ON THE DENOTATIONAL AND SOCIO-EXPRESSIVE PROPERTIES OF THE GREEK VERBAL DERIVATIVES IN *APO-*, *EK(S)-*, AND *KSE-*

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Abstract: This paper deals with the semantic structure of the Greek verb prefixes *apo-*, *ek(s)-*, and *kse-* by focussing on their socio-expressive content. The patterns presented are the result of an empirical analysis of data extracted from language interviews conducted with 31 native Greek speakers in Athens, Greece in October 2010. Lieber's (2004, 2007) theoretical framework is used in the analysis. The results suggest that *apo-* and *kse-* are similar both denotationally and socio-expressively, while *ek(s)-* shows up with an ambiguous structure. The interactional socio-expressive patterns make clear that no composition takes place between prefixes and bases but a discharging of the prefixal content onto a non-base argument. Positive socio-expressive clusters in the verbal roots promote the default negative content of the prefixes.

Keywords: morphological theory, verbal prefixes, distancing, socio-expressive meaning

1. Introduction

This paper[1] is the third part of the self-funded project "The Integration of Socio-expressive Meaning into Verb Structures" conducted by the author at the University of Cologne, Germany. The project aims at the formulation of a semantic theory of verb derivation which refers to: (i) a denotational (DE) tier based on Lieber's (2004, 2007) model, and (ii) a socio-expressive (SE) tier developed by the author out of the analysis of creations.

The first part of the project (Charitonidis 2011) gave the semantic profile of the Greek verb-deriving suffixes *-íz(o)*, *-én(o)*, *-év(o)*, *-ón(o)*, *-(i)áz(o)*, and *-ín(o)*,[2] with a special account of the ending *-áo/-ó*. The analysis suggested (i) a sign-based treatment of derivational affixes, (ii) a vertical preference structure in the semantic structure of the head suffixes which takes into account the semantic make-up of the bases, and (iii) the integration of SE meaning into verb structures.

The SE components detected in Charitonidis (2011) were decomposed into a set of SE features in the second part of the project (Charitonidis 2012a, 2012b). The selectional properties of the verb suffix *-(i)ázo* were sufficiently explained by means of an extra semantic representation, i.e. the SE tier (see section 4).

The present paper examines the DE and SE properties of the Greek verbal prefixes *apo-*, *ek(s)-*, and *kse-*, in the following referred to as *distancing* or [–Loc] prefixes. Several studies have already pointed out the entanglement between distancing and negative SE meaning (see Efthymiou 2001: 206 and the references therein). Accordingly,

these prefixes are ideal objects of investigation within the author's ongoing project. They carry an explicit DE and SE content which, should the situation arise, interacts with the verbal bases.

The data used in the analysis come from 31 interviews[3] conducted by the author in October 2010 at the Philosophical Faculty of the University of Athens, Greece. Each interview part was conceived as a question or task and had a small introductory text. As in Charitonidis (2011) the interviews concentrated on meaning predictions as regards **lexical** knowledge. This means that no context was given together with the tested material. The test persons (henceforth TPs) were able to both hear and read the introductory text and the base words. Since bases and prefixes were given in written form, the TPs did not confuse them with phonologically similar items. The TP responses were both recorded and written down on paper by the investigator.

The TPs were mostly humanities students aged between 18 and 25.[4] To ensure a homogenous sample, it was explicitly required that the TPs have been born in Athens with parents also born in Athens. Each TP received a €5 fee for his/her participation.

The main issues which will be addressed in this study are:

(i)   The general properties and the base/root preferences of the verbal prefixes *apo-, ek-,* and *kse-*.
(ii)   The default SE content of these prefixes.
(iii)   Whether or not composition takes place between verbal prefixes and verbal bases in the SE tier. Are there factors which influence the inheritance of the negative SE features of the prefixes at word level according to the TP interpretations?

Let us begin with a brief description of the morphological properties of the prefixes while taking into account some diachronic patterns.

2. Diachrony and the properties of the prefixes

2.1 The prefix *apo-*

The Greek prefix *apo-* is phonetically realized as [apó] when the stress raises from the base to the prefix and – mainly in old derivations – [ap] or [af] before a non-aspirated or an aspirated vowel, respectively (*DCMG* 1999)[5].

In Ancient Greek (AG), *apo-* was used as a deverbal, denominal, and deadjectival prefix to denote a point of departure, distancing, exclusion/isolation, privation, end of change of state, negation, "back" (cf. Engl. *re-* 'give/take back, etc.'), intensification, and

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[3] The interviews contained five parts. For the present paper only the first part was considered. The number of the interviews was regarded by the author as sufficient since explicit DE and SE patterns emerged by this number.

[4] Young humanities students usually have considerable interest in language issues. Additionally, the age from 18 to 25 years is usually connected with a natural propensity towards the use of neologisms and novel creations.

[5] In Modern Greek (MG) there are no aspirated vowels. The phonetic realization [af] is mainly used in old formations. Some well-educated speakers conversant in the grammar of old Greek continue to introduce words with [af], cf. the verbal derivative *afalatóno* 'desanalize' (*aláti* 'salt').

termination – special meaning: '**from/at outside of sth.'** (see Efthymiou 2002: 202-203). *apo-* also showed up independently as a **preposition** exclusively combined with NPs in genitive. The resulting PPs denoted place (point of departure, distancing, origin – special meaning: '**from/at outside of sth.'**), time (starting point, sequence of events), but also instrument, means, cause, and other relations which can metaphorically be related to the notion of a source or origin (cf. Bacharákis 1989: 34).

In MG, *apo-* is a deverbal, e.g. *apodhinamóno* 'weaken' (*dhinamóno* 'strengthen')[6] and marginally a deadjectival, e.g. *apókedros* 'decentral' (*kédro* 'center') prefix. According to Efthymiou (2002: 204), the four *apo-* meanings which are productive in contemporary Greek are 'distancing', e.g. *apoxorízome* 'part with/from' (V *xorízo* 'separate' + non-active *-me*), 'privation', e.g. *apokefalízo* 'decapitate' (N *kefáli* 'head' + suffix *-ízo*), 'end of change of state', e.g. *apoksenóno* 'estrange' (A *ksénos* 'different; stranger' + suffix *-óno*), and 'reversal', e.g. *apodhiorghanóno* 'disorganize' (V *dhiorghanóno* 'organize'). The prefix *apo-* shows up independently as a **preposition** combined mainly with NPs in accusative[7]. The uses of the resulting PPs are similar to the uses of the AG PPs described above but there are also some extra ones such as 'comparative', etc. (see Holton et al. 380-385).

2.2 The prefix *ek(s)-*

The prefix *ek(s)-* is phonetically realized as [ek] and – occasionally as [eg] before [v, γ, ð, z]. The same prefix is phonetically realized as [eks] before a vowel and [ék] or [ég] or [éks], when the stress raises from the base to the prefix (*DCMG* 1999).

In AG, *ek-* was used as a deverbal and deadjectival prefix (cf. some nominalised derivatives such as *ékghonos* 'offspring' (N *ghónos/ghonée* 'begetting') to denote a point of departure, 'out of', privation, end of change of state, intensification, and reversal – special meaning: '**from inside of sth.'** (see Efthymiou 2002: 200). The prefix *ek-* also showed up independently as a **preposition**, exclusively combined with NPs in genitive to denote place (point of departure, distancing, origin – special meaning: '**from inside of sth.'**), time (starting point, immediate sequence of events), but also instrument, means, cause, and other relations which can metaphorically be related to an (immediate) source or origin (cf. Bacharákis 1989: 35).

In MG, *ek-* is a deverbal, e.g. *ekthronízo* 'dethrone' (N *thrónos* 'throne' + suffix *-ízo*), and very marginally a deadjectival, e.g. *ékedros* 'eccentric' (N *kédro* 'centre') prefix. According to Efthymiou (2002: 204), the two *ek-* meanings which are productive in contemporary Greek are 'out of', e.g. *ekparathiróno* 'lock sm. Out' (N *paráthiro* 'window' + suffix *-óno*) and 'end of change of state', e.g. *eklaikévo* 'popularize' (A *laikós* 'popular' + suffix *-évo*).[8]

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[6] *Dhinamóno* is a denominal verb containing the N *dhínami* 'strength' and the suffix *-óno*. For brevity's shake, I do not give the root in the case of an *existing* suffixed verb in the base.

[7] Some speakers of Greek continue to use the AG *apo-* + NP (gen) construction in fossil expressions, e.g. *apó makrú* 'long, a long time ago'. It should be noticed that in MG there are also some *apo-* + NP (gen) constructions with an adverbial status, such as the temporal expression *apo tu xrónu* 'from next year on' (*xrónos* 'year'), etc. (see *DCMG*).

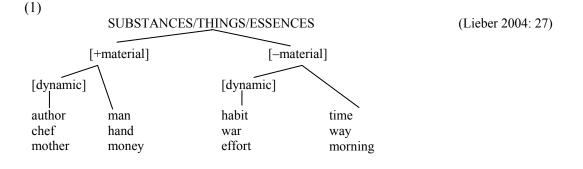[8] For stylistic effects, some speakers of Greek continue to use the AG *ek-* + NP (gen) construction, esp. in fossil expressions (cf. *ek tu ponirú* 'intentionally; selfishly' – lit. 'from the evil one'), but this construction is no longer productive.

2.3 The prefix *kse-*

The prefix *kse-* is phonetically realized as [kse], or [ksé] when the stress raises from the base to the prefix, and [ks], usually before [a], but also before the rest of the vowels (DCMG). It evolved out of the past forms of the AG prefix *ek(s)-*, e.g. from the past form *eks-éfigha* 'escaped' of the verb *ek-févgho* 'escape' (*févgho* 'be haunted', 'escape', etc.) the MG presens *kse-févgho* 'elude, escape' was evolved (see Efthymiou 2002: 200 and the references therein). *Kse-* is a deverbal, deadjectival and marginally a denominal prefix – in the latter case many nominal derivatives with an informal and highly expressive character are attested, e.g. N *kse-krío* 'not cold' derived from N *krío* 'cold', cf. the sentence *krío kse-krío – tha vghó ékso* 'I don't care if it's cold outside – I will go out', etc[9]. According to Efthymiou (2002: 201), the four meanings of *kse-* which are productive in contemporary Greek are 'privation', e.g. *ksefludhízo* 'hull, peel' (N *flúdha* hull, peel' + suffix *-ízo*), 'reversative', e.g. *ksedíno* 'undress' (V *díno* 'dress'), 'intensification', e.g. *ksekuféno* 'din' (V *kuféno* 'deafen'), and 'cessation/end of change of state', e.g. *ksemethó* 'sober up' (V *methó* 'inebriate'). As can be seen, though MG *kse-* evolved out of the AG *ek(s)-*, the former is categorially and semantically/expressively much more versatile as opposed to the latter.

3. Theoretical framework. The distinction between semantic skeleton and pragmatic body

Lieber (2004, 2007) introduces an ontological system which decomposes the traditional categories verb, noun, adjective, and preposition into combinations of features. The noun category is given in (1) bearing the label SUBSTANCES/THINGS/ESSENCES and the verb and adjective categories are given in (2) bearing the label SITUATIONS.[10] The feature [IEPS] in (2) refers to an 'inferable eventual position or state'. It denotes the progression towards an end position or an end state.

(1)
              SUBSTANCES/THINGS/ESSENCES   (Lieber 2004: 27)

          [+material]   [–material]

    [dynamic]   [dynamic]

    author   man   habit   time
    chef   hand   war   way
    mother   money   effort   morning

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[9] This informal/expressive use of *kse-* is also evident in deverbal and deadjectival formations.
[10] The featural system of English prepositions can be found in Lieber (2004: 107).

(2)

| | | SITUATIONS | | (Lieber 2004: 30) |

$$\text{SITUATIONS}$$

STATES
[–dynamic]

EVENTS
[+dynamic]

SIMPLE ACTIVITY
[+dynamic]

CHANGE
[+dynamic; +/–IEPS]

UNACCUSATIVE/
INCHOATIVE
[+dynamic, +IEPS]

MANNER OF
CHANGE
[+dynamic, –IEPS]

be	eat	descend	walk
remain	kiss	fall	run
own	listen	go	amble
hear	hold	evaporate	vary
cost	yawn	forget	waver
know	blink	grow	fluctuate

The features in (1) and (2) are treated as functions which take arguments. They combine to yield the **semantic/grammatical skeletons** (or **skeletons** for short) of various lexical items. In (3) and (4) two such skeletons are given. In (3) [+Loc] is a function which takes an end-state argument. In the inchoative alternation the first underlined part of the skeleton drops. In (4) [–Loc] is a function which takes a theme argument[11].

(3)   Bipartite semantic skeleton of causative/inchoative verbs *solidify* (Lieber 2004: 8)
[+dynamic ([$_{\text{volitional-i}}$], [+dynamic ([$_i$], [+dynamic, +IEPS ([$_j$], [+Loc ([$_k$])])]),
[$_j$])];   [-dynamic
                              ([$_k$])]] *solid*

$$\Downarrow$$
$$\varnothing$$

(4)   Semantic skeleton of denominal privative verbs
       deice (cf. *deice an airplane's wings*)   (Lieber 2004: 110)
[+dynamic ([$_{\text{volitional-i}}$], [$_j$])]; [+dynamic ([$_i$], [+dynamic, +IEPS ([$_j$], [–Loc
([$_k$])])]), [+material ([$_k$])]
de- ice

The violable **Principle of Co-indexation** (CIP) – see (5) – regulates the assignment of indices between heads and bases. In the case of (3) and (4) the affix is the head and the base the non-head[12].

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[11] For the reader not familiar with Lieber's system (3) can be paraphrased as 'i acts on j with the effect that j becomes solid', and (4) 'i acts on j with the effect that j has no ice on it'.

[12] In both (3) and (4) the respective affixes are heads because they determine, i.e. change, the syntactic category of the derived word (see Lieber 2004: 129-130).

(5)   **Principle of Co-indexation** (Lieber 2004: 61)
        In a configuration in which semantic skeletons are composed, co-index the
        highest nonhead argument with the highest (preferably unindexed) head
        argument. Indexing must be consistent with semantic conditions on the head
        argument, if any.

A semantic condition on the head argument is, for example, the feature 'volitional' in (3)
and (4), which according to Lieber (2004: 72) can be inferred from the composition of the
semantic/pragmatic body (or **body** for short) of the verbal arguments, e.g. from features
such as <animate> or <human>.

Lieber (2004 and 2007) regards body as encyclopaedic, holistic,
non-decompositional, and not composed of primitives. It refers to perceptual and cultural
knowledge while including many of the aspects of meaning that Pustejovsky (1995)
encodes in his Qualia Structure, i.e. information concerning material composition, part
structure, orientation, shape, colour, dimensionality, origin, purpose, function, etc.
(Lieber 2004: 10; see Pustejovsky 1995: 85-86 for a short description of Qualia
Structure).

4. The socio-expressive (SE) tier

In the following I will show that body, in the form of an extra SE tier, is a powerful
generative component with distinctive properties, contrary to Lieber's assumptions
mentioned in the previous section. This component restricts the skeleton operations so
that bases with a specific composition can be selected by a particular affix.

By analysing the Greek verb-forming suffixes *-ízo, -éno, -évo, -óno, -(i)ázo,* and
-íno, Charitonidis (2011) detected a set SE elements which interfere in Lieber's SE
structure for causative/inchoative verbs (cf. (3) in the previous section), such as
{+derisive}, {−evaluation}, {+intensive}, etc.[13] According to metaphorical uses of
English prepositions, Charitonidis (2012a and 2012b) elaborated a system of SE features
which account for these SE elements. Table 1 displays the process of identification of the
SE features.

Table 1. Spatial prepositions and SE meaning

Spatial Prepositions	Example phrases	SE metaphor (SE meaning)	SE features
Motion (*onto*, *into*, etc.)	*turn into a confrontation*	Meaning of measurement/ continuation/progress, i.e. size, intenseness, strength, etc., of a higher (cf. {+intensive}) or lower (cf. {+diminutive}) degree	{+measure}
Stasis (*at*, *on*, etc.)	*at home*	Invariable SE content	{−measure}

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[13] From now on SE elements are enclosed in curly brackets.

Orientation towards sth.. (*to, toward, along,* etc.)	*along the lines of the system*	Positive stance towards a situation or entity	{+stance}
Distancing from sth.. (*below, from,* etc.)	*below expectations*	Negative stance towards a situation or entity	{−stance}
Horizontal orientation (*along, across,* etc.)	*get along with so.*	Estimations and stances explicitly involving the domain of interpersonal relations	{+interpersonal}
Vertical orientation (*up, down, over,* etc.)	*passed over the governor's veto*	Estimations and stances that are to a certain degree orthogonal to the domain of interpersonal relations	{−interpersonal}

It must be noted that the features {measure}, {stance}, and {interpersonal} in Table 1 address all major lexical categories, i.e. nouns, adjectives, and verbs, and may be underspecified. Affixes are lexemes under the sign-based hypothesis (Lieber 2004 and 2007, Melissaropoulou and Ralli 2010, Plag 1999 and 2000, etc.) and are addressed by these features as well.

Table 2 exemplifies the mapping of the SE features onto lexemes – the SE features appear therein in abbreviated form.

Table 2. The mapping of SE features onto lexemes

SE features	Lexemes	Examples	
{+m}	N	*rébelos*	'loafer'
	A	*álalos*	'stunned, dazed'
	V_{af}	*-(i)ázo*	continuation, progress
{−m}	N	*mitéra*	'mother'
	A	*kítrinos*	'yellow'
	V_{af}	*-évo* [stative]	invariable SE meaning
{+s}	N	*mitéra*	'mother'
	A	*ghlikós*	'sweet'
	V	*filó*	'kiss'
{−s}	N	*rébelos*	'loafer'
	A	*álalos*	'stunned, dazed'
	V_{af}	*-(i)ázo*	negative meaning
{+i}	N	*kubáros*	'best man'
	A	*anedhís*	'impudent'
	V	*filó*	'kiss'
{−i}	N	*fádasma*	'ghost'
	A	*álalos*	'stunned, dazed'
	V	*aftoktonó*	'suicide'

In Table 2 N *rébelos* 'loafer' is {+m} because a person who spends time idly is engaged in various activities to a limited extent. A *álalos* 'stunned, dazed' is {+m} because an utterly confused or tangled person deviates from a standard psychological or mental state. Like the other dynamic suffixes the verbal suffix *-(i)ázo* – cf. *alaliázo* 'daze, drive sb. mad' – is {+m} because it denotes progress. N *mitéra* 'mother' is {–m} because it refers to an entity with an invariable socio-expressive content. A *kítrinos* 'yellow' is {–m} because, like the other basic colour terms, denotes an invariable focal colour (Berlin and Kay 1969). The verbal suffix *-évo* in its stative interpretation is {–m} because it denotes an invariable state, e.g. *vasilévo* 'be a king/queen (*vasiliás* 'king'). N *mitéra* 'mother' is {+s} because it refers to a socially positive role. A *ghlikós* 'sweet' is {+s} because, most trivially, it refers to a positive sensation. V *filó* 'kiss' is {+s} because it denotes a positive stance towards someone. N *rébelos* 'loafer' and A *álalos* 'stunned, dazed' are {–s} because they relate to negative evaluations. The verbal suffix *-(i)ázo* is {–s} because it imposes its negative coordinative structure onto entities not bearing a negative stance marking, e.g. the creation !*miteriázo* 'behave annoyingly like a mother' (*mitéra* 'mother') in Charitonidis (2011, 2012a and 2012b). N *kubáros* 'best man', A *anedhís* 'impudent', and V *fil(ó)* 'kiss' are {+i} because they normally involve interpersonal relations. N *fádasma* 'ghost' is {–i} because it refers to entities outside the domain of interpersonal relations. A *álalos* 'stunned, dazed' is {–i} because an utterly confused or tangled person cannot fulfil interpersonal relationships properly. V *aftoktonó* is {–i} because it denotes a behaviour which is definitely orthogonal to social interaction.

After considering all detected SE components and the interpretations/evaluations of all created and existing verbs in Charitonidis (2011), Charitonidis (2012a and 2012b) defined two main SE clusters for the Greek verbal suffixes. These are given in (6).

(6)   {+m}{s}{i} default SE matrix for *-ízo, -óno, -évo, -éno, -íno*
        {+m}{–s}{i} default SE matrix for *-(i)ázo*

The SE clusters in the head suffixes combine with the corresponding SE clusters in the verbal bases according to (7).

(7)   **The properties of the SE tier in relation to verbal suffixation**
        a.   Derivation bases refer to the same set of features as suffixes, i.e. {m},{s}, and {i}.
        b.   Suffixes are compound heads. Their valued features are also heads.
        c.   Underdetermined features are merged regardless of their head role.
        d.   Base arguments are addressed by the features throughout the derivation, i.e. base arguments are evaluated anew in every derivational step including output.

To show how the featural system in (7) works I give the SE structure of the verbs *alaliázo* and *rebeliázo* in (8) and (9), respectively.

(8)   *álalos* A 'stunned, dazed' > *alaliázo* 'daze; drive sb. mad'
          álalos   *-(i)ázo*   *alaliázo*
          {+m}   {+m}   {+m}
          {−s}   {−s}   {−s}
          {−i}   {i}   {−i}
(9)   *rébelos* N 'loafer' > *rebeliázo* 'loaf'
          rébelos   *-(i)ázo*   *rebeliázo*
          {+m}   {+m}   {+m}
          {−s}   {−s}   {−s}
          {+i}   {i}   {+i}

As can be seen, the features {+m}{−s} both in the base and in the suffix restrict the skeleton operations which would otherwise over-generate verbs by simply embedding [−dynamic, −scalar] As or [+material, dynamic] Ns into the structure in (10), as the single [+Loc] argument or the first [+dynamic] argument, respectively.

(10)   *-(i)ázo*
          [+dynamic ([volitional-i   ], [j   ])]; [+dynamic ([i   ], [+dynamic, +IEPS ([j   ],
          [+Loc   ])])])], <base>]

The SE system in (7) cannot be simply generalised over verbal *prefixation,* in particular over the *apo-*, *ek(s)-*, and *kse-* verbs examined for the present paper. The analysis in sections 8 and 9 will show that there are two distinct options in verbal prefixation which are both much more different than the head and merging operations involved in verbal suffixation. In particular, though the prefixes *apo-*, *ek(s)-*, and *kse-* refer to the same set of features as bases and suffixes, i.e. {m}, {s}, and {i}, they have a default negative structure which (i) is either uniformly negative as in the case of prefixation of converted verbs (see section 8.1), or (ii) is moderated by the operations in the first output, i.e. in the verbal base, as in the case of prefixation of non-converted verbs (see section 8.2). Standarly, the prefixal features which survive evaluate a non-base argument and not the base/root argument as in the case of verbal suffixation. In other words, at least at the level of SE meaning, prefixation is not a compositional process as opposed to suffixation (cf. Dimela 2011: 60 and the references therein).

5. Methodology

5.1 Creations vs. neologisms or hapaxes

The interviews conducted for this paper referred to **forced/created verbs** (or **creations**, for short). Creations are novel, ambiguous derivatives. Their bases are very old but for decades no derivatives have been formed. This is due to sometimes interrelated reasons: (i) they are blocked by the existence of other lexemes with the same or similar meaning (see Aronoff 1976, Bauer 2001, Plag 1999), (ii) they have not yet entered a

syntactico-semantic paradigm (see Charitonidis 2005), (iii) their bases are cognitively marginal/improper (see Onysko and Michel 2010, Charitonidis submitted), (v) they are blocked by phonological restrictions on the output (see Plag 1999), etc.

These output restrictions, **which are not always traceable**, do not affect the comparability of the results. First, affixes are regarded by the author as linguistic signs which keep (a part of) their semantic content whatever kind of base they attach to (the sign-based hypothesis; Plag 1999 and 2000, Lieber 2004, Melissaropoulou and Ralli 2010, etc.). Second, the comparison of the operations in created verbs with the operations in existing verbs validates the former (see section 8.2). As already shown in Charitonidis (2011, 2012a and 2012b) forcing is a highly efficient tool for the detection of SE meaning in the verbal suffixes.

The use of creations is much more efficient than the use of neologisms found in dictionary databases. Forcing evades the fundamental conflict between synchrony and diachrony and the undesirable effect of lexicalisation after the derivation of forms. As Bauer (2001) argues, neologisms can reveal active morphological processes in a given period of time, usually directly before the current time point. However, the major problem is that lexicographers have already decided what the **norm** in language is (see Bauer 2001: 28).

On the other hand, hapaxes found in large language corpora cannot be always regarded as clear and safe indicators of patterns actually active in the language **system**. They may refer to various environments, e.g. registers of young persons or experts, temporary trends, etc.

By saying this, I do not intend to depreciate the utility of neologisms or hapaxes in the morphological analysis completely (Plag 2005). In the present study, a large number of neologisms is used for the validation of the operations in created verbs (see sections 6, 8.2, and Appendix B).

Concluding, my method aims at the consolidation of the DE and SE content of the prefixes and the detection of relevant affixal operations under the condition of forcing.

5.2 Interview design

In the interviews, the TPs were asked to build "possible" verbs by using the prefixes *apo-*, *ek(s)-* and *-kse* and a group of six simple bases. The first four bases strictly conform to Lieber's (2004) featural decomposition of the noun category, which bears the mnemonic label SUBSTANCES/THINGS/ESSENCES (see (1)). Accordingly, the bases presented were the [+material, dynamic] noun *mitéra* 'mother', the [+material] noun *leftá* 'money', the [–material, dynamic] noun *adhikía* 'injustice', and the [–material] noun *xrónos* 'time'. The last two bases conform to Lieber's (2004) distinction of SITUATIONS into [+dynamic] and [–dynamic] (see (2)). Accordingly, the verbs *filó* 'kiss' and *nomízo* 'think' were presented[14]. The TPs were permitted to freely combine prefixes with suffixes by using more than one prefix for each base, if necessary. Additionally, the TPs were asked to give a short paraphrase for each created verb.

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[14] Further differentiations inside the [+dynamic] subclass (see (2) in section 3) would have been time-consuming to consider. For the same reason, adjectives were not presented to the TPs. As already mentioned, the questionnaire contained five language tasks (see f. 3).

In the compilation of the questionnaire I tried to use the same bases as in the suffixation questionnaire in Charitonidis (2011) because I intended to compare the suffixal operations with the prefixal operations according to the same input. However, the keeping of the same bases was not always attainable because the bases used in Charitonidis (2011) sometimes produced existing verbs, cf. *trógho + apo- = apotrógho* 'finish eating' (existing verb), etc. In these cases, a similar base with the same skeleton was used, cf. the [+dynamic] base *filó* 'kiss' which replaced the [+dynamic] base *trógho*, etc. Overall, I looked up all "possible" derivatives in the World Wide Web by using Google to ensure that they do not exist (the forcing argument, see section 5.1).

6. Existing verbs

6.1 The denotational (DE) skeletons of existing verbs

I would first like to present the DE profile of the existing verbs in *apo-*, *ek(s)-*, and *kse-*. Standard works, such as Efthymiou (2002), assume a **distancing** structure – or [–Loc] structure in Lieber's (2004) terms – for all three prefixes. The respective verbs are usually referred to as "privative, reversative", etc[15].

In (11) I give the main bipartite skeleton of *apo-*, *ek(s)-* and *kse-* verbs (Structure A). The [–Loc] argument may denote a removable entity (theme), a (reversible) state, a place (source), etc. In the inchoative variant the first underlined part of the skeleton drops[16].

In (12) and (13) I give two secondary bipartite skeletons containing a [+Loc] function which refer to a small number of *apo-* and *ek(s)-* verbs (Structures B and C). The verbs represented by the skeleton in (12) are usually called "ornatives" and the verbs represented by the skeleton in (13) are usually called "resultatives", etc[17]. The example verbs in (11)-(13) belong to the new derivation (M category; see section 6.2). It should be noted that in other *apo-*, *ek(s)-* or *kse-* verbs the ontological category of the base may vary[18].

(11) **Structure A: Bipartite skeleton with [–Loc]**
   kse-pagh-óno 'unfreeze, defrost' (*pághos* 'ice, frost')
   [+dynamic ([$_{\text{volitional-i}}$], [$_j$])]; [+dynamic ([$_i$], [+dynamic, +IEPS ([$_j$],
   [–Loc ([$_k$])])]]],
   kse-

                                           [+material ([$_k$])])
                                                                    pághos

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[15] The example verb *ksepaghóno* 'unfreeze, defrost' (*pághos* 'ice, frost') in (11) is reversative. A privative verb is *kse-nix-iázo* 'pull out sb.'s nails' (*níxi* 'nail'), etc.
[16] Accordingly, the [+dynamic, +IEPS] argument receives the index -i- etc. Unaccusative (change-of-place) verbs refer to the same non-underlined part of the skeleton in (11), cf. *kse-glistráo/kse-glistró* 'slip out' (*ghlistráo/ghlistró* 'creep, slip'), etc.
[17] In the ornatives the base argument is co-indexed with the already co-indexed second argument of the prefix – a permissible violation of CIP (see Lieber 2004: 85).
[18] (11) can be paraphrased as 'i acts on j with the effect that j has no ice/frost on it'; (12) can be paraphrased as 'i transmits j (i.e. rational properties) to x' (x being the [+Loc] argument); (13) can be paraphrased as 'i acts on j with the effect that j becomes miserable'.

(12)   **Structure B: Bipartite skeleton with [+Loc] (theme oriented)**
        ek-loghik-évo 'rationalize' (*loghikós* 'rational')
        [+dynamic ([$_{volitional-i}$], [$_j$])]; [+dynamic ([$_i$], [+dynamic, +IEPS ([$_j$],
        [+Loc ([   ])])])],
        ek(s)-

                                                                    [–dynamic, scalar ([$_j$])]]
                                                                                loghikós

(13)   **Structure C: Bipartite skeleton with [+Loc] (goal oriented)**
        eks-athli-óno 'reduce sm. to utter poverty; degrade' (*áthlios* 'miserable')
        [+dynamic ([$_{volitional-i}$], [$_j$])]; [+dynamic ([$_i$], [+dynamic, +IEPS ([$_j$],
        [+Loc ([$_k$])])])],
        ek(s)-

                                                                    [–dynamic, +scalar ([$_k$])]]
                                                                                áthlios

        Other *kse-* verbs with the structure in (11) are *kse-furn-ízo* 'take out of the oven'
(*fúrnos* 'oven'), *kse-strav-óno* 'straighten' (*stravós* 'slanting'), etc. Verbs with a
[+dynamic] verb in their base, such as *kse-pléko* 'undo a piece of knitting' (*pléko* 'knit'),
etc., refer to the same structure[19] – in this case a cognate, perhaps participial, [–dynamic]
base denotes a reversible state (cf. Efthymiou 2001: 208-209)[20].
        Apo- verbs with the structure in (11) are *ap-agistr-óno* 'unhook' (*agístri* 'hook'),
ap-embléko 'disb.urden' (*embléko* 'burden'),[21] *apo-thar-íno* 'discourage' (*tháros*
'courage'), etc.
        Ek(s)- verbs with the structure in (11) are *ek-xomat-óno* 'clear earth away' (*xóma*
'earth'), *ek-thron-ízo* 'dethrone' (*thrónos* 'throne'), etc.
        An *apo-* verb with the structure in (12) or (13) – conceived as ornative or
resultative, respectively – is *apo-the-óno* 'glorify, praise to the skies' (*theós* 'god'). An
apo- verb with the structure in (13) is *apo-vlak-óno* 'make stupid' (*vlákas* 'stupid'), etc.
        Concluding, I would like to point out two distinct patterns of the *eks-* verbs
(M category):
(i)   There are no *ek(s)-* verbs with a [–dynamic] (adjectival) root as the [–Loc]
argument, cf. *kse-strav-óno* and *ap-embléko* above, etc. Instead, all *ek(s)-* verbs with a
[–dynamic] root are causative verbs with a [+Loc] function, cf. *ek-loghik-évo* (see (12)),
eks-athli-óno (see (13)), etc. – notably without an active-inchoative variant[22]. The
preference of *ek(s)-* for [–dynamic] bases is discussed in section 6.2[23].

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[19] As opposed to *kse-pagh-óno* in (11), *kse-furn-ízo*, *kse-strav-óno*, and *kse-pléko* do not have an active-
inchoative variant.
[20] *kse-* and *apo-* on [+dynamic] verbs standardly change the lexical class of their bases, turning them into
change of state verbs (cf. Lieber 2004: 116, f.n. 12 on the English prefix *un-*).
[21] As with *kse-pléko* above, in *ap-empléko* a cognate, perhaps participial, [–dynamic] base denotes a
reversible state.
[22] The majority of the *ek(s)-* verbs referring to a causative skeleton containing [+Loc] are goal-oriented, see (13).
[23] The OUT1 ALL preference of *ek(s)-* at the level of SE meaning relates to the same DE preference (see
section 8).

(ii) There are no *ek(s)-* verbs with a [+dynamic] verbal root as opposed to *kse-* and *apo-* verbs, cf. *kse-pléko* 'undo a piece of knitting' (*pléko* 'knit'), etc. (see section 6.2).

In sum, *ek(s)-* refers to a different set of DE structures than *apo-* and *kse-*.

6.2 The base ontology of existing verbs

The argument put forward in this section is that differences in the base ontology of existing prefixed verbs can reveal similarities and differences in the diachronic development and the current status of the respective prefixes.

The *apo-*, *ek(s)-*, and *kse-* verbs used in the analysis to follow are taken from the online version of DCMG at http://www.komvos.edu.gr/dictionaries/dictonline/DictOn LineTri.htm. The raw data were scrutinized according to three criteria.

The first criterion was the existence of an apparently distinct nominal or adjectival root or an existing simplex verb in the base of the derivatives.

The second criterion was the existence of a [–Loc] function in the skeleton of the verbal derivatives, cf. *kse-nix-iázo* 'pull out sb.'s nails' (*níxi* 'nail'), or the absence of a [–Loc] function without lexicalization, cf. *eksatomikévo* 'individualize' (*atomikós* 'individual'). Verbs which did not conform to these requirements were regarded as synchronically unrelated (SU verbs) and were not examined. An example of a lexicalized verb which did not enter the analysis was the SU verb *ksedhíno* 'relax, unwind'. This verb cannot be thought of as a compositional function of a [–Loc] prefix and the existing verb *dhíno* 'give' (see Ralli 2004). It should be noticed that SU verbs showed up only in the old derivation (the N-M category, see below). The application of the first and second criterion defined the class of General verbs (G verbs).

The third criterion was chronological and applied to the class of G verbs[24]. According to this criterion, the origin of verbs in the last two centuries defines the subclass of "Main verbs" (M verbs/new derivation). In particular the M class contains (a) **neologisms**, especially those which scholars introduced in the past 150 years or a little earlier, e.g. *apagistróno* 'unhook' (*agístri* 'hook' + *-óno*), (b) **loan translations**, e.g. *ektroxiázo* 'derail' (*troxós* 'wheel' + *-iázo*), and (c) verbs from the **modern vernacular language**, e.g. *ksenixiázo* 'pull out sb.'s nails' (*níxi* 'nail' + *-iázo*). Verbs older than the M verbs define the subclass of Non-Main verbs (N-M verbs/old derivation).

In sum, three classes were defined: the G category with all verbs, the M category with new verbs, and the N-M category with old verbs.

The results of the analysis are given in Tables 3 and 4. All percentages are rounded off. [+Loc] in Table 4 refers to a very small number of adverbial bases in the *kse-* verbs, such as *brostá* 'in front, ahead' in *ksebrostiázo* 'expose, unmask', etc[25].

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[24] The distinctions within the class of G verbs were first made in Charitonidis (2005) in relation to Greek *-(i)zo* verbs.

[25] The fact that *kse-* combines with a wider range of bases than the other two prefixes should be related to the high productivity of this prefix – cf. *-ízo*, a highly productive verbal suffix in MG, which standardly derives verbs from nouns or adjectives but, as an exception, may combine with adverbs, as well (Charitonidis 2005).

Table 3. Percentages of subcategory totals (horizontal viewing, existing verbs)

apo-	*ek(s)-*	*kse-*	Total
M: 14 verbs	**M:** 21 verbs	**M:** 112 verbs	147 verbs (M)
9.52%	14.28%	76.19%	100%
N-M: 179 verbs	**N-M:** 96 verbs	**N-M:** 73 verbs	348 verbs (N-M)
51.44%	27.59%	20.98%	100%
G: 193 verbs	**G:** 117 verbs	**G:** 185 verbs	495 verbs (G)
38.99%	23.64%	37.37%	100%

Table 4. Base ontology and subcategory percentages (vertical viewing, existing verbs)

apo-		Subcategory Percentage	*ek(s)-*		Subcategory Percentage	*kse-*		Subcategory Percentage
Main: 14 verbs (7,25%)			**Main: 21 verbs (17,95%)**			**Main: 112 verbs (60,54%)**		
[+material, dynamic]	0	0.00%	[+material, dynamic]	0	0.00%	[+material, dynamic]	0	0.00%
[–material, dynamic]	3	21.43%	[–material, dynamic]	1	4.76%	[–material, dynamic]	7	6.25%
[+material]	5	35.71%	[+material]	7	33.33%	[+material]	57	50.89%
[–material]	1	7.14%	[–material]	3	14.29%	[–material]	5	4.46%
[+dynamic]	3	21.43%	[+dynamic]	0	0.00%	[+dynamic]	31	27.68%
[–dynamic]	0	0.00%	[–dynamic]	0	0.00%	[–dynamic]	2	1.79%
[+Loc]	0	0.00%	[+Loc]	0	0.00%	[+Loc]	1	0.89%
[–dynamic, +scalar]	0	0.00%	[–dynamic, +scalar]	5	23.81%	[–dynamic, +scalar]	6	5.36%
[–dynamic, –scalar]	2	14.29%	[–dynamic, –scalar]	5	23.81%	[–dynamic, –scalar]	3	2.68%
Non-Main: 179 verbs (92.75%)			**Non-Main: 96 verbs (82.05%)**			**Non-Main: 73 verbs (39.46%)**		
[+material, dynamic]	4	2.23%	[+material, dynamic]	1	1.04%	[+material, dynamic]	0	0.00%
[–material, dynamic]	10	5.59%	[–material, dynamic]	6	6.25%	[–material, dynamic]	5	6.85%
[+material]	45	25.14%	[+material]	27	28.13%	[+material]	21	28.77%
[–material]	7	3.91%	[–material]	5	5.21%	[–material]	4	5.48%
[+dynamic]	77	43.02%	[+dynamic]	15	15.63%	[+dynamic]	35	47.95%
[–dynamic]	1	0.56%	[–dynamic]	0	0.00%	[–dynamic]	2	2.74%
[+Loc]	0	0.00%	[+Loc]	0	0.00%	[+Loc]	0	0.00%
[–dynamic, +scalar]	11	6.15%	[–dynamic, +scalar]	22	22.92%	[–dynamic, +scalar]	2	2.74%
[–dynamic, –scalar]	24	13.41%	[–dynamic, –scalar]	20	20.83%	[–dynamic, –scalar]	4	5.48%
General: 193 verbs (100%)			**General: 117 verbs (100%)**			**General: 185 verbs (100%)**		
[+material, dynamic]	4	2.07%	[+material, dynamic]	1	0.85%	[+material, dynamic]	0	0.00%

[–material, dynamic]	13	6.74%	[–material, dynamic]	7	5.98%	[–material, dynamic]	12	6.49%
[+material]	50	25.91%	[+material]	34	29.06%	[+material]	78	42.16%
[–material]	8	4.15%	[–material]	8	6.84%	[–material]	9	4.87%
[+dynamic]	80	41.45%	[+dynamic]	15	12.82%	[+dynamic]	66	35.68%
[–dynamic]	1	0.52%	[–dynamic]	0	0.00%	[–dynamic]	4	2.16%
[+Loc]	0	0.00%	[+Loc]	0	0.00%	[+Loc]	1	0.54%
[–dynamic, +scalar]	11	5.70%	[–dynamic, +scalar]	27	23.08%	[–dynamic, +scalar]	8	4.32%
[–dynamic, –scalar]	26	13.47%	[–dynamic, –scalar]	25	21.37%	[–dynamic, –scalar]	7	3.78%
(SU: 58 verbs)			(SU: 117 verbs)			(SU: 61 verbs)		

The horizontal comparison of the percentages in Table 3 yields the following picture:

(i)   **G (all verbs)**. *Apo-* and *kse-* show almost the same percentages, i.e. 38.99% and 37.37%, respectively. *ek(s)-* shows the lowest percentage, i.e. 23.64%.

(ii)   **N-M (old verbs)**. There is a clear preponderance of *apo-* verbs, i.e. 51.44%; *kse-* shows the lowest percentage, i.e. 29.98%.

(iii)   **M (new verbs)**. *Kse-* almost dominates this category; *apo-* and *ek(s)-* show very low percentages, i.e. 9.52% and 14.28%, respectively.

The vertical comparison between the categories M, N-M, and G in Table 4 yields the following picture:

(i)   **G (repository)**. *Ek(s)-* has the lowest attestation (117 verbs), followed by *kse-* (185 verbs), and *apo-* (193 verbs). It should be noted that *ek(s)-* has the lowest attestation although it is an old prefix like *apo-*. The preponderance of *apo-* verbs is explained by the large number of verbs in the N-M category, i.e. the old derivation (179 verbs). According to the analysis of the Greek verb-forming suffixes in Charitonidis (2011) it is expected that the number of *apo-*, *ek(s)-*, and *kse-* creations will follow the general attestation patterns (see section 7).

(ii)   **M vs. N-M (attestation in diachrony)**. *Apo-* has a very high loss (14 verbs in M vs. 179 verbs in N-M), *ek(s)-* has a high loss (21 verbs in M vs. 96 verbs in N-M), whereas *kse-* has an apparent gain (112 verbs in M vs. 73 verbs in N-M). There is therefore evidence that, in comparison to *apo-* and *ek(s)-*, *kse-* is currently the most productive prefix[26].

(iii)   **M (base/root ontology)**. Both *apo-* and *kse-* have a robust layer of [+material] and [+dynamic] bases in the M category, i.e. both prefixes combine with simple concrete nouns and activity verbs to yield the most numerous subcategory each. *Ek(s)-* does not combine with [+dynamic] bases at all. Instead, it combines very well with both [–dynamic, +scalar] and [–dynamic, –scalar] bases, i.e. adjectives, in contrast to the other two prefixes. It should be noted that similar preferences for *ek(s)-* are evident in the N-M and G categories as well.

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[26] Type frequency is only an indication of productivity. The former should not be equated with the latter (see Bauer 2001).

To conclude, in relation to the transition from the N-M to the M category, there is a clear decrease of *apo-* and *ek(s)-* verbs and a clear increase of *kse-* verbs. Currently, *ek-* has very different base preferences in comparison to *apo-* and *kse-* (M category). These special base preferences of *ek(s)-* suggest a considerably different structure for this prefix (see also section 6.1). The examination of the base ontology in *apo-* and *kse-* verbs (M category) did not yield any considerable differences, while suggesting a similar structure for both prefixes. It should be noted, however, that both the considerable increase and the large number of *kse-* verbs (112 verbs, M category) suggest that this prefix currently outspaces *apo-* (14 verbs, M category).

7. Created verbs. Prefixes and bases in interaction.

Let us now see how prefixes and bases combined in the creation task. It should be noted that the majority of the creations contained a root combined with a suffix, whereby the composed base was usually a non-existing verb. Table 5 gives the percentages over the totals of creations and Table 6 helps us to identify the interaction patterns between prefixes and roots/bases. Figure 1 displays these interactions. In the last row of Table 6 labelled "No V" the number of the TPs who did not give any derivatives is given. All percentages are rounded off.

Table 5. Percentages over the totals of created verbs

apo-	*ek(s)-*	*kse-*	Total
89 verbs	59 verbs	75 verbs	223 verbs
39.91%	26.46%	33.63%	100%

Table 6. Verbal prefixes and roots/bases in interaction (created verbs)

Bases	Ontology	apo-	%	ek(s)-	%	kse-	%	Total	No V
mitéra 'mother'	[+material, dynamic]	16	17.98	14	23.73	8	10.67	**38**	1
leftá 'money'	[+material]	13	14.61	7	11.86	13	17.33	**33**	4
adhikía 'injustice'	[–material, dynamic]	14	15.73	8	13.56	12	16	**34**	5
xrónos 'time'	[–material]	14	15.73	15	25.42	13	17.33	**42**	0
filó 'kiss'	[+dynamic]	24	26.97	6	10.17	10	13.33	**40**	0
nomízo 'think'	[–dynamic]	8	8.99	9	15.25	19	25.33	**36**	3
Total		**89**		**59**		**75**			

As can be seen in Table 5, *apo-* and *kse-* combine almost equally well (39.91% and 33.63%, respectively). *Ek(s)-* shows the lowest combinability (26.46%). These results are in accord with the results in the G category of existing verbs. In this category, *apo-* figures with 193 verbs (38.99%), *kse-* with 185 verbs (37.37%), whereas *ek-* figures with 117 verbs (23.64%) which is the lowest number of verbs in the sample (see section 6.2). As in the case of the native Greek verb-forming suffixes in Charitonidis (2011) one is confronted again with an **index of usage** for all three prefixes which relies on the repository of existing forms and defines the creation of verbs **quantitatively** (see Charitonidis 2011: 12).
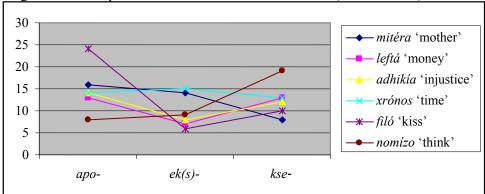
Figure 1. Verbal prefixes and roots/bases in interaction (created verbs)

As the percentages in Table 6 and the corresponding curves in Figure 1 show there are almost no exceptional patterns in the combination of the prefixes with the roots/bases. The two exceptional cases, i.e. the strong combination of *apo-* with *filó* and the strong combination of *kse-* with *nomízo,* can be explained according to particular relations of these creations to existing words.

In particular, the creation !*apofiló*[27] is associated in the TP interpretations with the existing verb *apoxeretó* 'say goodbye to, take leave of' (*xeretó* 'greet'). It should be noted that the event of *xeretó* often contains (= is a hypernym of) the action of *filó* 'kiss'. The creation !*apofiló* was thus meant as a hyponym of *apoxeretó*. Accordingly, the high rate of this creation suggests its formation from two meaningful parts (prefix + base) whereby base hyponymy plays a crucial role. The creation !*ksenomízo* was attested twice on WWW (accessed 2/4/2012 by using Google) in the highly expressive phrase *nomízo-ksenomízo* 'whatever I say, think the one/right or the other/wrong' (lit. 'think-not think'). It is therefore possible that the high rate of !*ksenomízo* relates to an existing pattern – though this possibility does not actually account for the generation of this creation. Most crucially however, both !*apofiló* and !*ksenomízo* cannot be explained sufficiently according to the DE patterns in the existing verbs of the previous section, cf. the very low percentages of *apo-* verbs with a [+dynamic] base and *kse-* verbs with a [–dynamic] base (see Table 4).

Concluding, though there is a mentally represented index of usage for all three prefixes which influences the creation of novel verbs quantitatively, it seems that no selection takes place from the prefix toward the root/base or the opposite in the creation task. But if no selection takes place, what is the mechanism with brings together prefixes and roots/bases? In the following sections I will attempt to answer this question by considering the level of SE meaning.

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[27] "!" in front of verbal forms indicates creations.

8. The socio-expressive (SE) patterns of the created verbs

8.1 Preliminaries

Charitonidis (2011 and 2012b) has shown how valuable insights about the combinatorial properties of verbal suffixes can be obtained by examining created verbs. In Charitonidis (2011) it was made clear, that Lieber's (2004) DE framework cannot sufficiently explain how verbal suffixes and bases are put together. The level of SE meaning should be addressed at any event – in both the suffixes and the bases. In Charitonidis (2012a and 2012b) it was concluded that one needs both a DE and an SE tier in accounting for verb derivation. The DE tier relates to syntax and the identification of referents, whereby the inner-word structure is grossly addressed. The SE tier restricts the syntactically motivated patterns so that bases with a specific composition can be selected by a particular suffix.

It is now time to see the power of the SE tier in verbal **prefixation**. Section 8.2 defines the basic SE properties of *apo-, ek(s)-* and *kse-*. Section 8.3 gives an answer to the question framed at the end of section 7, i.e. what is the mechanism which brings together prefixes and roots/bases in the verbal creations.

8.2 Comparison of all creations with a converted base

In the new derivation (M category) there are no *apo-, ek(s)-*, or *kse-* verbs with a converted or "zero-derived" base, i.e. verbs with a base derived from a noun without the addition of a derivational suffix, but simply by adding the standard verbal inflection to the nominal stem (see also Ralli 2005: 141-146). Only in the old derivation (N-M category) some sporadic formations are attested, cf. the medieval verb *ksenixtáo*/*ksenixtó* 'stay/sit up all night' derived from the N *níxta* 'night'.

However, this section is crucial for the analysis to follow, because it decides on the default SE content of *apo-, ek(s)-*, and *kse-*. The analysis of the creations has shown that, when these prefixes combine with a converted base, they are simply {–m},{–s},{–i}. By doing so, they do not necessarily evaluate the base/root argument, as in the case of verbal suffixation (see section 4). Instead, they standarly pass all their features on a non-base argument given or implied in the TP responses. To become more conspicuous I give two examples.

The first creation (TP1) with a converted base was !*apo-miter-ó* (*mitéra* 'mother'; SE structure of *mitéra*: {–m}{+s}{+i}). !*apo-miter-ó* received the interpretation 'leave away from the mother; get away from the bonds'. This interpretation does not *necessarily* evaluate the base argument MITÉRA but the theme argument of the created inchoative verb – in technical terms, the [+dynamic, +IEPS] argument of the non-underlined part of Structure A, or [+d, +I]i/A, for short (see (11) in section 6.1)[28]. In particular, all three SE features in the prefix are discharged as *negative* features onto [+d, +I]i/A. The creation

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[28] From now on I use abbreviations, such as [+d, +I]i/A, [j]/A, [+Loc]/B, etc. to refer to argument positions in the structures A-C (see (11)-(13) in section 6.1). In Structure A the argument of [+dynamic, +IEPS] has a -j-index because it shows up after the agent argument of the causative variant indexed with -i-. In the inchoative variant, i.e. the non-underlined part of the skeleton, there is no agent argument, with the effect that -i- is assigned to the argument of [+dynamic, +IEPS] as first index.

expresses the discontinuation of an existing state of [+d, +I]i/A ({−m}), the negative self-evaluation of [+d, +I]i/A being attached to his/her mother ({−s}), and the dysfunction of the relation of [+d, +I]i/A to his/her mother ({−i}). The SE template in (14) exemplifies these operations.

(14)

apo-	*mitéra*	!*apo-miter-ó*		
{−m}	{−m}	{−m}	—>	[+d, +I]i/A
{−s}	{+s}	{−s}	—>	[+d, +I]i/A
{−i}	{+i}	{−i}	—>	[+d, +I]i/A

The creation of TP8 !*ek-left-ó* (*leftá* 'money'; SE structure of *leftá:* {+m}{+s}{+i}) received the interpretation 'get money out of the way' (i.e. 'disassociate a state, a relationship, etc. from money'). This interpretation does not necessarily evaluate the base argument LEFTÁ but the implied theme argument of the created causative verb – in technical terms the [j]/A argument (see (11) in section 6.1). As in the case of !*apomiteró* above, this creation discharges all three SE features in the prefix as negative features onto [j]/A. In particular, !*ekleftó* expresses the discontinuation of a present state, a relationship, etc. from being attached to money ({−m}), the negative evaluation of this state or relationship ({−s}), and the change or dysfunction of interpersonal relations in the involvement of money ({−i}). The SE template in (15) exemplifies these operations.

(15)

ek-	*leftá*	!*ek-left-ó*		
{−m}	{+m}	{−m}	—>	[j]/A
{−s}	{+s}	{−s}	—>	[j]/A
{−i}	{+i}	{−i}	—>	[j]/A

Tables 7-9 contain all creations with a converted base. The SE composition of the base (in this case the first output) is given at the topmost row of each table. PREF ALL refers to verbs who kept all negative prefixal features in the second output, i.e. in the interpretation of creations. OUT1 ALL refers to verbs who kept all base features in the second output. Under each table the respective creations and their interpretations are given, together with the argument positions onto which the SE features are discharged[29]. Table 10 summarizes the discharging patterns in Tables 7-9.

Table 7. *Apo-*: {−m}{−s}{−i}

	mitéra (1) {−m}{+s}{+i}	*leftá* (1) {+m}{+s}{+i}	*adhikía* (0) {+m}{−s}{+i}	*xrónos* (1) {+m}{s}{i}
PREF ALL	1	1	0	1
OUT1 ALL	0	0	0	0

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[29] In Table 8 '[+Loc]/B' refers to the goal argument of Structure B (see (12) in section 6.1). In the same table 'PREF {−m}{−s}, SUFF {i}' refers to the marginal case of !*ekxronó* which passed its base {i} on the second output. It should be noted, however, that this underspecification may be due to a missing hint in the TP interpretation.

(16)   a.   *!apomiteró* 'leave away from the mother; get away from the bonds'
                (TP1) PREF ALL, [+d, +I]i/A
        b.   *!apoleftó* 'run out of money' (TP17) PREF ALL, [+d, +I]i/A
        c.   *!apoxronó* 'be too tired to live anymore'(TP24) PREF ALL, [+d, +I]i/A

Table 8. *Ek(s)*-: {−m}{−s}{−i}

	mitéra (**1**) {−m}{+s}{+i}	*leftá* (**1**) {+m}{+s}{+i}	*adhikía* (**0**) {+m}{−s}{+i}	*xrónos* (**3**) {+m}{s}{i}
PREF ALL	1	1	0	
OUT1 ALL	0	0	0	2
PREF {−m}{−s} SUFF {i}				1

(17)   a.   *!ekmitró* 'take sth. out of my innards (metaphorically)' (TP17) PREF
                ALL, [j]/A [=spit it out, CC]
        b.   *!ekleftó* 'get money out of the way' (TP8) PREF ALL, [j]/A
        c.   *!ekxronó* 'do sth. in time (= within the time limit)' (TP1) OUT1 ALL,
                [+Loc]/B
        d.   *!ekxronó* 'dedicate time' (TP15) OUT1 ALL, [+Loc]/B
        e.   *!ekxronó* 'exceed the time limit (= fail to do sth. in time)' (TP26) PREF
                {-m}{-s} SUF {i}, [+d, +I]i/A

Table 9. *Kse*-: {−m}{−s}{−i}

	mitéra (**0**) {−m}{+s}{+i}	*leftá* (**1**) {+m}{+s}{+i}	*adhikía* (**0**) {+m}{−s}{+i}	*xrónos* (**1**) {+m}{s}{i}
PREF ALL	0	1	0	1
OUT1 ALL	0	0	0	0

(18)   a.   *!kseleftó/-áo* 'run out of money' (TP1) PREF ALL, [+d, +I]i/A
        b.   *!ksexronó* 'lose track of time' (*ksexronístika* 'missed sth.') (TP28) PREF
                ALL, [+d, +I]i/A

Table 10. SE discharging in *apo*-, *eks*-, and *kse*- verbal creations with a converted base
(summary)

	mitéra {−m}{+s}{+i}	*leftá* {+m}{+s}{+i}	*adhikía* {+m}{−s}{+i}	*xrónos* {+m}{s}{i}
apo-	PREF ALL [+d, +I]i/A (1)	PREF ALL [+d, +I]i/A (1)		PREF ALL [+d, +I]i/A (1)
ek(s)-	PREF ALL [j]/A (1)	PREF ALL [j]/A (1)		PREF {−m}{−s}, SUFF {i} [+d, +I]i/A (1)
				OUT1 ALL [+Loc]/B (2)
kse-		PREF ALL [+d, +I]i/A (1)		PREF ALL [+d, +I]i/A (1)

The conclusions which can be drawn from the patterns in Tables 7-9 are:

(i)   The verbal prefixes *apo-*, *ek(s)-*, and *kse-* are {–m}{–s}{–i} prefixes by default (the forcing condition: in contemporary Greek, *apo-*, *ek-*, and *kse-* do not attach to converted bases).

(ii)   The prefixes do not evaluate the base/root argument but standarly discharge their features as such onto a non-base argument given or implied in the TP responses.

(iii)   The two dissonant !*ekxronó* cases (OUT1 ALL, see Table 8) suggest a weak or ambiguous structure for *ek(s)-* (cf. sections 6, 8.2 and 10).

8.3 Comparison of all creations with a non-converted base

Apo-, *ek(s)-*, and *kse-* verbs with a non-converted base are verbs with a suffixed base, cf. *apo-the-óno* 'glorify, acclaim' (*theós* 'god' + suffix *-óno*), etc., and verbs having an existing verb as base, cf. *kse-zalízo* 'take away dizziness' (*zalízo* 'make dizzy'), etc.

Accordingly, the set of non-converted bases used by the TPs in the creation task contains suffixed bases (*mitéra/leftá/adhikía/xrónos* + suffix) and existing verbs (*filó/ nomízo*). Tables 11-13 display the attested patterns. In the topmost row the SE composition of the roots is given, together with the total number of creations. Again, PREF ALL refers to the number of verbs who kept all negative prefixal features in the second output, i.e. in the interpretation of the creations. OUT1 ALL refers to the number of verbs who kept all the base features in the second output. As already shown in section 4, OUT1 is independently computed according to head and merging operations between suffixes and bases. SUB (subordinate) refers to an OUT1 feature identical to a PREF ALL feature with the same value. For brevity's sake, only a few examples are given under each table. Table 14 summarizes the discharging patterns in Tables 11-13. The full set of verbal creations with a non-converted base referring to PREF ALL or OUT1 ALL can be found in Appendix A.

Table 11. *Apo-:* {–m}{–s}{–i}

	mitéra (**15**) {–m}{+s}{+i}	*leftá* (**12**) {+m}{+s}{+i}	*adhikía* (**14**) {+m}{–s}{+i}	*xrónos* (**13**) {+m}{s}{i}	*filó* (**24**) {+m}{+s}{+i}	*nomízo* (**8**) {–m}{s}{i}
PREF ALL	9	12	1	0	4	0
OUT1 ALL	0	0	3	0	0	7 (SUB {–m})

(19)   a.   !*apomiteróno* 'leave the motherly role' (TP8) PREF ALL, [+d, +I]i/A
        b.   !*apoleftízo* 'take all the money from sb.' (TP30) PREF ALL, [j]/A
        c.   !*apadhikévo* 'bring injustice' (TP18) OUT1 ALL, [+Loc]/B
        d.   !*apofiló* 'turn sb. away/out' (TP28) PREF ALL, [j]/A

Table 12. *Ek(s)-:* {–m}{–s}{–i}

	mitéra (**13**) {–m}{+s}{+i}	*leftá* (**6**) {+m}{+s}{+i}	*adhikía* (**8**) {+m}{–s}{+i}	*xrónos* (**13**) {+m}{s}{i}	*filó* (**6**) {+m}{+s}{+i}	*nomízo* (**9**) {–m}{s}{i}
PREF ALL	1	1	0	0	1	0
OUT1 ALL	1	2	0	0	2	4 (SUB {–m})

(20) a.   !*ekmitróno* 'alienate' (TP22) PREF ALL, [j]/A
      b.   !*ekleftévo* 'remove/steal money from sb.' (TP18)   PREF ALL, [j]/A
      c.   !*ekfiló* 'kiss with an indecent purpose' (TP31) OUT1 ALL, [+Loc]/B
      d.   !*eknomízo* 'draw a conclusion' (TP19) OUT1 ALL, [j]/A

Table 13. *Ese-:* {–m}{–s}{–i}

	mitéra (**8**) {**–m**}{**+s**}{**+i**}	*leftá* (**12**) {**+m**}{**+s**}{**+i**}	*adhikía* (**12**) {**+m**}{**–s**}{**+i**}	*xrónos* (**12**) {**+m**}{**s**}{**i**}	*filó* (**10**) {**+m**}{**+s**}{**+i**}	*nomízo* (**19**) {**–m**}{**s**}{**i**}
PREF ALL	5	11	0	0	8	0
OUT1 ALL	0	0	0	1	1	1 (SUB {–m})

(21) a.   !*ksemitrévo* 'deprive the mother from sb.' (TP27) PREF ALL, [j]/A
      b.   !*kseleftízo* 'run out of money' (TP20) PREF ALL, [+d, +I]i/A
      c.   !*ksefilízo* 'stop being friends with sb.' (TP10) PREF ALL, [j]/A
      d.   !*ksefiló* 'smother sb. with kisses' (TP20) OUT1 ALL, [+Loc]/B

Table 14. SE discharging in *apo-*, *eks-*, *and kse-* verbal creations with a non-converted
          base (summary)

	mitéra {–m}{+s}{+i}	*leftá* {+m}{+s}{+i}	*adhikía* {+m}{–s}{+i}	*xrónos* {+m}{s}{i}	*filó* {+m}{+s}{+i}	*nomízo* {–m}{s}{i}
apo-	PREF ALL [+d, +I]i/A (7) [j]/A (2)	PREF ALL [+d, +I]i/A (7) [j]/A (4) [j]/A~[i]/B (1)	PREF ALL [+d, +I]i/A (1) OUT1 ALL [+Loc]/B (3)		PREF ALL [+d, +I]i/A (1) [j]/A (3)	PREF ALL [+d, +I]i/A (6) [j]/A (1)
ek(s)-	PREF ALL [j]/A (1) OUT1 ALL [+Loc]/B (1)	PREF ALL [j]/A (1) OUT1 ALL [+Loc]/B (2)			PREF ALL [j]/A (1) OUT1 ALL [+Loc]/B (2)	OUT1 ALL [j]/A (3) [+Loc]/B (1)
kse-	PREF ALL [j]/A (5)	PREF ALL [+d, +I]i/A (6) [j]/A (5)		OUT1 ALL [i]/B (1)	PREF ALL [j]/A (8) OUT1 ALL [+Loc]/B (1)	OUT1 ALL ?OBJ/[–dyn] (1)

        The conclusions which can be drawn from the patterns in Tables 11-14 are:
(i)   There is a clear difference between the creations with a non-converted base in this
section and the creations with a converted base in the previous section. Non-converted
bases do not always allow a full discharging of the {–m}{–s}{–i} prefixes onto a non-
base argument. In addition, there is a clear difference between the creations with the
bases *mitéra*/*leftá*/*filó* and the creations with the bases *adhikía*/*xrónos*/*nomízo*. The
former allow a full prefixal discharging[30] whereas the latter do not. The DE composition
of the respective bases cannot account for these patterns: the features [+material,
dynamic] in *mitéra*, [+material] in *leftá*, and [+dynamic] in *filó* are explicitly different.
Most notably, simple [+material] in *leftá* and [+dynamic] in *filó* are definitely

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[30] As an exception, *filó* displays *apo-* discharging only to a limited extend (4 of 24 verbs; see Table 11).

incompatible. Only the common {+s}{+i} cluster in all three bases can serve as a foundation for the attested patterns. It should be noted that this pattern is in accord with the patterns in the *existing* verbs having a non-converted base (see Appendix B). Verbs such as *ekthronízo* 'dethrone' (*thrónos* 'throne'), *kseklirízo* 'exterminate, wipe out' (*kliros* 'share, holding'), and *kseparadhiázo* 'fleece, skin' (*parás* 'money, brass') similarly have a {+s}{+i} root/base and thus discharge all prefixal features as negative features onto a non-base argument[31].

(ii)   The similarity of *apo-* with *kse-* is evident. In both prefixes there is a similar PREF-ALL discharging on a non-base argument – whereby in *kse-* [j]/A (theme) arguments are preferred (see Table 14). In the *ek(s)-* creations OUT1 ALL is more strong than PREF ALL – whereby [+Loc]/B (goal) arguments are preferred. It seems that *ek(s)-* has a disappearing existence in MG since OUT1 ALL compensates or overcomes PREF ALL. According to the interpretation of the creations, one could define two homophonous *ek(s)-*'s: (i) a distancing *ek(s)-* promoting (some of) the prefixal content; (ii) a transparent or weak *ek(s)-* promoting the base content. I assume that the bifurcation of *ek(s)-* semantics results into its low productivity since more decisions must be made for the use of this prefix in combination with bases (cf. section 6.2).

It should be noted that the bifurcation of *ek(s)-* semantics is attested in the **existing** M verbs as well, cf. *ekthronízo* 'dethrone' ({−m}{−s}{−i} = PREF ALL, [j]/A) vs. *eksathlióno* 'reduce sb. to utter poverty, degrade' ({+m}{−s}{−i} = OUT 1 ALL, [j]/C) (see Table 2 in Appendix B).

9. The properties of the socio-expressive (SE) tier in relation to *apo-*, *ek(s)-* and *kse-* verbs

We can now attempt a first formulation of the properties of the SE tier in relation to verbal prefixation. These properties should be regarded as a supplement to the properties of the SE tier in relation to verbal suffixation (see section 4). For details and examples the reader is referred to sections 8.1, 8.2 and Appendix A.

The properties of the SE tier in relation to verbal prefixation (general operations)
(i)   Prefixes refer to the same set of features as suffixes and bases/roots, i.e. {m},{s}, and {i}.
(ii)   Prefixal operations, if any, occur after suffixal operations.
(iii)   Standardly, the prefixal features which survive in the second output are discharged onto a non-baseargument.

The properties of the SE tier in relation to *apo-*, *ek(s)-*, and *kse-* verbs having a converted base
(i)   Prefixes refer to the same set of features as bases/roots, i.e. {m}, {s}, and {i}.
(ii)   All prefixal features are negative.
(iiii) All prefixal features survive in the second output.
(iv)   Standardly, the prefixal features are fully discharged onto a non-base argument.

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[31] In the existing *apo-* verbs there are no formations with a {+s}{+i} root/base (see Table 1 in Appendix B).

The properties of the SE tier in relation to *apo-*, *ek(s)-*, and *kse-* verbs having a non-converted or suffixed base

(i)   Prefixes refer to the same set of features as bases/roots, i.e. {m},{s}, and {i}.
(ii)   All prefixal features are negative by default.
(iii)   Prefixal operations, if any, occur after suffixal operations.
(iv)   Standardly, the prefixal features which survive in the second output are   discharged onto a non-base argument.
(v)   The value of the prefixal features in the second output is a function of the SE structure of the bases. In particular, {+s}{+i} bases consolidate the negative content of the prefixes.

We can now turn to the conclusions of this study.

10. Conclusions

The comparison of the Greek verb prefixes *apo-*, *ek(s)-*, and *kse-* has shown that a distancing or [–Loc] function in the DE structure of these prefixes describes their properties only at the very general level of referential identification. In the SE tier no composition takes place between the prefixes and their bases. The DE and SE patterns confront *apo-* and *kse-* as similar prefixes with *ek(s)-*. The latter shows up with a weak or transparent content to such an extent that one could almost say that it is no more synchronically relevant. In the following I draw the general conclusions by separately regarding DE and SE meaning.

The analysis of existing verbs has shown that in the new derivation (= M category) *kse-* dominates quantitatively. Both *apo-* and *ek(s)-* have a diminishing status in MG. As regards the base/root preferences of the prefixes, both *apo-* and *kse-* have a robust layer of [+material] and [+dynamic] bases in the M category, i.e. they both combine with simple concrete nouns and activity verbs to yield the most numerous subcategory each. On the other hand, *ek(s)-* does not combine with [+dynamic] bases at all. Instead, it combines very well with both [–dynamic, +scalar] and [–dynamic, –scalar] bases, i.e. adjectives, in contrast to the other two prefixes (section 6).

The interactional patterns in the created verbs validated a phenomenon first described in Charitonidis (2011) in relation to verbal suffixation, i.e. the number of creations conforms to the repository (G category) of existing verbs with the same prefix. This fact suggests that explicit morphosemantic knowledge defines the creation of novel verbs (section 7).

The analysis of created verbs at the level of SE meaning addressed an issue already pointed out in past literature, i.e. the absence of semantic composition between verbal prefixes (or preverbs) and verbal bases (see Dimela 2011:60 and the references therein). The examined prefixes standardly discharge their features onto a non-base argument. In other words, no head and merging operations between prefixes and bases take place as opposed to the operations between suffixes and bases (section 8).

In particular, *apo-*, *ek(s)-* and *kse-* are {–m}{–s}{–i} prefixes by default. Converted bases impose no restrictions on discharging, i.e. the negative features are discharged as such onto a non-base argument (section 8.1).

Instead, the roots of non-converted bases influence discharging. Whereas no explanation for this pattern could be found at the DE level, it turned out that, in the presence of a {+s}{+i} root, the negative prefixal features are discharged as such onto a non-base argument.

In other words, the SE content of the prefixes is a function of the SE composition of the roots. {+s}{+i} in the roots consolidate the negative content of the prefixes[32].

Overall, *apo-* and *kse-* are similar as regards SE meaning, in accord with the DE patterns of the existing verbs in section 6. Both prefixes show up with a similar PREF ALL discharging. In the case of *ek(s)-*, by contrast, OUT1 ALL compensates of overcomes PREF ALL (section 8.2).

The analysis of SE patterns resulted into a first formulation of the properties of the SE tier in relation to verbal prefixation, in particular in relation to *apo-, ek-* and *kse-* prefixation. The attested patterns can be thought of as conditions on prefixal discharging. In conjunction with the suffixation patterns in section 4, these conditions pave the way toward the formulation of an integrated theory of verbal derivation which takes into account both DE and SE meaning (section 9).

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[32] {±m} in the roots does not seem to affect discharging. It should be noted that root {±m} is standardly transformed into {+m} by the verbal heads (see section 4).

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APPENDIX A. Creations with PREF ALL and OUT1 ALL

apo- + *mitéra* + suffix | PREF ALL (9 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
25	!*apomitriázome*	-*iázome*	*apoghalaktízome apó ti mitéra mu*	'be weaned off one's own mother'	[+d, +I]i/A
21	!*apomitrízo*	-*ízo*	*dhen anaghnorízo pléon ti mitéra mu san aftí*	'not acknowledge one's own mother any more'	[j]/A
5	!*apomiteróno*	-*óno*	*dhiakópto ti mitrikí eksártisi dhiakópto apó édoni eksártisi anthrópini*	'interrupt the motherly dependence' 'suspend a strong human dependence'	[+d, +I]i/A
8	!*apomiteróno*	-*óno*	*févgho apó to rólo tis mitéras*	'leave the motherly role'	[+d, +I]i/A
28	!*apomiteróno*	-*óno*	*dhióxno, apomakríno kápio ikogheniakó mélos (óxi aparétita apó ti mitéra)*	'expel, keep away a family member (not necessarily away from the mother)'	[j]/A
26	!*apomitróno*	-*óno*	*apokóvome apó ti mitéra*	'straggle away from the mother'	[+d, +I]i/A
19	!*apomiterónome*	-*ónome*	*xáno ti mitéra mu*	'loose one's own mother'	[+d, +I]i/A
23	!*apomiterónome*	-*ónome*	*aneksartopiúme apó ti mitéra mu (apoghalaktismós)*	'become independent from one's own mother (weaning off)'	[+d, +I]i/A
7	!*apomitropiúme*	-*piúme*	*apoghalaktopiúme, févgho apó tin prosoxí tis mitéras mu*	'be weaned off, get away from the attention of one's own mother'	[+d, +I]i/A

apo- + *leftá* + suffix | PREF ALL (12 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
4	!*apolefténo*	-*éno*	*afíno kápion xorís leftá*	'let sb. without money'	[j]/A
11	!*apoleftízo*	-*ízo*	*aferó xrímata apó kápion*	'take away money from sb.'	[j]/A
13	!*apoleftízo*	-*ízo*	*kseméno apó xrímata*	'run out of money'	[+d, +I]i/A
15	!*apoleftízo*	-*ízo*	*eksadló ta teleftéa ikonomiká apothémata*	'deplete the last financial resources'	[+d, +I]i/A
20	!*apoleftízo*	-*ízo*	*méno apó xrímata*	'run out of money'	[+d, +I]i/A
28	!*apoleftízo*	-*ízo*	*pio dhókimo "kseleftízo". Dhiamáxi tu apo-(perisótero dhókimo) me to leftá (lighótero dhókimo)*	'run out of money – more scholarly than "kseleftízo" (*apó:* more scholarly vs. *leftá:* less scholarly)'	[+d, +I]i/A
30	!*apoleftízo*	-*ízo*	*pérno óla ta leftá kápiu*	'take all the money from sm.'	[j]/A
24	!*apoleftízome*	-*ízome*	*méno xorís kathólu leftá, mu teliónun ta leftá*	'run out of money'	[+d, +I]i/A
3	!*apoleftóno*	-*óno*	*klévo kápion, listévo kápion*	'steal from sm., rob sm.'	[j]/A

19	!apoleftóno	-óno	spataláo kápu xrímata í ekmetalévome ta xrímata kápiu	'waste money for sth or misappropriate sb.'s money'	[i]/B or [j]/A
5	!apoleftónome	-ónome	kseméno apó leftá	'run out of money'	[+d, +I]i/A
14	!apoleftónome	-ónome	sighá sighá stamatáo na éxo xrímata	'run out of money little by little'	[+d, +I]i/A

apo- + adhikía + suffix | PREF ALL (1 creation)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
6	!apodhikázo	-ázo	févgho apó ti dhiadhikasía mias dhíkis	'leave a criminal procedure'	[+d, +I]i/A

apo- + adhikía + suffix | OUT1 ALL (3 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
18	!apadhikévo	-évo	férno adhikía	'bring injustice'	[+Loc]/B
25	!apadhikeóno	-óno	adhikó, dhen dhíno dhíkeo se kápion	'be unfair/unjust to sm.'	[+Loc]/B
30	!apodhikeóno	-óno	férome edelós ádhika se kápion	'be entirely unfair/unjust to sm.'	[+Loc]/B

apo- + filó | PREF ALL (4 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
18	!apofiló	–	ghínome pio exthrikós se kápion (filó = aghapó)	'become more hostile to sm. (filó 'love')'	[j]/A
22	!apofiló	–	prodhídho	'betray'	[j]/A
28	!apofiló	–	apodhióxno	'turn sm. away/out'	[j]/A
14	!apofilúme	-úme	stamatáo na íme fílos me kápion	'stop being friends with sm.'	[+d, +I]i/A

apo- + nomízo | OUT1 ALL (7 creations) [SUB {–m}]

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
14	!aponomiúme	-iúme?	stamatáo na éxo tin ídhia sképsi ghia káti	'stop thinking the same thing about sth.'	[j]/A
2	!aponomízo	–	katalígho siberasmatiká	'conclude by saying that'	[+d, +I]i/A
3	!aponomízo	–	dhen nomízo	'not think/think not'	[+d, +I]i/A
4	!aponomízo	–	alázo ghnómi	'change his/her mind'	[+d, +I]i/A
18	!aponomízo	–	siberéno xorís na ghnorízo (óxi katanági sibérasma)	'draw a conclusion without being aware of sth. (not necessarily a conclusion)'	[+d, +I]i/A
23	!aponomízo	–	alázo ápopsi edelós ghia éna théma	'change one's own mind about sth. completely'	[+d, +I]i/A
28	!aponomízo	–	alázo ghnómi (pio epísima)	'change one's own mind (more formally)'	[+d, +I]i/A

ek(s)- + *mitéra* + suffix | PREF ALL (1 creation)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
22	!*ekmitróno*	-óno	*apoksenóno*	'alienate'	[j]/A

ek(s)- + *mitéra* + suffix | OUT1 ALL (1 creation)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
4	!*ekmitróno*	-óno	*ekpedhévo se thémata mitrótitas*	'educate sm. in maternity issues'	[+Loc]/B

ek(s)- + *leftá* + suffix | PREF ALL (1 creation)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
18	!*ekleftévo*	-évo	*aferó xrímata apó kápion (pio lóghio)*	'steal money from sb. (more scholarly)'	[j]/A

ek(s)- + *leftá* + suffix | OUT1 ALL (2 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
23	!*ekleftízo*	-ízo	*prospathó na petíxo káti me ton xrimatismó, dhorodhokó*	'try to achieve sth. by giving bribes, bribe.'	[+Loc]/B
26	!*ekleftóno*	-óno	*xrimatízo kápion*	'bribe sm'	[+Loc]/B

ek(s)- + *filó* | PREF ALL (1 creation)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
28	!*ekfiló*	–	*apodhióxno (ísos sinónimo tu "apomiteróno") – óxi se sxési me to filí*	'turn out/away (possibly synonymous to *apomiteróno*) – unrelated to a kiss (*filí*)'	[j]/A

ek(s)- + *filó* | OUT1 ALL (2 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
23	!*ekfiló*	–	*íme fílos apó paliá*	'be a friend of old'	[+Loc]/B
31	!*ekfiló*	–	*filó me ékfila kínitra*	'kiss with an indecent purpose'	[+Loc]/B

ek(s)- + *nomízo* | OUT1 ALL (4 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
19	!*eknomízo*	–	*vgházo kápio sibérasma*	'draw a conclusion'	[j]/A
25	!*eknomízo*	–	*adilamvánome káti me vási mia ghnósi pu píra prin lígho*	'realize sth. according to information that one got a little earlier'	[j]/A
27	!*eknomízo*	–	*siberéno apó káti, vgházo to sibérasma*	'infer from sth., draw a conclusion'	[j]/A
24	!*eknomízome*	-me	*theoró káti ghia ton eaftó mu pu dhen isxíi*	'consider himself/herself as sth. that is not true'	[+Loc]/B

*ks*e- + *mitéra* + suffix | PREF ALL (5 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
27	!*ksemitrévo*	*-évo*	*steró ti mitéra apó kápion, p.x. me fóno*	'deprive the mother from sb., e.g. through murder'	[j]/A
31	!*ksemiteriázo*	*-iázo*	*apokiríso ti mána mu*	'renounce one's own mother'	[j]/A
3	!*ksemiterízo*	*-ízo*	*apaláso mia mitéra apó ta kathíkodá tis*	'let off a mother from her duties'	[j]/A
13	!*ksemiteróno*	*-óno*	*pérno ti mitéra apó kápion*	'take away the mother from sb.'	[j]/A
15	!*ksemitróno*	*-óno*	*apomakríno káti/kápion apó tin mitéra í tis rízes tu*	'move off sth./sb. from his/her mother or his/her roots'	[j]/A

kse- + *leftá* +suffix | PREF ALL (11 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
18	!*kseleftévo*	*-évo*	*aferó xrímata apó kápion (*blocking *tu apo- apó apotamiévo)*	'remove money from sb. (*apotamiévo* 'save money' blocks *apo-*)'	[j]/A
7	!*kseleftiázo*	*-iázo*	*méno xorís xrímata*	'run out of money'	[+d, +I]i/A
31	!*kseleftiázo*	*-iázo*	*apaláso kápion apó ta xrímatá tu, ton eksapató*	'remove money from sb., defraud sb.'	[j]/A
6	!*kseleftízo*	*-ízo*	*tróo ta leftá mu*	'squander one's own money'	[+d, +I]i/A
16	!*kseleftízo*	*-ízo*	*dhen éxo pia xrímata*	'have no money any more'	[+d, +I]i/A
17	!*kseleftízo*	*-ízo*	*kseftilízo (kodhikopiiméni ghlósa ghia na min katalávi o álos)*	*kseftilízo* 'humiliate (encrypted term by means of which a third person does not make sense)'	[j]/A
20	!*kseleftízo*	*-ízo*	*méno apó xrímata*	'run out of money'	[+d, +I]i/A
28	!*kseleftízo*	*-ízo*	*méno xorís leftá*	'run out of money'	[+d, +I]i/A
10	*!kseleftóno*	*-óno*	*pérno óla ta xrímata kápiu dhiá tis pithús, ton anagázo na mu ta dhósi me apotélesma na min éxi ála*	'take all the money from sb. through persuasion, force sb. to give it (the money, CC) to me so that he/she has no money anymore'	[j]/A
20	*!kseleftóno*	*-óno*	*méno apó xrímata*	'run out of money'	[+d, +I]i/A
27	!*kseleftóno*	*-óno*	*steró tin periusía kápiu*	'deprive sb. of his property'	[j]/A

kse- + *xrónos* + suffix | OUT1 ALL (1 creation)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
25	!*ksexroniázo*	*-iázo*	*méno polí keró se kápio méros*	'stay for a long time in one place'	[i]/B

kse- + *filó* | PREF ALL (8 creations)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
10	!*ksefilízo*	*-ízo*	*stamató ti filía mu me kápion*	'stop being friends with sb.'	[j]/A
3	!*ksefiló*	–	*filó kápion ke to metanióno*	'kiss sb. and regret it'	[j]/A
17	!*ksefiló*	–	*dhen mu arési káti (filó = aghapó)*	'not like sth. (*filó* = love)'	[j]/A
18	!*ksefiló*	–	*ghínome pio exthrikós se kápion (pio laikó) (filó = aghapó)*	'become more hostile to sm (vernacular) (*filó* = *aghapó*)'	[j]/A
24	!*ksefiló*	–	*pérno lektiká píso to filí pu su édhosa, dhiladhí to filí dhen isxíi pléon*	'take back the kiss by using words, i.e. the kiss in not valid any more'	[j]/A
26	!*ksefiló*	–	*dhen filó* ('not give a kiss to sb., CC)	'not kiss'	[j]/A
30	!*ksefiló*	–	*xorízo me ton/tin sídrofo*	'break up/split up with one's own mate'	[j]/A
12	!*ksefilóno*	*-óno*	*dhen tréfo pia filiká sinesthímata ghia kápion ánthropo*	'not bear friendly feelings towards sb. any more'	[j]/A

kse- + *filó* | OUT1 ALL (1 creation)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
20	!*ksefiló*	–	*ghemízo kápion me filiá*	'smother sb. with kisses'	[+Loc]/B

kse- + *nomízo* | OUT1 ALL (1 creation)

TP	Creation	Ending	Paraphrase (TP)	Translation (CC)	Discharging
26	!*ksenomízo*	–	*dhen ghnorízo*	'not know'	?OBJ/[–dyn][a]

[a] Possible structure: [–Loc([i], [–dynamic ([ ], [j])])]

APPENDIX B. Existing verbs in the Main (M) category with a valued {s}/{i} root
Table 1. Existing *apo-* verbs in the M category with a valued {s}/{i} root [DCMG (approx. 19c.–)]

Verb	Gloss	Root	Gloss	DE cluster (root)	SE cluster (root)	Discharging
apotharíno	'discourage'	*thár(os)*	'courage'	[–material, dynamic]	{+s}{i}	{–m}{–s}{–i} PREF ALL, [j]/A
apotheóno	'glorify, acclaim'	*the(ós)*	'god'	[±material, dynamic]	{+s}{i}	{+s}{+i}
apodhinamóno	'weaken'	*dhínam(i)*	'power, strength'	[–material, dynamic]	{+s}{i}	{–s}{i}
apembléko	'disburden sb.'	*emblék(o)*	'burden sb.'	[+dynamic, +IEPS, +Loc]	{–s}{+i}	{+s}{i}
apomithopió	'debunk, demystify	*míth(os)*	'myth, legend'	[–material]	{–s}{+i}	{–s}{i}
apovlakóno	'make stupid/dull'	*vlák(as)*	'stupid'	[+material]	{–s}{–i}	{+m}{–s}{–i} OUT 1 ALL, [j]/C

Table 2. Existing *ek(s)-* verbs in the M category with a valued {s}/{i} root [DCMG (approx. 19c.–)]

Verb	Gloss	Root	Gloss	DE cluster (root)	SE cluster (root)	Discharging
ekdhimokratízo	'democratize'	*dhimokratí(a)*	'democracy'	[–material, dynamic]	{+s}{+i}	{–s}{+i}
ekthronízo	'dethrone'	*thrón(os)*	'throne'	[+material]	{+s}{+i}	{–m}{–s}{–i} PREF ALL, [j]/A
ekloghikévo	'rationalize'	*loghik(ós)*	'rational''	[–dynamic, +scalar]	{+s}{+i}	{–s}{i}
ekpolitízo	'civilize'	*politism(ós)*	'civilization'	[–material]	{+s}{+i}	{–s}{+i}
eksaghiázo	'sanctify'	*ághi(os)*	'holy'	[–dynamic, –scalar]	{+s}{+i}	{–s}{+i}
eksidhikévo	'particularize'	*idhik(ós)*	'particular'	[–dynamic, +scalar]	{+s}{i}	{s}{i}
eklaikévo	'popularize'	*laik(ós)*	'popular'	[–dynamic, +scalar]	{–s}{+i}	{s}{+i}
eksatomikévo	'individualize'	*atomik(ós)*	'individual'	[–dynamic, –scalar]	{s}{–i}	{s}{+i}
eksathlióno	'reduce sb. to utter poverty, degrade'	*áthli(os)*	'miserable'	[–dynamic, +scalar]	{–s}{–i}	{+m}{–s}{–i} OUT 1 ALL [j]/C

Table 3: Existing *kse-* verbs in the M category with a valued {s}/{i} root [DCMG (approx. 19c.–)]

Verb	Gloss	Root	Gloss	DE cluster (root)	SE cluster (root)	Discharging
kseklirízo	'exterminate, wipe out'	*klír(os)*	'share, holding'	[+material]	{+s}{+i}	{–m}{–s}{–i} PREF ALL, [j]/A
kseparadhiázo	'fleece; skin'	*pará(s)*	'money, brass'	[+material]	{+s}{+i}	{–m}{–s}{–i} PREF ALL [j]/A
ksetheóno	'exhaust, wear out'	*the(ós)*	'god'	[±material, dynamic]	{+s}{i}	{–s}{+i}

Verb	Gloss	Root	Gloss	DE cluster (root)	SE cluster (root)	Discharging
ksemialízo	'seduce; tempt'	*mial(ó)*	'brain'	[+material]	{+s} {i}	{s} {+i}
ksespitóno	'turn sb. out of his house'	*spít(i)*	'house'	[+material]	{+s} {i}	{−s} {−i} PREF ALL, [j]/A
ksethimóno	'appease, be no longer angry'	*thim(ós)*	'anger'	[−material, dynamic]	{−s} {+i}	{+s} {+i}
ksematiázo	'cast off the evil eye'	*mát(i)*	'eye'	[+material]	{−s} {+i}	{+s} {+i}
ksesklavóno	'liberate, deliver'	*skláv(os)*	'slave'	[+material, dynamic]	{−s} {+i}	{+s} {+i}
ksexreóno	'pay up a debt, get out of debt'	*xré(os)*	'debt'	[+material]	{−s} {+i}	{−s} {+i}
ksepsaróno	'be no longer timid'	*psár(i)*	'timid (lit. 'fish')'	[+material]	{−s} {+i}	{−s} {+i}
ksekolóno	'take it out of sb.; wear sb. out'	*kól(os)*	'ass'	[+material]	{−s} {i}	{−s} {+i}
ksepatóno	'knock the bottom off sth.; wear sb. out'	*pát(os)*	'bottom, buttocks'	[+material]	{−s} {i}	{−s} {+i}
ksexarmaniázo	'take my fix'	*xarmán(i)*	'blend'	[+material]	{−s} {i}	{+s} {i}
ksezalízo	'take away dizziness'	*zál(i)*	'dizziness'	[−material]	{−s} {i}	{+s} {i}
ksekutiéno, -iázo	'make stupid, become stupid'	*kut(ós)*	'stupid'	[−dynamic, −scalar]	{−s} {−i}	{−s} {−i}
ksemaskarévo	'unmask, debunk'	*maskar(ás)*	'rogue, rascal'	[+material, dynamic]	{−s} {−i}	{−s} {+i}
ksemetháo	'sober up'	*méth(i)*	'drunkenness'	[−material]	{−s} {i}	{s} {i}
ksemurléno	'drive sb. mad'	*murl(ós)*	'madcap'	[−dynamic, −scalar]	{−s} {−i}	{s} {+i}
ksemoréno	'make sb. imbecile'	*mor(ós)*	'imbecile'	[−dynamic, −scalar]	{−s} {−i}	{−s} {−i}
ksedropiázo	'take away sb.'s shame'	*drop(í)*	'shame'	[−material]	{−s} {−i}	{+s} {+i}
kseskatóno	'clean shit off'	*skat(ó)*	'shit'	[+material]	{−s} {−i}	{+s} {+i}
ksestravóno[1]	'straighten'	*strav(ós)*	'slanting; oblique'	[−dynamic, +scalar]	{−s} {i}	{−m} {s} {i}
ksestravóno[2]	'open sb.'s eyes'	*strav(ós)*	'blind'	[−dynamic, −scalar]	{−s} {−i}	{+s} {+i}
ksetreléno	'drive sb. mad; infatuate'	*trel(ós)*	'mad'	[−dynamic, −scalar]	{−s} {−i}	{s} {i}
ksetsipónome	'become shameless'	*tsíp(a)*	'crust; shame'	[+material]	{−s} {−i}	{−s} {+i}