of left-headed compounds in languages such as Italian, Tagalog, and the Italiot-Greek variety militates against the proposal that the head of a compound must be identified with the right-most element; this is an idea which clearly follows from the Right-Hand Head Rule (Williams 1981).

As far as the presence of left-headed compounds of the type *sporomáratho* ‘seed of fennel’ in Italiot-Greek is concerned, I argued that the idea that this phenomenon is primarily triggered by language external factors, i.e. language contact, should be reconsidered. This conclusion is based on the fact that a number of left-headed compounds existed in the Greek language prior to any contact with Italian. In addition, such formations exist in other dialects as well, albeit with not the same profitability.

To conclude, although the phenomenon of left-headedness in Greek seems to be primarily triggered by system-internal factors (see Andreou 2014 for a detailed investigation), language interference may have served as a catalyst which has led to the creation of left-headed compounds in the Bovesse variety of Italiot-Greek which are not attested in other Greek dialects in this form.

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