ON PREFIX LIKE ADVERBS IN MODERN GREEK[*]

ELEONORA DIMELA & DIMITRA MELISSAROPOULOU

Abstract

This paper analyses first constituents of complex morphological structures with a vague status. More specifically, using data from Standard Modern Greek and its dialectal variation, we investigate the phonological, semantic and structural properties of *so-* / *sjo-*, *sa-*, *kso-*, *kalo-*, *kako-*, *kutso-*, *poli-*, *miso-* and *olo-* and the role of these properties in the change of the elements' status. We argue that the characteristics under investigation can form a hierarchy of restrictions that could indicate the morphological status of each element within the morphological continuum (cf. Bybee 1985, Ralli 2005). Among these, phonological change is a contributive factor, however not the one that could solely determine this change, *while semantic shift is the one that activates transition from compounding to prefixation*. Crucially, the transition from a less towards a more grammatical status seems to be determined on the basis of the structural relations established between the morphological elements of a formation.

Key words: prefixation, compounding, phonological erosion, desemanticization, structural relations, morphological continuum.

1. Introduction

The similarities between prefixation and compounding and the question as to whether they constitute distinct morphological processes are well known topics in linguistic theory. On the one hand, the syntacticist views tend to equate the two processes (cf. Marchand 1967, Siegel 1974, Allen 1978). On the other hand, according to the lexicalist view, affixes are generally considered to participate in derivational structures, whereas stems or words, depending on the language in study, can form part of compounds (see among others Scalise 1994, Booij 2005, Ralli 2007, 2009, in preparation). In the same spirit, a number of criteria have been proposed in order to classify the characteristics that distinguish each process (cf. Iacobini 1998, 2004, Amiot 2005, Ralli forthcoming). Some of the most striking ones are summarized below:

a) Lexical autonomy:

- Their appearance either as autonomous lexemes or bound elements (Iacobini 1998, 2004, Amiot 2005, Ralli forthcoming).
- The separability from the base they attach to or not (Booij 2005).

b) Morphological character:

- The definiteness of their position as left or right constituents or not (Iacobini 1998, 2004).
- Their potential status as heads (Iacobini 1998, 2004, Amiot 2005).
- The structural relation between combining elements (subordinative, coordinative, endocentric, exocentric, cf. Iacobini 1998, 2004).

c) Semantic properties:

-Their ability to express a lexical or a functional-relational meaning (Iacobini 1998, 2004, Amiot 2005).

However, the differences between the two processes are not always so clear cut[1] (see among others, Ralli forthcoming, Bauer 2005, Booij 2005, Stekauer 2005, Giannoulopoulou 2000). There are cases where a prefix or a stem does not conform to all the above mentioned parameters. For instance, as van Goethem (2007) shows, separability is not a decisive criterion in defining an item as a prefix in Dutch or, as noticed by Ralli (1988, 2004, 2005, 2007) left constituents of complex morphological formations cannot function as heads[2] in Standard Modern Greek since they do not change the category of the base they attach to.

Consequently, there are borderline cases that render the characterization of the leftmost element either as a prefix or as a compound element, a difficult task. In an effort to account for these phenomena, the term affixoid or semi-affix was introduced by Fleisher (1969) and Marchand (1969) respectively. Affixoids share similarities both with derivation and compounding. Ten Hacken (2000:355) points out that increased productivity and decreased semantic specificness make affixoids resemble affixes, *while a link to an existing free stem could separate affixoids from them*.

In this paper an attempt is made to investigate one of these borderline cases, specifically those complex morphological structures whose first constituents are adverbs and/or adjectives deriving from words or appearing synchronically as such. The elements under investigation are the following: *kalo-* (deriving from the adjective *kalos* 'good')*, kako-* (deriving from the adjective *kakos* 'bad')*, kutso-* (deriving from the adjective *kutsos* 'gimpy, defective')*, poli-* (deriving from the

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[1] This is the reason why within the frame of stratum oriented models (i.e. *Lexical Morphology*, Kiparsky 1982) prefixation and compounding are cited in the same stratum.
[2] Derived and Compound morphological structures in Standard Modern Greek are right headed.

adverb *poli* 'very')*, miso-* (deriving from the adjective *misos* 'half')*, olo-* (deriving from the adjective *olos* 'whole')*, so- / sjo-* (deriving from the adjective *isjos* 'straight')*, sa-* (deriving from the adverb *isja* 'straight')*,* and *kso-* (deriving from the adverb *ekso* 'out'). Our data come from SMG as well as its dialectal variations, specifically Cretan, Lesbian and Cypriot.

Examining the phonological, semantic and structural properties of the above elements we will argue that the observed characteristics of the examined elements can form a hierarchy of restrictions that determine the morphological status of each element. Moreover, the status of the examined elements as intermediate constituents between compounding and derivation is accounted for on the basis that these items can cause a quantitative change in the meaning of the second constituent either towards intensification, or towards weakening. However, having no access to the internal morphological core of the second constituent, they cannot cause any specific semantic or morphological modifications to it. In other words, the examined constituents seem to share morphological similarities with external prefixes, without losing -at least not so far- their autonomy as lexemes.

2. Theoretical assumptions

Dealing with morphological configurations of Modern Greek preverbs, Ralli (2004: 272) introduces a tripartite classification. In the first class, she lists prefixes like *kse-* which are not attested as independent words; in the second class prefixes originating from ancient Greek preverbs (e.g. *kata-, apo-*) which can also have a prepositional or a conjunctional use are listed, while in the third, there are adverbs which can appear at the same time either as phrasal elements or first constituents of compounds[3] (e.g. *ksana-*, *poli-*).

With respect to the type of modifications they bring to the base, preverbs can be either internal or external. Elaborating on Di Sciullo's (1997) proposal about internal and external prefixation[4], Ralli (2004) points out that semantic modification by itself is not a safe distinctive criterion for preverbs in general. She also states that phonological modifications and combinatorial properties of the examined elements may give us a hint about their morphological character. *A combination with a stem represents the fact that there is a closer relation between the stem and the item* (left constituent) *that is adjoined to it than the relation that exists between a word and its combining element* (Ralli 2004: 271, 298).

For instance, *para-* in (1a,d) denotes intensification and attaches to words. However, neither the element by itself, nor the base it is attached to, undergo any
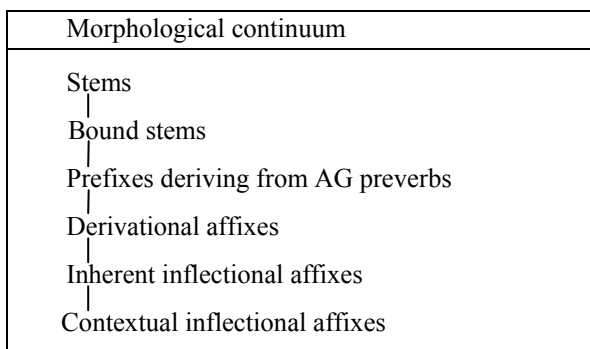
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[3] Ralli (1992, 2004, 2005) also considers formations with *poli-*, *kalo-* and *kako-* to be instances of compounding, acknowledging however some peculiarities in their formations.
[4] According to Di Sciullo (1997) a prefix is considered to be external when it provides the base with external characteristics, i.e. iteration or inversion, while an internal prefix modifies the semantic core of the base, adding internal characteristics to it.

formal changes, therefore, according to Ralli's (2004) proposal, it acts like an external prefix. On the other hand, *para-* in (1b,c) denotes *annulment*. Since, in the imperative form, the verb becomes *paravlepe* (1c) with a stress shift, it attaches to stems, and acts like an internal prefix.

(1)
    a. parafortono   < para +   fortono
         'to overload'   'to load'
    b. para'vlepo   < para +   vlepo
         'to disregard'   'to see'
    c. pa'ravlepe
         'to disregard-IMP.'
    d. paraevlepa
         'to oversee-PAST-IMPERF.'[5]

However, the specific semantic, phonological and morphological properties of preverbs, as Ralli (2004:299) stresses, can cut across the categories of prefix/lexeme, and internal/external preverbs, since *there are preverbs of free-word status that share properties with prefixes, while other preverbs of a prefixal status may display characteristics of stems or words that are usually found in composition*. We argue that affixoids constitute cases of this kind. This intermediate category of affixoids acts in favor of the existence of a morphological continuum (Bybee 1985), where the two poles are occupied by typical prefixes and stems and affixoids are situated in between (Ralli 2005, forthcoming).

Morphological continuum
Stems
Bound stems
Prefixes deriving from AG preverbs
Derivational affixes
Inherent inflectional affixes
Contextual inflectional affixes

Table 1: (Taken from Ralli 2005:316)

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[5] The glosses are meant to be read as: IMP=IMPERATIVE, PAST=PAST TENSE, IMPERF=IMPERFECTIVE ASPECT, ACC=ACCUSATIVE CASE, GEN=GENITIVE CASE and STH=SOMETHING. The lack of glosses entails, in the case of verbs, the choice of the first singular, present indicative verbal form, while in nominal types the choice of the nominative singular form.

Taking into account the above mentioned theoretical assumptions, in this paper we focus on the relation between the constituents of a complex morphological structure, that can be identified, or even controlled, by their specific morphological, semantic and phonological properties. Furthermore, since some compound constituents behave more or less like prefixes, and vice versa, the definition of borderline cases should not simply be based on their possible differences from or similarities with the clear-cut categories of "true" prefixes and words. There is a need for a hierarchical proposal focused on the idiosyncratic structural behaviour of the intermediate items. Using Modern Greek "prefix like" adverbs as a case study, we examine a number of criteria which can help us indicate their exact position in the above presented morphological continuum (Table 1).

3. Criteria for distinguishing between compounding and derivation.

One of the most striking differences between prefixation and compounding is thought to be the lexical or non-lexical status of the elements involved. A morphological element is considered to be a lexeme if it preserves its lexical meaning when found in a complex structure, i.e. when the native speaker can correlate the meaning of the bound element with that of the independent word (Ralli 2004, Booij 2005, Amiot 2005). Moreover, a lexeme is an element that preserves its integrity, i.e. it is not subject to any phonological or semantic change (Lehmann 1995), as well as its autonomy, i.e. it is found in speech as an independent word (with or without an inflectional affix, depending on the language), even though its combination with other lexemes is optional.

Nevertheless, autonomy and lexical character cannot be seen as criteria for the distinction between the two processes (compounding and derivation). In our opinion, they can be seen as mere indications of the two different clear cut cases, but not as criteria for deciding about the fuzzy ones. However, how can we determine those factors that show the path towards the change of status, or in other words, enable the loss of lexical integrity?

In the following sections, we examine a number of criteria which can help us define whether the elements in question are prefixes, constituents of compounds or intermediate constituents. The proposed criteria that can show the path towards the loss of an item's lexical integrity or autonomy are the following:

3.1 Phonological

In this section, our interest focuses on the phonological characteristics of the examined elements. More specifically, we investigate what kind of phonological phenomena (*phonological erosion* in terms of Heine & Kuteva 2002, 2005, 2007, Heine 2003 or *attrition* in the terms of Lehmann 1995) could serve as triggering factors for the grammatical change of the elements in question, and how crucial their appearance could prove to be for the specific process.

Examining *sa-* and *sjo-* elements, found systematically in the dialectal varieties of Lesbos and Aivali – Moschonisia, (so forth LAM[6]), and Cretan, we observe a significant reduction in their phonological forms. Examples can be seen under (2) and (3) respectively:

(2) LAM[7]
  a. sapera   < (i)sa   +   pera
    'far away'   'straight' 'away'
  b. saδo   < (i)sa   +   (i)δo
    'over here'   'straight' 'here'
  c. saδuna   < (i)sa   +   (e)δuna
    'over here'   'straight' 'here'
  d. saftu   < (i)sa   +   (e)ftu
    'ofter there'   'straight' 'there'
  e. safna   < (i)sa   +   (e)fna [<eftuna]
    'over there'   'straight' 'there'

(3) Cretan
  a. sjoδeno   < (i)sj(a)   + -o[8]- + δeno
    'to tight straight'   'straight'   'to tight'
  b. so̡jerno   < (i)isja   + -o- + ̡jerno
    'to become too old'   'straight'   'to become old'
  c. sjoksafrizo   < (i)sja   + -o- + ksafrizo
    'to steal everything'   'straight'   'to steal'

In the above examples, we can see that the adverb *isja* 'straight' is subject to phonological erosion. The starting vowel in both varieties is deleted, while the semivowel /j/ is retained only in Western Cretan (3a,c)[9].

Apart from phonological reduction in the examples under (2) and (3), a systematic semantic change is attested as well. More specifically, we observe a semantic change in the examples under (2) and (3b,c) where *sa-* and *sjo-* denote intensification (cf. Ralli & Dimela forthcoming, and Dimela 2009), while the original meaning of *isja* denotes direction of movement, specifically 'straight ahead'.

According to Romaine (1999: 341), *semantic and phonological reduction do not always go hand in hand.* One such case is that of *kso-*, which although undergoes phonological reduction, is hardly subject to semantic change, at least in

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[6] These dialectal varieties are spoken in Eastern Lesbos.
[7] Data taken from the Dialectal Data Base of the Centre of Modern Greek Dialects (Director: Prof. A. Ralli).
[8] -o- is a compound marker (Ralli 2008).
[9] The occurrence or non-occurrence of the semi-vowel distinguishes the western from the eastern Cretan dialectal variety (cf. Newton 1972, Kontosopoulos 1997, Dimela 2009).

SMG (4). In certain dialects such as Cretan and Cypriot, however, as shown in the examples under (5) and (6) respectively, the new meaning denoting intensification appears often, but again not systematically.

(4)　SMG
　　a. ksoklisi　　　　<　(e)ks(o) + -o- +　eklis(ia)
　　　 'country church'　　　　'out'　　　　'church'
　　b. ksofilo　　　　<　(e)ks(o) + -o- +　filo
　　　 'folding-shutter'　　　　'out'　　　　'leaf'
　　c. ksopetsa　　　　<　(e)ks(o) + -o- +　petsa
　　　 'superficially'　　　　'out'　　　　'skin'
　　d. ksofaltsa[10]　　<　(e)ks(o) + -o- +　faltsa
　　　 'superficially'　　　　'out'　　　　'sharp, out of tone'

(5)　Cretan[11]
　　a. ksopiso　　　　　　　　　　< (e)ks(o) + -o- + piso
　　　 'utterly behind'　　　　　　　'out'　　　　'behind'
　　b. ksomeno　　　　　　　　　　< (e)ks(o) + -o- + meno
　　　 'to stay out of home (usually at night)' 'out'　　　　'to stay'

(6)　Cypriot[12]
　　a. ksoprotos　　　<　(e)ks(o) + -o- +　protos
　　　 'first of all', 'best'　　'out'　　　　'first'
　　b. ksomakrizo　　　<　(e)ks(o) + -o- +　*makr(izo) [<makreno]
　　　 'to keep away'　　　　'out'　　　　'to lengthen'
　　c. ksominisko　　　<　(e)ks(o) + -o- +　*minisko [<meno]
　　　 'to stay out of home　'out'　　　　'to stay'
　　　 (usually at night)'
　　d. ksosirno[13]　　　<　(e)ks(o) + -o- +　serno
　　　 'trail outside'　　　　'out'　　　　'to trail'

　　In what follows, we are going to examine the semantic and structural characteristics of the examined elements. We will argue that, although phonological reduction may occur very often in cases where change in the grammatical status of elements takes place, it cannot be thought of as a secure criterion for the distinction between prefixation and compounding, since phonological attrition does not always imply loss of independence.

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[10] The word *ksofaltsa* (ξώφαλτσα) is a medieval formation originating from the adverb *ekso* (ξω) and the Italian loanword *faltsos* (φάλτσος < falso it. < falsus lat.).
[11] See Ksanthinakis (2001), Pitikakis (1971).
[12] See Loukas (1979).
[13] In the formation *ksosirno*, *sirn-* is an allomorph of the verb *serno* used in compounding.

3.2 Semantic

In the previous section, we saw that phonological change does not always trigger semantic and morphological change. In addition, phonological *erosion* is not always attested in borderline cases between derivation and compounding. This is not the case in semantics. In this section, we would like to propose that the semantic behaviour of *prefixoids* is a crucial parameter for grammatical change. More specifically, we examine whether the element under consideration displays the predictable meaning (the one corresponding to its lexeme status). Our hypothesis is that semantic extension either towards a more general – abstract meaning, or towards semantic opacity (*desemanticization or semantic bleaching*, see Lehmann 1995, Heine & Kuteva 2002, 2005, 2007, Heine 2003) is attested as well.

We have already mentioned the cases of *sa-* in LAM and *s(j)o-* in Cretan. There are more problematic cases, for example those that are not subject to phonological change but display semantic bleaching. More specifically, we will see that the change of meaning is of gradable quantitative nature and can fluctuate either towards intensification or towards weakening. This holds true both for SMG as well as for its dialectal variation since there are no significant semantic, structural or phonological differences.

To begin with, *poli-* ('very') systematically functions as an intensification marker, as shown in the examples below:

(7)
    a. poliekatomiriuxos   < poli + ekatomiriuxos
     'multimillionaire'   'very' 'millionaire'
    b. poliθesia   < poli + θes(ia)
     'occupying more than one posts'   'very' 'post'
    c. poliasxolos   < poli + asxol(os)
     'very busy'   'very' 'busy'

Although the meaning of *poli-* is still predictable, its application is not free of structural restrictions. As Delveroudi & Vassilaki (1999) show, *poli-* attaches only to verbs in negative form and deverbal adjectives in *–menos* and *–tos* (8).

(8)
    a. *polierxome   se afto   to   estiatorio
      frequently-come to this-ACC. the-ACC. restaurant-ACC.
      'I frequently come to this restaurant'
    b. δen polierxome   se afto   to   estiatorio
      not frequently-come to this-ACC. the-ACC. restaurant.ACC.
      'I don't usually come to this restaurant'

    c. poliδiavazmenos < poli + δiavasmenos
                                    'very'   'studied'
      'very well- studied / something widely read'
    d. poliδoksastos   < poli + δoksas(tos)[14]
      'glorious'   'very'   'honourable'

The same behavior is attested with *kalo-* ('good', 'well'). *Kalo-* exhibits similar structural properties with *poli-*, i.e. appearing only with negation, as can be seen in the examples under (9).

(9)

    a. *to   kaloθimame   afto   to   peristatiko
       the-ACC. well-remember this-ACC. the-ACC. incident-ACC.
       'I remember this incident well'
    b. δen   to   kaloθimame/ poliθimame afto
       not the-ACC. well-remember   this-ACC.
       to   peristatiko
       the-ACC.   incident-ACC.
       'I don't   remember this incident well/ that much'
    c. kaloδiavazmenos < kal(a) + -o- + δiavasmenos
       'well-studied'   'well'   'studied'

Kalo- preserves its original meaning 'good', i.e. that of positive evaluation (10a-c). The only difference here is that in some cases, lexicalization takes place (10d), since the word *kaloithis* is of learned origin and functions as a single entity, i.e. it is semantically opaque.

(10)

    a. kalojalizo   < kal(a) ('well') +-o-+   jalizo ('brush up')
       'to brush up very well/carefully'
    b. kalotaksiδos < kal(a) ('well') +-o-+   taksiδ(os) ('travel')
       'weatherly'
    c. kalozoia   < kal(a) ('well') +-o-+   zo(ia) ('living')
       'easy life/living, well-being'
    d. kaloiθis   < kal(a) ('well') +-o-+ iθ(os) ('morale')
       'benign'

Miso- ('half') may also undergo semantic shift, when found as the 1st constituent in morphologically complex structures. When combined with bases

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[14] In the example above it is shown that *poli-* attaches to the verbal stem *δoksaz-* which is further suffixed as *poliδoksastos* via the addition of the deverbal *–t(os)*. *δoksas(tos)* is not an attested but rather a possible word in Modern Greek.

whose semantic features are compatible with *miso*'s literal meaning, it reduces the meaning of the base either to half or to a certain degree, e.g. ɟemizo 'to fill' vs. *misoɟemizo* 'to half-fill" etc.

(11)
       a. misokarvelo   < mis(o) +-o-+ karvel(o)
         'half loaf'   'half'   'loaf'
       b. misoɟimnos   < mis(o) +-o-+ ɟimnos
         'half-naked'   'half'   'naked'
       c. misoɟemizo   < mis(a) +-o-+ ɟemizo
         'to half-fill'   'half'   'fill'

On the other hand, when *miso*- combines with bases incompatible with miso's literal meaning (cf. examples under (12)), it denotes approximation or the semantic weakening of the meaning of the base. For example, *misoθimame* does not mean 'I remember half of something; but 'I remember something by and large, not in detail'.

(12)
       a. misoboem   < mis(o) +-o-+ boem
         'bohemian-like'   'half'   'boemian'
       b. misopalavos   < mis(o) +-o-+ palavos
         'half-mad'   'half'   'mad'
       c. misoastia   < mis(o) +-o-+ astia
         'not that funny'   'half'   'funny'
       d. misoθimame   < mis(a) +-o-+ θimame ('remember')
         'to remember something in general terms, not in detail'

kutso- in few cases preserves (13a) its prototypical meaning 'gimpy, defective' being more frequent and productive when denoting weakening in quantitative (13b-c) or qualitative terms (13d,e).

(13)
       a. kutsoδodis   < kuts(o) +-o-+   δod(is)
          'gap-toothed'   'gimp'   'tooth'
       b. kutsoδjaskeδazo   < kuts(o) +-o-+   δiaskedazo
          'to have some fun but not that much'   'to have fun'
       c. kutsoxreos   < kuts(o) +-o-+   xreos
          'small debt'   'gimp'   'debt'
       d. kutsomaɟirevo   < kuts(o) +-o-+   maɟirevo
          'to cook but not quite well'   'to cook'
       e. kutsoδaskalos   < kuts(o) +-o-+   δaskalos
          'not quite a good teacher'   'teacher'

It's worth noticing that *kutso-* and *miso-* verbal formations are quite similar, when the latter denotes approximation/quantitative weakening. Moreover, they can function as free variants, with no divergence in their phonological, morphological and semantic properties, as can be seen in the examples under (14):

(14)
      a. koutsoθelo = misoθelo
        'to want sth but not that much or not being quite sure about it'
      b. koutsoδjavazo = misoδjavazo
        'to read/study but not that well'
      c. koutsocimame = misocimame
        'to doze'

Based on the above we could argue that the majority of the examined elements show a semantic shift towards a more general and abstract meaning. This shift is a strong indication of their changing status. Nevertheless, it cannot solely determine their exact spot in the morphological continuum. This is the reason why structural relations need to be taken into consideration.

3.3 Structural

3.3.1 Structural relations

Examining the structural properties of the examined elements, our interest focuses on the question whether there is opacity with respect to the structural[15] relation established between the two constituents of the complex morphological formation; namely if their syntactic structure is visible or not. We use the term *structural relation* instead of *syntactic relation*, since in our view syntax has no access to morphological structures[16]. The compositionality of morphological structures is controlled by morphology *which is not entirely reducible to another level, and follows principles of its own* (Aronoff 1994: 63).

As we can see in the examples under (15), in the case of compounding the syntactic structure of the constituents is transparent (15a,b,c) and their meaning is compositional. However, this is not the case with prefixation (15d,e), according to which *prefixes are largely syntactically underspecified* (Drachman 2007).

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[15] The term *structural* is used in a wider sense. It is not directly linked to X structures and the notion of headedness.

[16] Two of the strongest arguments in favour of this statement are given by Smirniotopoulos & Joseph (1998:456) and Ralli (2004:287) who claim that for every phrasal combination of verb+adverb, there is no corresponding item and vice versa.

(15)

    a. kuklospito   < (to)   spiti   (tis)   kuklas
    (subordinative)
       'dollhouse'   ('the') 'house' ('of the') 'doll-GEN.'
    b. kocinomavros   < kocinos (ce)   mavros
    (coordinative)
       'red and black, russet' 'red'   ('and') 'black'
    c. aspromalis   <(kapjos pou exi)   aspra   maʎa (attributive-
    exocentric) 'silver-haired' ('a person ho has') 'white' 'hair'
    d. ksekaθarizo   <   *kaθarizo   kse
       'to short out, to clarify'   'to clean' 'completely, undo'
    e. adiɣrafo   <   *ɣrafo   adi
       'to copy, to cheat'   'to write' 'substitution'

We presume that prefixes do not establish structural relations with the bases they attach to are attached to. However, that is not to say though, that they do not structurally depend on the bases they modify. Following Ralli (2004), we assume that there is a dependency relation of gradable nature which can be either loose, when the prefix is external, or tight, when the latter is internal (Ralli 2004). However, in neither case is this structural relation similar to that of subordinate compounds. Structural dependency in subordinate compounds is realized syntactically, while in prefixes it is not, at least not in the same way (i.e. in terms of θ-role saturation etc.). It just points out the degree of dependency of the prefix on the base it attaches to.

Looking at the data, we can see that structural relations are totally visible in the case of *olo-* and *kako-*. In (16) *olo-* as a first element in a morphological structure, forms syntactically transparent relations, i.e. it creates either attributive compounds, e.g., *olofegaro*, or subordinate ones e.g., *olofego*. *Kako-* (17) shows the same structural behavior. Since these elements create structurally transparent structures and no semantic shift is observed in their original meaning, we can consider them as lexemes rather than as prefixes. Finally, in the case of *poli-* (18), although it shows the same behavior with *olo-* and *kako-* (no semantic shift and transparency in structural relations), it creates complex forms under specific structural restrictions (negative verbal structures and participles (cf. examples under (8)). That is to say, it is subject to a structural restriction, which is indication of a weak lexical status.

    (16) Visible structural relations: olo-
         a. olofegaro   < olo   to   fegari
         (attributive)
           'full moon'   'whole' 'the' 'moon'
         b. oloskotinos   < olos   skotinos (attributive)
           'completely dark, pitch-dark' 'complete' 'dark'

   c. olofego   < ola (oloklirotika) fego
   (subordinate)
    'to shine all over'   'fully/totally'   'to shine/glint'

(17) Visible structural relations: kako-
    a. kakocefos   < (kapjos pu exi)   kako   cefi
      'moody'   ('a person ho has')   'bad' 'temper'
                                          (attributive- exocentric)
    b. kakocimame <   cimame   kaka   (subordinate)
      'to sleep badly' 'to sleep'   'badly'
    c. kakotixia   <   kaci   tixi   (attributive)
      'bad luck'   'bad' 'luck'

(18) Visible structural relations: poli-
    a. poliscizmenos   < scizmenos poli   (subordinate)
      'tattered'   'cut' 'very much'
    b. δen to   poliksero < δen to   ksero poli (kala)
      not the-ACC. well-know   not the-ACC. know 'very' ('well')
      'I don't know it quite well'

Moving to *kalo-, kso-* and *miso-*, we see that they show some variation in their behaviour as they can form both transparent and opaque structural relations. *Kalo-* (19) forms visible structural relations when it retains its original meaning, but invisible ones when it shows a semantic shift. The same holds true also for *kso-* (20). *Miso-* (21) creates structurally invisible structures when it is semantically shifted to its wider meaning (which is close to the original meaning in metaphorical terms).

(19) Partially visible structural relations: kalo-
    a. kaloθrefo   <   θrefo   kala   (subordinate)
      'to nourish very well' 'to nourish' 'well'
    b. kalozoia   <   kali   zoi   (attributive)
      'well-being'   'good' 'life'
    c. δen to   kalo δjavasa   afto   to   vivlio
      not the-ACC well read-PAST.   this-ACC. the.ACC book.ACC.
      'I didn't read that   book well/that much'
     but
     ![17]δen to   δjavasa   kala afto   to   vivlio
       not the-ACC read-PAST. well this-ACC. the.ACC book.ACC.
      'I didn't read that book well'

---

[17] The exclamation mark is used to denote that semantic and structural relations of the examined elements as first constituents are not always the same as when used as independent words.

(20) Partially visible structural relations: kso-

    a. ksopiso   <   *(e)kso piso

      'behind, in the wake of'   'out'   'behind'

    b. ksoklisi   <   (e)kso   eklisia

      'country church'   'out'   'church'

    c. ksofaltsa   <   *(e)kso faltsa

      'superficially'   'out'   'sharp, out of tone'

(21) Partially visible structural relations: miso-

    a. misofegaro   <   miso   fegari (attributive)

      'lunette, half-moon'   'half' 'moon'

    b. misoɟemizo   <   ɟemizo   misa/sti mesi (subordinate)

      'to half-fill'   'to fill' 'half of sth'

    c. misokakomira   <   *misi   kakomira (!attributive)

      'some how/not   'half' 'miserable'

      entirely miserable'

    d. misopalavos   < !misos palavos (!attributive)

      'half-mad'   'half'   'mad'

    e. misoθimame   < !θimame   (ta) misa

      'to remember sth by   'to remember'   'halves'

      and large, not in detail'

    f. misoboem   < !misos   boem

      'somehow but not   'half'   'bohemian'

      entirely bohemian'

    g. misoksero   < *ksero   (ta) misa

      'to know sth but not   'to know'   'halves'

      very well/in detail'

The same holds for *kutso-*, sa- (LAM) and *sjo-* (Cretan). When the examined element is semantically shifted to the new quantitative meaning, the structural relations are opaque. The only difference lies in the strength of the original meaning. The stronger and more productive the formations bearing the original meaning (examples (16) and (17)), the less invisible the structural relations (examples (22)-(24)).

(22)   Barely visible structural relations: kutso-

    a. kutsoδodis   < (kapjos pu exi) kutso   δodi

      'gap-toothed'   ('a person who has') 'gimpy' 'tooth'

                                           (attributive-exocentric)

    b. kutsoθelo   <   *θelo   kutsa

      'to want something but   to want' in a gammy way'

      not very badly, or not to

      be quite sure about it'

    c. kutsoxreos   <   *kutso   xreos

      'small debt'   'gimpy' 'debt'

    d. kutsozo   <   *zo   kutsa

      'to live but   'to live' 'in a gammy way'

      not quite well'

    e. kutsoksenoδoxio   <   *kutso   ksenoδoxio

      'not quite a good hotel'   'gimpy'   'hotel'

    f. koutsocimame   <   *cimame   kutsa

      'to sleep but not   'to sleep' 'in a gammy way'

      very well/to doze'

(23) Barely visible structural relations: sa-

      a. sapera   <   isa   pera,   but *sa pera (attributive)

        'far away'   'straight' 'away'

      b. saδuna   <   *isa   eδuna and *sa eδuna (!attributive)

        'over here'   'straight' 'here'

(24)   Invisible structural relations: s(j)o-

      a. sjoδeno   < !δeno   isja but *δeno sjo/sja (!subordinate)

        'to tie sth   'to tie' 'straight'

        straight'

      b. soi̯erno   <   *i̯erno   isja/ sjo/ sja   (intrasparent)

        'to become   'to become old' 'straight'

        too old'

3.3.2 Co-occurrence with other morphological elements (prefixes, a´ constituents)

 Examining more thoroughly the position of the aforementioned elements in complex morphological formations, i.e. combinations with real prefixes, participation in compound formations, we should point out that this is not a secure criterion for the identification of the grammatical status of the element in question. When *kutso-, poli-, miso-, kalo-, sa-* (LAM), *sjo-* (Cretan), *kso-* (in dialectal variation) express a quantitative change in the meaning either towards intensification, or towards weakening, their bases retain all the semantic, morphological and phonological characteristics they have as lexemes. That is to say, the elements in study can be either external lexemes or external prefixes which combine with full words.

(25)

    a. δen poliparaγrafode afta ta prostima

      'These fines are not easily/usually erased'

    b. δen to kaloparaδexome

      'I don't clearly admit'

    c. misoparafrazo

      'to paraphrase somehow but not exactly'

    d. kutsoparacino

      'to induce someone to do sth but not intensively or without being pushy'

Moreover, if the examined element can precede an external prefix in a morphological formation, in examples like *sjokseɟivedizo* [[sjo-] [[kse-] [ɟivedizo]]] 'to totally embarrass') in Cretan, it could serve as further support to our claim that it can be either an external lexeme or an external prefix.

Nevertheless, we should mention that even the position of an element at the left edge of an external prefix, is not a secure criterion for the identification of its grammatical status. For example, in *parasapano* 'straight higher up' (LAM), the *sa*-element precedes the external prefix *para-*, while in *sjokseɟivedizo* (Cretan), *sjo*-follows the external prefix *kse-*[18]. That is not to say that in the first example *sa-* is an internal prefix, while in the second *sjo-* is a lexeme.

As already mentioned by Ralli (2004), prefixation and compounding have no concrete boundaries and that is the reason why the process of prefixation may follow that of compounding in a complex morphological structure. The two processes are not 'locked' and may interact. Elaborating on this, we would like to add that it is true that a prefix can occupy a higher place in the structure of a compound formation, as long as it is an external one. That is to say, it combines with words and has no access to their internal structure.

3.3.3 Combinability of the examined elements

In what follows, we are interested in investigating what the combinatorial properties of the examined elements can tell us about their grammatical status. Taking their semantic and structural properties into account, we would like to see if there are any ordering restrictions and what the latter would imply for their status. In the examples

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[18] In both cases *sa-* and *sjo-* combine with an external prefix (*para-* and *kse-* respectively) which has the same semantic function (intensification). However, this does not constitute a strong indication of their grammatical status since recursion of the same element can take place in both morphological processes in Greek (cf. Iacobini's (2004) account for Italian which reveals that recursion holds true only for compounding in this language).

under (26), we can see plausible and non plausible combinations of elements having a similar meaning. The choice of elements with a similar meaning is deliberate so as to ease comparison:

(26)

    a. misokutsokataferno, but *kutsomisokataferno
      'to manage sth but not very well '
    b. kalokutsokataferno, but *kutsokalokataferno
      'to manage sth but not very well '
    c. δen ton polikaloksero, but * δen ton kalopoliksero
      'I don't know him quite well'
    d. misokutsocedo, but *kutsomisocedo
      'to broider but not very well'
    e. δen ton polikalothimame, but *δen ton kalopolithimame
      'I don't remember him that well/ I vaguely remember him'
    f. ??ton misokaloksero, but *ton kalomisoksero
      'I know him but not very well'
    g. *δen ton misokaloksero, but *δen ton kalomisoksero
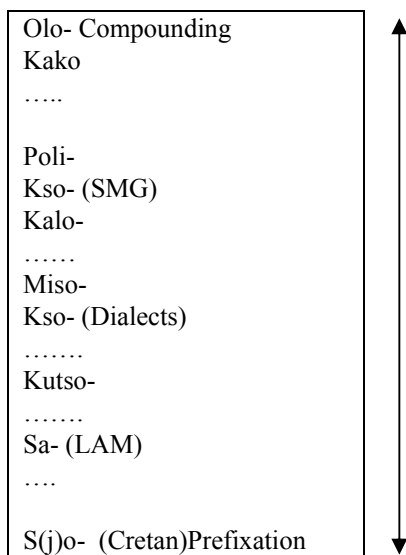   'I don't know him quite well'

The different orderings of the elements show that the element closer to the base is the one that is closer to the acquisition of a prefixal status. More specifically, examining *miso-, kutso-, kalo-* and *poli-* we see that *kutso-* is closer to the base, while *kalo-* and *poli-* follow. Between the last two, *kalo-* is the one that seems to be closer. *Miso-* and *olo-* are not so flexible. *Olo-* cannot combine with any of the examined elements, while *miso-* can easily combine with *kutso-* (21a, 21d), although it creates ungrammatical or questionable structures with *kalo-*. Lastly, as shown in the examples under (26f-g), the comparison between *kalo-* and *miso-* cannot provide a secure indication as to defining their place in the ordering hierarchy.

4. Proposal

In our view, the above mentioned phonological, semantic and structural properties of the elements in study formulate the necessary criteria for the identification of their grammatical status. Based on the first part of the table 1 (cf. section 2) we consider compounding and prefixation to hold the two poles of the morphological continuum as illustrated in table 2 below. Given that the two processes are not 'locked' but rather in mutual interaction (c.f Ralli 2004), we expect to find borderline cases. The elements in question are placed closer to the one or to the other pole depending on the properties they display.
    More particularly, as shown in the table 2, *olo-* and *kako-* are placed on the level of compounding, since they display no phonological attrition or semantic shift and

form transparent structural relations with their bases. Additionally, they systematically occur as independent elements (lexemes, thus acting as first constituents.

Olo- Compounding
Kako
…..
Poli-
Kso- (SMG)
Kalo-
……
Miso-
Kso- (Dialects)
…….
Kutso-
…….
Sa- (LAM)
….
S(j)o- (Cretan)Prefixation

Table 2: Positions of the examined elements on the morphological continuum of compounding and derivation

Immediately below these, we have placed *poli-*, which although displaying similar properties with *olo-* and *kako-* (i.e. no phonological or semantic change, transparency in structural relations), it is subject to a specific restriction, as it combines only with verbal bases in negative form. This restriction could serve as an indication that *poli-* does not fully retain its lexical integrity, thus, it diverges from pure compounding.

Kso-, apart from its phonological attrition, does not systematically acquire a new meaning (that of intensification). However, when it does, the structural relations between the constituents are not visible. On the other hand, *kso-* in dialectal variation is closer to prefixation, since semantic shift is attested more often.

Kalo- displays both semantic extension and opacity in structural relations. Nevertheless, its semantic shift is restricted only to verbal bases in their negative form. Its restricted semantic extension in combination with structural opacity support our claim that *kalo-* is moving gradually towards acquiring a prefixal status, still preserving its lexical status to a large extent.

Similar to *kalo-* is the behavior of *miso-*. The only difference here is that the latter, when bearing a new meaning, is found both with nominal and verbal bases, which is an argument in favor of the establishment of its new meaning. Despite being closer to prefixation than *kalo-*, *miso-* cannot be thought of as a pure prefix,

since its prototypical meaning is still productive both in morphological and syntactic processes, i.e. when used as an independent word.

Moving now to *kutso-*, we show that in this element the new meaning of qualitative or quantitative attenuation is well established. It combines with verbal and nominal bases, although the verbal ones are more frequent in our corpus. In addition, when combined with *miso-* and *kalo-*, it is found closer to the base than the latter. However, it is not considered to be a pure prefix, even though it is really close to being one, since the prototypical meaning is still available in native speakers' minds and is used both in morphology and syntax (as an independent word).

Finally, *sa-* (LAM) and *s(j)o-* (Cretan) are the closest ones to prefixation in comparison with all the examined elements. They have undergone both phonological and semantic change and their structural relations with the combined elements are not visible. In our view, *s(j)o-* has become a real prefix (Dimela 2009). *Sa-* also shares a lot of prefixal characteristics. However, the fact that it combines only with adverbial bases shows, according to Ralli & Dimela (forthcoming), that it functions as a prefix only in the specific morphological environment (in terms of morphological creativity, cf. Baeskow 2004), being generally in the course of acquiring a prefixal status. In addition, Ralli & Dimela (forthcoming) claim that *sa-* has acquired prefixal characteristics only in certain dialects (such as the dialects of Lesbos, Moschonisia and Aivali), while in others (such as dialects of Pelloponisos, Kozani, Pilio etc.) it retains its lexical character.

Summing up, the evaluation of the properties of all these elements enables their consideration as important criteria for the determination of the elements' grammatical status. We have shown that not all of the above mentioned properties / criteria are prerequisites for the identification of the elements' status. However, some of them proved, in our view, to be really crucial for their acquisition of a prefixal status.

Phonological change seemed to be a contributive factor towards the acquisition of a prefixal status, but not so decisive as to determine the change by itself (section 3.1). Semantic shift on the other hand, is the factor activating transition from compounding to prefixation (section 3.2). Transition from a less towards a more grammatical status seemed to be determined on the basis of the structural relations established between the morphological elements of a formation (from totally visible to totally invisible). It was shown that the structural properties of the examined constituents are those that can give us a clearest picture of where these elements stand (section 3.3).

That is not to say though, that these (structural) properties, place borderline cases necessarily in one of the two poles (compounding-prefixation) since by definition, the two processes are in mutual interaction and intermediate constituents are expected to appear. However, these properties can be indicative of these constituents' trends.

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Περίληψη

Το παρόν άρθρο αναλύει τα πρώτα συστατικά σύνθετων μορφολογικά δομών των οποίων η ταυτότητα δεν είναι σαφώς καθορισμένη. Χρησιμοποιώντας δεδομένα από την Κοινή Νέα Ελληνική και τη διαλεκτική της ποικιλία, εξετάζουμε τις φωνολογικές, σημασιολογικές και μορφολογικές ιδιότητες των στοιχείων *σο-/σιο-, σα-, ζω-, καλο-, κουτσο-, πολύ-, μισο-* και *ολο-* με σκοπό την αποσαφήνιση του γραμματικού τους χαρακτήρα. Παρατηρείται πως τα εξεταζόμενα χαρακτηριστικά μπορούν να διαμορφώσουν μία ιεραρχία παραμέτρων ικανών να αναδείξουν τόσο τη μορφολογική ταυτότητα των στοιχείων, όσο και τη θέση που αυτά καταλαμβάνουν στο μορφολογικό συνεχές. Συγκεκριμένα, η φωνολογική αλλαγή έχει συμμετοχή στη διαδικασία αλλαγής από τη σύνθεση στην προθηματοποίηση, αλλά η συμμετοχή αυτή δεν είναι ικανή να καθορίσει την πορεία της. Η σημασιολογική μετατόπιση φαίνεται να ενεργοποιεί τη διαδικασία μετάβασης, ενώ η διαδικασία ελέγχεται και ολοκληρώνεται από το είδος των μορφολογικών σχέσεων που συνάπτουν τα στοιχεία της μορφολογικής δομής.

ELEONORA DIMELA

CENTRE OF MODERN GREEK DIALECTS

DEPARTMENT OF PHILOLOGY

UNIVERSITY OF PATRAS

eldimela@upatras.gr

DIMITRA MELISSAROPOULOU

CENTRE OF MODERN GREEK DIALECTS

DEPARTMENT OF PHILOLOGY

UNIVERSITY OF PATRAS

dmelissa@upatras.gr