

moro, akro, sjo: Prefixes or Compound Constituents?

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Abstract

In this paper we examine the items *akro-*, *moro-* and *sjo-* that constitute three particular cases of grammaticalization within the morphological domain. Using data from the Modern Greek dialects, we show that for an item to be a lexeme or a prefix depends on specific phonological, semantic and morphological properties. These properties indicate the specific parameters which are involved in a morphologization process.

1. Defining Prefixization

1.1 Grammaticalization vs. Morphologization

The classical concept of grammaticalization (or grammaticization, or even grammatization) originates from Meillet (1912: 131), who has defined it as “the attribution of a grammatical character to a previously autonomous word”. As noted by Hopper (1991: 18), grammaticalization for Meillet refers to an array of forms, which constitute the morphology of a language. It is only latter (following work by Givón 1971, 1979, Heine & Reh 1984, Lehmann 1985, Hopper & Traugott 1993, McMahon 1994, Gaeta 1998) that the range of grammaticalization phenomena are shown not to be restricted to morphology, and that the process is seen as encompassing all types of language change, having a broader scope as the study of the origins of grammar in general.

The emergence of elements with a morphological role from items which were not a matter of morphology in a previous stage is usually called ‘morphologization’. Hopper & Traugott (1993: 135) define morphologization as the creation of a bound morpheme out of an independent word, and Joseph (2003) discusses two types of morphologization, namely desyntactization and dephonologization, on the assumption that there is a wide range of phenomena that show ‘movement into morphology’ (see also Klausenburger 2002). Joseph argues that morphologization has to be kept distinct from grammaticalization, although the two may overlap to some extent: on the one hand, grammaticalization may make claims about changes that have nothing to do with morphology, and on the other hand, morphologization may involve changes that can be accommodated within morphology, but do not involve the grammar in general (see Joseph 2003 for more details).¹

In this presentation, we investigate a prefixization process in Greek, which is developed out of compounding. We examine a number of items which appear in morphologically complex words, and have become, or tend to become, prefixes. As Ralli (2007, 2009a, 2010) has shown, Greek compounding and prefixation are morphological processes according to the following basic criteria:

- a) Compound and prefixed formations display one stress, i.e. they are single phonological words,
- b) They involve bound elements. On the one hand, Greek prefixes are non-separable entities, and on the other hand, Greek compounding is mainly stem based², since, with

¹ For instance, Joseph (2003: 47) criticizes the formation of the German word *heute* ‘today’ from a presumed instrumental phrase **hiu tagu* in Old High German, since “...this combination of sounds is as grammatical (or not, as the case may be) before the phrase was reduced as it is afterwards”.

² According to Ralli (2005, 2009a, 2009b), in Modern Greek, there is no structural difference between a root and a stem, as opposed to Ancient Greek, where stems were usually combinations of

some exceptions, the first component is a stem, while the second component can be either a stem or a word.

c) They are subject to word atomicity, i.e. no syntactic rules have access to their internal structure.

d) In many cases, prefixed and compound formations are semantically non-compositional.

In this respect, moving from compounding to prefixation takes place within morphology, and should be seen as an instance of morphologization, in the sense that prefixation implies a greater morphological involvement than compounding, since stems display a greater autonomy than prefixes. For instance, stems can be used as independent words with the appropriate inflectional ending, and have a specific lexical meaning. In contrast, prefixes cannot be used as autonomous entities, and have a rather abstract semantic function, which contributes to the determination of the meaning of the word.³

It should be noticed that the difference between prefixes and compound constituents is accounted for by certain frameworks (see, among others, Anderson 1992, within the framework of a process-morphology model), which assign to compounds a rather syntactic structure, while they realize prefixes by morphological operations. Under this perspective, prefixation could also be seen as an instance of grammaticalization in the classical sense, that is as a process where lexemes acquire a grammatical role.

On the basis of the considerations above, one may argue that prefixation involves movement along a scale ('cline') of increasing grammatical status, by which expression via prefixation can be considered as 'more morphological' as well as 'more grammatical' than expression via compounding. Given the fact that prefixation deriving from compounding is an instance of morphologization, as well as of grammaticalization, we prefer adopting the term of morphologization, since, as also pointed out by Joseph (2003: 478), in grammaticalization studies there is a tendency to ignore the formal question of where in the grammar a particular phenomenon is located.

1.2 Parameters of prefixation

It is generally accepted that grammaticalization occurs if certain criteria are satisfied, which correspond to a number of parameters accounting for the process (see, among others the theoretical approaches of Lehmann [1982] 1995, Hopper 1991, Heine 2003, Heine & Kuteva 2002, 2005, 2007, Amiot 2005, Marchello-Nizia 2006, van Goethem 2007, 2008). As far as prefixation is concerned, and with some degree of variation from one author to another, there is more or less agreement on the following general criteria:⁴

- Phonological erosion
- De- or re-semanticization
- Decategorialization (or transcategorialization according to Ramat 2001)
- Extension

According to Joseph (2003: 477), each of these criteria is in principle independent of the others, and grouping them is purely stipulative. Moreover, to our knowledge, there are no explicit proposals about the order according to which these criteria are met for a prefixation process, with maybe the exception of Booij (2005), who claims that semantic change precedes the formal one.

With respect to these observations three basic questions are raised: a) what are the specific parameters which induce prefixation out of compounding? b) Are these parameters the same for all the range of grammaticalization phenomena, or are restricted

roots and thematic vowels. Today, the notion of a thematic vowel is no longer relevant. See Ralli 2007, 2009a, in preparation, for more details on Greek compounds.

³ See Iacobini (2004) for a range of abstract meanings, which may be assumed by a prefix.

⁴ Paradigmatization has also been proposed by Lehmann (1985) as a parameter for an item to be grammaticalized. This parameter refers particularly to inflection, which has a typical paradigmatic character, while for prefixes, this parameter is meaningful only if we consider them to be distributed into specific paradigms. See van Marle (1985) for the notion of paradigms in derivation.

to morphology, and thus to morphologization? c) Is there a particular order according to which these parameters occur?

Following the general assumption that morphology is an independent grammatical module with its own rules and constraints, our position is that if we deal with morphology the parameters which lead to the completion of a morphologization process have to be morphological in nature. Other parameters may trigger the process, or may play a role during the process, but do not guarantee completion. Within this spirit, we propose that the general grammaticalization parameters which may be involved in prefixization are resemanticization and erosion, but the specific morphological parameters, which are crucial for determining the final stage of prefixization, are related with

- the expansion of morphological combinatorial properties, and
- the increase of productivity.

We also suggest that the parameters playing a role in prefixization are not of equal weight. In an effort to rate their importance we show that:

a) Resemanticization is compulsory for an item to become a prefix (as also correctly noticed by Booij 2005), but does not guarantee completion.

b) Erosion⁵ (in accordance with Heine & Kuteva 2007) may play a role in prefixization, but it is not a necessary condition for the process to start, or to be achieved. Furthermore, it may precede semantic and morphological change.

c) The increase of productivity and the expansion of morphological combinatorial properties are strong indications for a candidate to have reached the final stage of morphologization (see also van Goethem 2008 and Amiot 2005 respectively).

Finally, we consider decategorialization to be the result of morphologization, but not part of the process itself.

These suggestions imply a certain degree of hierarchical application of the parameters involved in prefixization: Desemanticization and phonological erosion precede the morphologically-proper parameters, which, in their turn, lead to decategorialization.

Support for these proposals comes from research in the dialectal domain. We use evidence from several Modern Greek Dialects, where three particular items, *akro*, *moro* and *sjo*, originate from nominals, but have become, or tend to become prefixes, each one demonstrating a number of peculiar properties. The dialectal data are drawn from local dictionaries, grammars, dialectal documents, the archives of the Centre of Modern Greek Dialects of the Academy of Athens, and the oral material of the Laboratory of Modern Greek Dialects of the University of Patras.

1.3 Prefixation vs. Compounding in Greek

There is more or less agreement among linguists (cf., among others, Iacobini 2004, Stekauer 2005) that typical prefixes display the following properties: they are category neutral, occupy a particular position within prefixed words (preposed to a constituent), are structurally dependent on the base, and do not have a specific lexical meaning. Non-separability, or loss of lexical autonomy may be another property (Iacobini 2004, Booij 2005), but as shown by van Goethem (2007), separability is not a decisive criterion to define an item as a prefix.

As opposed to prefixes, items participating in Greek compounding bear a specific grammatical category (at least for languages like Greek, where there are no verbs and nouns sharing the same form⁶), may appear first or second elements in compound

⁵ We prefer using the term *erosion* than *phonological reduction*, since as pointed out by Heine & Kuteva (2007: 44), the former implies a wider sense and it can be linked to grammaticalization phenomena.

⁶ With the exception of a handful of stems (e.g. *kinig(os)* 'hunter' vs. *kinig(o)* 'to hunt'), which share the same form in both verbs and nouns, and only their inflectional endings are different. However, this is not sufficient evidence in order to adopt a model like that of *Distributed Morphology*, where

formations, may or may not be structurally dependent on the base (see subordinate vs. coordinate compounds), and have a specific lexical meaning (see Ralli 2009, 2010, in preparation).

However, between the two categories, prefixes and stems, there is no radical separation. There are items, the so-called ‘affixoids’ (Fleisher 1969), which may share properties with both categories: an increased productivity, a decreased semantic specificity, and a link to an existing free stem. As noted by ten Hacken (2000: 355), the first two criteria make affixoids resemble affixes, while the third one distinguishes affixes from affixoids. Following Ralli (2005, 2010), the intermediate category of affixoids can justify the existence of a morphological cline, where the two poles are occupied by typical affixes (prefixes and suffixes) and stems, while affixoids are situated in between. Moreover, the existence of affixoids can also motivate a cline of morphologization, which denotes the fact that the morphological change from compounding to prefixation is gradable,⁷ and that there are intermediate stages demonstrating that the boundaries between the two processes are not very clear (Booij 2005, Bauer 2005, Ralli 2010).

2 The data

2.1 *akro-*

In Ancient Greek, *akr-* is the root of the noun *akra* (or *akron*) ‘top, extremity, edge’, and of the adjective *akr-os/-a/-on* ‘high, extreme’.⁸ Like other lexemes, *akr-* participates in compounds (in this case, [N N] or [A N] ones), as in the following examples, where a linking element/compound marker *-o-* appears between the root and the second constituent:⁹

(1) Ancient Greek

a. *akr-o-xlieros* < *akr(a/on) xlieros* (Hippocrates, 5th c. BC)

‘little warm’ edge warm

b. *akr-o-polis* < *akr(a) polis*

‘high town’ high town

According to Babiniotis (1969: 111), the formations with *akr-* have been subject to a semantic drift, the first indications of which go up to the 8th c. BC (2a), where *akr-* seems to quantify the meaning of the base by bringing either a weakening (2a) or an intensification (2b).

(2) a. *akr-o-knephaios* (Hesiodus, 8th c. BC) < *akr-* kneph(as)

little dark edge cloudness/darkness

b. *akr-o-mane:s* (Herodotus, 5th c. BC) < *akr-* -mane:s¹⁰

very mad extremity mad

In Hellenistic Koine (ca 3th c. BC – 3th c. AD), the examples of this use become more frequent, where *akr-* appears mainly in contexts, where the meaning of the base is weakened. However, compounds with *akr-* bearing the original meaning of *akr(a/on)* are still common:

(3) a. *akr-o-karpou* (Theophraste, 4th c. BC) < *akr(on) karp(os)*

with fruits at the top top fruit

b. *akr-o-lith(os)* (Palatine anthology, 5th c. AD) < *akr(on) lith(os)*

with stone edges edge stone

lexical items are categorically underspecified, and get their categorial specifications by appearing in syntactic structures.

⁷ See Hopper (1991) for the gradable nature of grammaticalization in general.

⁸ Most adjectives in both Ancient and Modern Greek have three forms (corresponding to distinct inflectional paradigms), depending on their gender value, i.e. masculine, feminine, and neuter.

⁹ See Ralli (2008b) for the notion of compound marking and compound markers in Greek.

¹⁰ *-man(es)* is a bound nominal form, deriving from the verb *main(omai)* ‘to be in a rage’.

Examples demonstrating the weakening function of *akr-* are multiplied during the late medieval period (around the 12th c. AD), where there are also instances of verbal formations:

- | | | |
|---|---------|-------------|
| (4) a. akroeksispazo (Glykas, 12 th c. AD) | < akr- | eksispaz(o) |
| to shake a bit | | to shake |
| b. akrioxtipo (Chronicle of Moreas, 14 th c. AD) | < akri- | xtipo |
| to softly knock | | to knock |
| c. akralafrono (Pseudo Georgil, 15 th c. AD) | < akr- | alafrono |
| to lighten a bit | | to lighten |

Today, it still appears in certain dialectal areas, frequently in Crete, and sporadically in Cyprus, Pontus, South Italy, the Dodecanesian islands, Thrace, and the Peloponnese.

- | | | |
|---|----------|--------------|
| (5) a. akrokuzulizo (Crete) | < akr- | kuzulizo |
| to softly distract | | to distract |
| b. krofoume (Cyprus) | < (a)kr- | fou(me) |
| to be a bit afraid | | to be afraid |
| c. akriokitrininos (Peloponnese) | < akri- | kitrininos |
| yellowish | | yellow |
| d. akranixtos (Pontus, South Italy, Dodecanesian islands, Thrace) | < akr- | anixtos |
| a bit open | | open |

Crucially, while the ancient noun root *akr-* is attached to nominals (adjectives and nouns), the dialects display many verbal examples with *akr-* as first constituent. This is an indication that it has become neutral with respect to the category of the base it combines with, and thus, argues in favor of a possible prefixal status. In fact, as pointed out by Amiot (2005: 184), the ability to combine with different categories of lexemes can be a criterion according to which we may distinguish a lexical item from a prefix.

It is also important to add that the prefixal status entails a form restructuring, from *akr-* to [*akr- + -o-*], since the linking element *-o-* would no longer be considered as a compound marker, and it should be analyzed as being incorporated onto the prefix. Note that this collapsing together of adjacent forms has been proposed by Lehmann ([1982] 1995) to be one of the parameters for grammaticalization (coalescence). However, beside the merger of the root and the linking element, there is no other substantial form change. For instance, in Cretan, where *akro-* is very productive (6a), it keeps its original form. A slight change is observed in Cypriot and Peloponnesian, where *akro-* appears as *kro-* (6b) or *akrio-* (6c), respectively:

- | | | |
|---------------------------------|-----------|---------|
| (6)a. akrovoitho (Cretan) | < akro- | voitho |
| to help a bit | | to help |
| b. krolalo (Cypriot) | < (a)kro- | lalo |
| to have a small talk | | to talk |
| c. akriokokinos (Peloponnesian) | < akrio- | kokinos |
| little red | | red |

It should be noticed that the change in Cypriot (*kro-* in 6b) is triggered by the application of a general phonological law applying to certain dialects, according to which unstressed vowels are usually deleted at the beginning of words (cf. Newton 1972). Note that the Peloponnesian *akrio-* (6c) is a particularly interesting case, since it establishes a formal link with the Medieval word types *akri* and *akria* 'edge'¹¹, which coexist with the Classical Greek form *akra*. *akrio-* is firstly detected in the 14th century, as illustrated by the examples of the Chronicle of Moreas in (4b), and can be used as an indication that the prefixization of *akr(a/i/ia)* into *akro-* (or *akrio-*, depending on the area) has occurred by that period. Since *akrio-* comes from *akri/akria*, it does not involve any real form change.

Crucially, parallel to the use of *akro-* as a meaning quantifier, the noun forms *akri/akria* 'edge' or *akro* have never disappeared from the language, as shown by the following

¹¹ *akra* was the Attic form, while *akri* was the Ionian one.

Standard Modern Greek examples, where they keep their original meaning. They still form compounds (7a) or show as free items in syntactic structures (7b):

- (7)a. akrokeramo < akr(o) keram(idi)
 tile of the edge edge tile
 b. I akri/to akro/i akria tu dromu
 The edge of.the road

Finally, it is important to point out that the coexistence of the old noun with the new prefix does not pose any problems for the prefixation hypothesis: it illustrates a typical case of ‘divergence’, which is justified and accounted for within the framework of grammaticalization theory (Hopper 1991: 11)¹².

2.2 *moro-*

mor- is the root of the Ancient Greek adjective *mo:r-os/-a/-on* ‘idiot, silly’, and with this meaning appeared in a small number of nominal compounds of the classical period:

- (8) mo:r-o-logos (Aristotle, 4th c. BC) < mo:r- -log(os)¹³
 who talks silly silly who talks

As Babiniotis (1969: 154) notes, in the 12th century, formations with *mor-* display traces of a hypocoristic function. For instance, *moroipnos* in (9) is ambiguous: it may mean a ‘silly sleep’, where *mor-* keeps the original meaning, but also ‘little sleep’:

- (9) moroipnos < mor- ipnos (Glykas, 12th c. AD, 170 TLG)
 little sleep sleep

However, there is no other evidence of this hypocoristic meaning in the subsequent centuries, and it is only in the 17th c. AD, where the first examples of a similar use are detected in a chronograph from Serres, a town in the northern part of Greece (Macedonia):

- (10)a. morogematos < mor- gematos
 not very full full
 b. moropsaltis < mor- psaltis
 who knows some chanting chanter
 c. morofovume < mor- fovume
 to be a bit afraid to be afraid

What is crucial about these occurrences is not only the new hypocoristic meaning, which at least for the examples (10a,b) is not transparent to the original meaning (‘silly’), but also the fact that *mor-* can be added to verbs (10c). This property to combine with lexemes of various categories leads us to suppose that combinations with *mor-* are not compounds, but derived words, i.e. prefixed words. Were *mor-* an adjective, the only possible combinations would have been those with a nominal base, such as the ones that we find in earlier texts. We further suppose that the prefixal use also leads to a form restructuring (coalescence), from *mor-* to *moro-*, as we have supposed for *akro-*, according to which *-o-* is no longer a compound marker, but a prefix final vowel.

Today, the prefix *moro-* can be found in dialects all over Greece (11), but the number of occurrences is very restricted, and the native speakers of these dialects cannot create productively new formations:

- (11)a. moroskotina (Mykonos) < moro- skotina
 little dark dark
 b. morovrasto (Kythera) < moro- vrasto
 little boiled boiled
 c. moranixtos (Chios) < moro- anixtos
 bit open open

¹² “When a lexical form undergoes grammaticization to a clitic or affix, the original form may remain as an autonomous element, and undergo the same changes as ordinary lexical items.”

¹³ *-log(os)* is a bound nominal, which derives from the verb *lego* ‘to talk’. See Ralli (2008a) for more information about those nominal elements.

- d. moroprasinizo (Macedonia) < moro- prasinizo
to become little green to become green
- e. morokegome (Epeiros) < moro- kegome
to be a bit burnt to be burnt
- f. morovrexī (Euboea) < moro- vrexī
to rain a bit to rain

The limited number of these occurrences and the lack of productivity of prefixing *moro-* to other lexemes, drive us to the conclusion that *moro-* came close to become a prefix in some parts of Greece. However, for some reason it disappeared, leaving certain examples, such of those in (11) as fossilized cases.

It is also important to add that with respect to its form, *moro-* has not undergone any specific phonological changes across centuries, with the exception of the shortening of the ancient root vowel /o:/, which, however, has affected all Greek long vowels in the Hellenistic period (ca. 3rd c. BC - 3rd c. AD).

At this point, it is worth noticing that parallel to the appearance of the hypocoristic function in Serres (17th c. AD), in two other areas, Cyprus and Crete, the adjective *mor(os)* 'silly' seems to have undergone a recategorialization as noun, with the meaning of 'baby'. This noun is found as a free item in syntax (12a,b), and as a stem constituent of [N N] Cretan compounds (12c) in various texts dating of the 16th and 17th centuries:

(12)a. Cretan (Erotokritos A2239, 17th c. AD)

San to moro opu kianis fajto ðen t' arminevji ke kin ot ora jeniθi na vri vizi jirevji

Lit. Like the baby that nobody food NEG it recommend.3Sg and it any time bear.3PassSg PRT look.3Sg for breast

'As for the baby for whom nobody recommends any food, but by the time he is born he looks for breast-feeding'

b. Cypriot :

moron pedin (Poèmes d'amour, 16th c. AD)

baby child

c. Cretan

morokopelo (Stathis, 17th c. AD)

young man

The noun *moro* spread all over the Greek speaking world, since it is part of today's common vocabulary, while its ancestor *mor(os)* 'silly' has disappeared from the common language.¹⁴ However, compounds with the stem of the noun *moro* as one of their constituents are not rare, especially in the dialects of Lesbos and Aivali¹⁵, as the following examples illustrate:

(13) Lesbian / Aivaliot

a. mur-u-klegu¹⁶ < mur- klegu

to cry like a baby baby to cry

b. mur-o-panu < mur- pan(i)

baby cloth baby cloth

Interestingly, in the dialect of Apiranthos of the island of Naxos (14), which is related to Cretan, the noun *moro* seems to have developed a new evaluative function. In this dialect,

¹⁴ It subsists only in some expressions of a very formal type of language (in the so-called 'katharevousa'), which are reminiscent of Ancient Greek.

¹⁵ Aivaliot is the Asia Minor dialect of the former Greek-speaking town of Kydonies (also called Aivali), today's Ayvalik, till 1922. This dialect is still spoken in certain dialectal enclaves in Greece, which are inhabited by first, second, and third generation refugees, who have settled there after the end of the war between Greece and Turkey, and the Lausanne treaty in 1923.

¹⁶ -u- is the linking vowel/compound marker. It is an underlying /o/ which has become /u/ in unstressed position because of a dialectal phonological law applying to the northern Greek dialects, among which those of Lesbos and Aivali, which raises the mid unstressed vowels /o/ and /e/ into /u/ and /i/ respectively.

there are formations, where the stem of *moro* can be seen as a diminutivizer of the meaning of the base:

(14) Apiranthos (Naxos)

- a. moragatho < mor- agath(i)
 little thorn little thorn
 b. moromagazo < mor- magaz(i)
 little shop little shop

However, this evaluative use should be considered as an independent development from that of the Serres dialect. Beside the fact that the new diminutivizing *mor-* appears in a different area from that of Northern Greece (Naxos and Crete are located in South Greece), it is attached only to nouns, and its semantic and formal relation with the new noun formation *moro* 'baby' is very transparent. Therefore, it is legitimate to assume that the Apiranthos *mor-* still retains its lexical character, and has not acquired the prefixal status.

2.3 *sjo/so-*

sjo-/so- (< *sio-*) as first constituent of morphologically complex words originates from the adverb *isja* (< *isia*) 'straight'. It appears under the form of *sjo-* in Western Crete, while in the eastern part of the island, an independently motivated palatalization law reduces *sjo-* into *so-*. In the early texts of the 16th and 17th centuries, the original adverbial stem *is(i)-* is a compound constituent, as illustrated by the examples in (15). In these examples, the unstressed initial vowel /i/ is deleted, due to a phonological law erasing initial unstressed vowels, as already mentioned for *akro-*, and a compound marker *-o-* appears between the two compound constituents:

(15)a. Ta kanu ki apomenusi me texni s-o-themena (Panoria A 416)

- Lit. Them make.1SG and remain.3PL with art straight-put
 'I make them and they remain as such with an artistic straight manner'
 b. s-o-pato horafi (Varuchas, notary. 1598.353.2)
 Lit. straight-stepped land
 'flat land'

Dimela (2005) and Ralli & Dimela (to appear) have shown that parallel to the original word where it came from, *sjo-* is used in today's Cretan as an intensifying prefix, and is attached to several categories, i.e. to verbs (16a), adjectives (16b), adverbs (16c), and nouns (16d):

(16) Cretan

- a. sojerno < so- jerno
 to become very old to become old
 b. soaspros < so- aspros
 very white white
 c. sodreta < so- dreta
 very straight straight
 d. sogopanisma < so- kopanisma
 thrash walloping

sjo- is very frequent, and participates in the creation of everyday neologisms, some of which cannot be found in the most updated Cretan dictionaries (e.g. Idomeneas 2006 and Ksanthinakis 2000). For instance, Dimela (2005) reports the verb *sjoksejivedizo* 'highly humiliate', which has been produced by native speakers during her field work.

The prefixal status of *s(j)o-* is also proved by the fact that, on synchronic grounds, native speakers make no link between its initial lexical meaning of 'straight' and the actual intensifying function. For instance, they often mix up *s(j)o-*, originating from *isja* 'straight', with a prefix *sin-* (from the Ancient Greek preposition *sin* 'together, plus' cf. Charalabakis 2001). Following Dimela (2005), this confusion is due not only because *sjo-* and *sin-* are not very distant phonologically, but also because among the interpretations of their

morphologically produced words there is a notion of similarity. The first traces of such a mixing can be detected as far as to the 17th c. AD. Consider the following examples:

(17) a. k'i djo so-bropatusasi (Erotokritos A 37)¹⁷

Lit. and.the.two straight-stepped.3PL

'And both of them have the same age'

b. sjotseros < sjo- ker(os) / sigeritis < sin ker-itis
of the same age weather/time / of the same age time/weather-DAFF

(17a) is ambiguous with respect to which of the two, (*i*)*sjo*- or *sin*- is used: formally, the first constituent *so*- appeals to the original *isja*. However, the fact that the initial consonant of the base (*propato* or *porpato* 'to walk') becomes a voiced /b/ shows that the previous constituent ends in a nasal /n/, which belongs to *sin*-. The mixing is further demonstrated by (17b), where without any change in the meaning, the same base is prefixed by either *sjo*- or *sin*-. Further proof is found in the files of the *Centre of Research of Modern Greek Dialects* of the *Academy of Athens*, where the verb *sofiliazio* (< *filiazo*¹⁸ 'apply') is given two different interpretations: in certain files, *so*- is attributed to the word *isja*, while in others, an anonymous lexicographer claims that it comes from the preposition *sin*.¹⁹

Crucially, as noted by Ralli & Dimela (to appear) and Ralli (2009b, 2010), in some northern dialects, mainly in Lesbian and Aivaliot, a corresponding item *sa*-, also originating from the adverb *isja*, appears preposed to locative adverbs.

Consider the examples in (18):

(18) *sapera* 'far away' < *sa*- *pera* 'away'
sadju 'over here' < *sa*- *edju* 'here'
saki 'over there' < *sa*- *iki* 'there'
sakatu 'straight down there' < *sa*- *katu* 'down'
sapanu 'straight up there' < *sa*- *apanu* 'above'
samesa 'more inside' < *sa*- *mesa* 'inside'

Ralli & Dimela (to appear) have shown that, contrary to Cretan speakers, all native speakers of Lesbian and Aivaliot are aware of the relationship that *sa*- bears with the original word *isja*. In these dialects, the fact that *sa*- is still semantically transparent with respect to *isja* casts doubt on the hypothesis that *sa*- is a real prefix. If it is a lexeme, its combination with the locative adverbs could be analyzed as an instance of compounding. In fact, *sa*-, under its full adverbial form *isa*, also appears at the right-hand position of adverbial compounds, as for instance, in the following formation:

(19) *uloisa* 'all straight' < *ulu* 'all' *isa* 'straight'²⁰.

Moreover, the appearance of *sa*- in morphologically complex adverbs is of limited productivity, since it is restricted to a handful of examples containing specific locative adverbs, as illustrated by the ungrammatical example of **saksu* in (20):

(20) **saksu* 'more outside' < *sa*- *oksu* 'outside'

Finally, like *sjo*-, *sa*- has undergone a phonological change with an initial /i/ deletion and the internal loss of the semi-vowel /j/ (palatalization). However, both phonological changes are due to general phonological laws, which apply to several Modern Greek dialects, independently of the particular morphological environment of the *s(j)o*-/*sa*- formations.

¹⁷ Literary texts of the 17th century are written in the dialectal variant of Eastern Crete, where the prevalent form is *so*-. Therefore, it is not a coincidence that *so*- is phonologically confused with *sin*-, since it is more similar with the latter than its variant *sjo*-.

¹⁸ The verb either comes from *thiliazio* (< *thilia* 'noose, eyelet') or is of an unknown etymology.

¹⁹ Interestingly, a number of comparable cases can be shown in the dialects of Cyprus, a number of Cycladic islands (e.g. Naxos, Thera), Euboea and Samos, although not with the same frequency.

²⁰ In this case, there is no need for /i/ deletion, since /i/ is not in the initial position.

3 Discussion

As seen with the data above, there is no doubt that *akro-* in several dialects, and *s(j)o-* in Cretan are prefixes resulting from a prefixization process. The evolution of *akro-* cuts across the history of Greek, since the first indications of a semantic change appeared in the early years of the historical period (8th c. BC), while *s(j)o-* is a recent formation. *moro-* is a different case: there are traces of a prefixal use in the post medieval period (17th c. AD), but, as shown in 2.2., this use has disappeared from the language. In contrast, the original adjectival lexeme (with the meaning of ‘silly’) has been nominalized (with the meaning of ‘baby’), and from that, a new evaluative use seems to be under development, especially in the dialect of Apiranthos. However, this new form is not a true prefix yet, since the connection with its source is quite transparent on both semantic and structural grounds. For instance, it is significant that *moro-* as a diminutivizer cannot combine with adjectival bases, as opposed to other diminutive affixes in Greek, which can be attached to both nouns and adjectives.

The status of a real prefix is doubtful with respect to the Lesbian/Aivaliot *sa-* too, which is also transparently linked to its source, and has specific combinatorial properties, since it is combined with a small number of locative adverbs.

As mentioned in section 1, prefixization is an instance of morphologization, and its realization is due to a number of parameters. With respect to the two general parameters that are usually assumed to be involved not only in morphologization, but in every grammaticalization process, that is the phonological and the semantic ones, our data have shown the following two facts:

a) Phonological erosion may precede or follow resemanticization, but it is not a compulsory criterion for an item to be morphologized. In fact, we have seen that *akro-* has become a prefix in a number of Modern Greek dialects, without being subject to any phonological change, and that the slight change that is attested with respect to the Cypriot *kro-* is not related to the process of prefixization itself but is due to a general phonological law. Nevertheless, the Cretan *s(j)o-* proves that phonological change, although independently motivated, is part of the prefixization process of the adverb *isja*, as it led to the confusion with the preposition *sin* (see section 2.3).

b) Resemanticization has affected all three examined items. Our data have provided support to Booij’s (2005) statement that semantic change precedes the formal one. Nevertheless, as shown by *moro* in the dialect of Apiranthos, and by *sa-* in Lesbian and Aivaliot, resemanticization is not a sufficient parameter to ensure completion of prefixization. In fact, those two items are still close to lexemes, and speakers still link them to their sources.

In section 1.2, we have put forward the hypothesis that since compounding and prefixation are morphological processes, at least for Greek, the decisive criteria for an item to become a prefix should be morphological. With few exceptions, researchers agree that one of these criteria refers to the property of boundness (see, among others, Booij 2005). However, as already mentioned in section 1.1., in a language like Greek, both prefixes and the first constituents of compounds are bound, the latter being stems deprived of their inflectional endings. Seen from this perspective, the distinction between the first constituent of a compound and the prefix of a prefixed word should not be based on the non-separability property of these items. In fact, van Goethem (2007) has also reached the same conclusion in her examination of Dutch preverbs. In this paper, we would like to suggest that the application, or non-application, of this parameter should be viewed as being language dependent. In Greek, prefixes have a ‘more bound character’ than stems, since they do not appear in syntactic constructions as free items (stems can be used as free words with the appropriate inflectional endings).²¹ In this sense, the non-separability

²¹ Some Modern Greek prefixes though share the same form with prepositions that are free items. For instance, the prefix *apo*, in a prefixed verb like *apografo* ‘to record’, has the same form with the

criterion is not irrelevant to a prefixization process in this language, since it makes a morphologized item to gain a greater degree of boundness. Nevertheless, we would also like to claim that it should be considered as a criterion for distinguishing a Greek prefix from a non-prefix, and not as a parameter, which may be directly involved in a prefixization process.

The same considerations apply to the decategorialization of an item, and the property of occupying a specific position within a morphologically complex word. A constituent which is category neutral, and appears at the left-hand position²² of a word, has already become prefix, as opposed to stems, which belong to specific grammatical categories, and may appear as first or second items, depending on the case. Therefore for a particular item, boundness, decategorialization, and fixed position are strong indicators of a prefixal status. These properties signal the final stage (the result) of prefixization, and should not be viewed as parameters, which may induce the item to become a prefix.

The question that still requires an answer though concerns the parameters which are typical of a prefixization process, and characterize the incipient stages, where variable phenomena occur. At this point, we would like to propose that the decisive factors for the completion of a prefixization process are a) the expansion of the combinatorial properties of an item (in accordance with Amiot 2005), and b) the raise of productivity of a candidate prefixation pattern. For instance, in Ancient Greek, *akr-* and *mor-* are attached to nouns to form compounds. In contrast, much later (*akro-* around the 12th century and *moro-* at the 17th century) the two items appear to be combined with nouns, adjectives and verbs. In other words, they have become category neutral, like true prefixes. However, while formations with *akro-* have been multiplied, and since the 12th c. are massively used in a number of dialects, those with *moro-* have disappeared. The spread of the *akro-* formations, and the disappearance of those with *moro-*, are mainly due to the degree of productivity according to which their combining processes occur. In fact, as shown in section 2.2, occurrences with *moro-* are found only in a single 17th century document from Serres. Low productivity prohibits the use of *moro-* to spread, and thus, its prefixal status is doubtful.

The same considerations apply to *s(j)o-*: we have seen in 2.3 that *s(j)o-* after being confused with the prefix *sin-* (around the 17th century) there is a significant raise of productivity of the process. We suggest that category neutrality, as well as the high productivity of attaching *s(j)o-* to several bases has induced it to emerge as a real prefix.

Nevertheless, as also seen in section 2.3, there is no sufficient justification for the hypothesis that its cognate Lesbian and Aivaliot *sa-* is a prefix. Given the unclear status of *sa-*, we may suppose that it is in the process of losing its lexeme independence, and thus, it may be considered as a kind of prefixoid. Although there are certain indications (e.g. form reduction and extended meaning), which suggest a morphologization in progress, there is no guarantee that it will result into being one: for instance, it shows no expansion of its combinatorial properties, being combined only with certain locative adverbs. It is important to point out that *sa-* illustrates the intermediate stage of a prefixization cline, where true prefixes occupy one pole, lexemes the other pole, and prefixoids are situated in between (cf. Bauer 2005, and Ralli 2010 for the notion of cline). Thus, it confirms the general claim that grammaticalization changes are accomplished gradually, as proposed by many linguists (see, among others, Meillet 1912, Lehmann 1985, Lichtenberk 1991).

preposition *apo* denoting the origin (e.g. *Erxome apo tin Athina* 'I come from Athens'). In accordance with Ralli (2005), we consider the prefix *apo* to be a bound item, and distinct from the preposition.

²² Note, however, that detecting the exact position of constituents in morphologically complex words requires an accurate documentation, something which is very difficult to have if one deals with diachronic sources, where crucial evidence is often missing (c.f. Manolessou 2008).

4 Conclusions

In this paper, we have shown that the properties of *akro-*, *moro-* and *sjo/so-* provide significant insights about the nature of a prefixation process, which implies a greater morphological involvement, since it belongs to morphologization. With respect to the general parameters playing a role in a grammaticalization process, i.e. phonological erosion and resemanticization, we have argued that they cannot ensure completion, as the crucial parameters of prefixation have to be morphological. We have proposed that decategorialization, boundness, and positioning signal the final stage (result) of prefixation and are not directly linked to the process itself, since the specific morphological parameters leading to completion are: a) the expansion of the combinatorial properties, and b) the raise of productivity of a word-formation process.

Finally, elaborating on dialectal data, we have claimed that dialects provide crucial evidence for our argumentation, evidence usually absent from the standard form of a language.

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