THE MORPHOLOGY–PRAGMATICS INTERFACE IN MODERN GREEK COMPOUNDING

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ABSTRACT

- This study deals with the morphology–pragmatics interface in Modern Greek compounding. The object of investigation are 64 compounds explicitly marked for stance. It is shown that the linking of denotational (semantic and/or categorial) and socio-expressive (pragmatic) heads defines the different classes of compounds in a highly restrictive manner. The threefold negative socio-expressive structure of the verbal derivatives in -(i)áz(o) shows up in the compounds as well. It is concluded that, in both verbal derivation and compounding, the morphology-pragmatics interface recruits specific denotational structures for its expression.
- KEYWORDS: Lexical semantics; morphology-pragmatics interface; socio-expressive (pragmatic) heads; evaluative compounding; Modern Greek lexical semantics.

1. Introduction

- This paper is the fourth 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. This project aims at the formulation of a theory of verbal derivation which refers to (i) a denotational (DE) tier based on Lieber's (2004, 2007) framework, and (ii) a socio-expressive (SE/pragmatic) tier developed by the author according to the applying of verbal greations and
- 35 tier developed by the author according to the analysis of verbal creations and existing verbs.

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¹ The previous stages of the project are: (i) Charitonidis (2011), (ii) Charitonidis (2012a, 2012b), (iii) Charitonidis (2013).

² The term "denotational tier" refers to Lieber's (2004, 2007) "Semantic/Grammatical Skeleton" (see Section 2.1).

The SE operations in Modern Greek (MG) verbal derivation in $-(i)\dot{a}z(o)$ (Charitonidis 2012a, 2012b) could not be validated according to the patterns in MG verbal derivation in *apo-*, ek(s)-, and kse- (Charitonidis 2013).³ To accomplish this task one needs lexical units explicitly marked for stance, similar to $-(i)\dot{a}z(o)$ verbs.

Accordingly, the object of investigation in the present study are 64 MG compounds explicitly marked for stance (henceforth "SE compounds"), found in Ralli (2007, 2013).

The goals of this study are:

- The validation of the SE operations attested in MG verbal derivation.
- The categorization of MG compounds by integrating SE meaning.
- To find out whether or not the strong DE-SE coordination in -(i)áz(o) derivation is an isolated phenomenon in MG morphology.

In Section 2 I will present Lieber's (2004, 2007) theoretical framework and her important distinction between Semantic/Grammatical Skeleton and Semantic/Pragmatic Body. By referring to the main results in Charitonidis (2011, 2012a, 2012b) I will then present the motivation of my SE features and their mapping onto grammatical categories and affixes. In the case of the MG –(i)áz(o) verbs, the SE patterns subsume Lieber's DE structures in a highly coordinative manner.

In Section 3 I will present the main categories of MG compounds and their general morphophonological properties according to Ralli (2013). I will then extend the properties of the SE tier attested in verbal derivation to compounding. Ralli's (2007, 2013) main categories of compounds will be redefined according to the linking patterns of DE (semantic and/or categorial)⁴ and SE (pragmatic/evaluative) heads in binary structures. In the case of phrasal compounds (class D) and attributive phrasal-compound-like phrases (class E) the SE heads heavily interact with the pragmatic context and redefine their feature values before composition.

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 $^{^3}$ -(i)áz(o) verbs show up with a threefold negative structure in nonhead, head, and output, whereby the head suffix defines the structure of the base (Charitonidis 2012a, 2012b; see also Section 2.2). In the *apo*-, *ek*(*s*)-, and *kse*- verbs no composition takes place between the prefixes and their bases (Charitonidis 2013).

⁴ Following the definitions in Scalise and Fábregas (2010: 124), the semantic head is the unit that defines the semantic class of the output word, and the categorial head is the unit that defines the lexical category of the output word.

In Section 4 I will argue that the strong DE-SE coordination in the $-(i)\acute{a}z(o)$ verbs is an exceptional phenomenon. Nonetheless, in both $-(i)\acute{a}z(o)$ verbs and SE compounds, the morphology-pragmatics interface prefers particular DE structures for its expression.

In Section 5 I summarize the main accomplishments of this paper and suggest paths for future research.

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2. Background analysis

Section 2.1 gives an overview of the morphological theory by Rochelle Lieber (2004, 2007) while focussing on verbal derivation and compounding. Section 2.2 refers to the theoretical set-up of the SE tier. Both sections contain parts from Charitonidis (2011, 2012a, 2012b, 2013, to appear¹). Several changes and enhancements have been made to support the analysis in Sections 3–5.

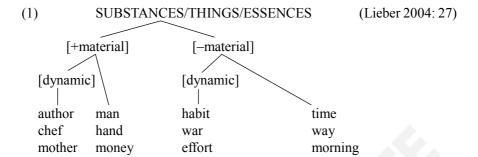
2.1. Theoretical framework. The distinction between semantic skeleton and pragmatic body.

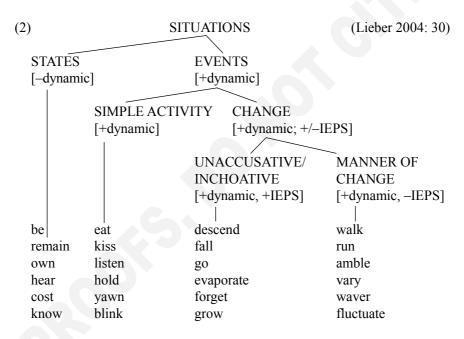
Lieber (2004, etc.) proposes two parts of semantic representation, i.e. the Semantic/Grammatical Skeleton (or skeleton, for short) and the Semantic/Pragmatic Body (or body, for short). The skeleton is the decompositional and hierarchically arranged part of the representation. It seeks to isolate all and only those aspects of meaning which have consequences for the syntax. The body is encyclopaedic, holistic, and nondecompositional, by comprising bits of perceptual and cultural knowledge that form the bulk of the lexical representation. It includes many of the aspects of meaning that Pustejovsky (1995: 85–86) encodes in his Qualia Structure, i.e. information concerning material composition, part structure, orientation, shape, colour, dimensionality, origin, purpose, function, etc. (see Lieber 2004: 9–10).

Lieber (2004, 2007) introduces an ontological system which decomposes the traditional grammatical 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. 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.⁵

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⁵ The featural system of English prepositions can be found in Lieber (2004: 107).





IEPS: 'Inferable Eventual Position or State' (Lieber 2004)

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As can be seen in (1) and (2), the features are binary in value (i.e. positive or negative), but they may also be either present or absent in the semantic skeleton of a given item (cf. [+dynamic, +IEPS] for *fall* vs. simple [+dynamic] for *eat* in (2), etc.). Absence from a representation indicates the irrelevance of the semantic feature for the item in question (Lieber 2014: 23).

The features in (1) and (2) are treated as functions which take arguments. They combine to yield the skeletons of various lexical items. In (3) and (4) two such skeletons are given, a bipartite skeleton for verbal derivation and a skeleton for nominal derivation. In both skeletons, the suffix is the head because it defines the lexical category of the output word, and the base is the nonhead. The violable *Principle of Co-indexation* in (5) regulates the assignment of indices between heads and nonheads.

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(3) Bipartite semantic skeleton of causative/inchoative verbs

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employee (Lieber 2004: 63)
[+material, dynamic ([sentient, nonvolitional-i employ], [+dynamic ([], [i])])]
-ee employ
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(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.

The skeleton in (3) for the verbal derivative *solidify* has two parts according to a convention which Lieber (2004, etc.) follows for the representation of causative/inchoative verbs. In particular, the first part of the skeleton (before the semicolon) encodes the agent-patient relation, cf. the first and second argument slot, indexed with "i" (agent) an "j" (patient), respectively. The agent in the first slot must be a volitional entity, e.g. a physicist, a chemist, etc., and this is encoded by the semantic condition "volitional". This condition can be inferred from the composition of the body of the agent argument, e.g. from features such as <animate> or <human> (Lieber 2004: 72). The second part of the skeleton (after the semicolon) encodes a change-of-state pattern, in which an agent (i) acts on a theme (j), so that this theme reaches a final state. This state is the argument of the [+Loc] function. In the inchoative variant the first underlined part of the

skeleton drops, because, most trivially, the first argument indexed with "i" (agent) is missing.

According to the Principle of Co-indexation in (5), the highest nonhead argument (i.e. the argument of the base *solid*) is co-indexed with the highest unindexed head argument (i.e. the [+Loc] argument of the affixal skeleton). Accordingly, a third index "k" is used in this last step.

In the case of the nominal derivative *employee* in (4), the skeleton of the suffix *-ee* includes two semantic conditions, i.e. "sentient" and "nonvolitional". "Sentient" means that the referent of -ee must be an entity which is both animate and conscious, e.g. a human, etc., and "nonvolitional" means that this referent does not act deliberately, cf. the nouns *addressee*, *employee*, etc. The condition "nonvolitional" in (4) is underlined because it is not always met, cf. specific nouns in which the referent may have an interpretation between volitional and nonvolitional, such as *standee*, *escapee*, etc. (Lieber 2004: 64–66).

As regards co-indexation in (4), the first argument of the verb employ is volitional. There is thus a conflict in the coindexation process: the highest nonhead argument, i.e. the first argument of the verbal base, cannot be coindexed with the highest head argument, i.e. the single argument of the suffix, because the latter bears the condition "nonvolitional". Accordingly, the principle of coindexation proceeds to the second argument of employ, i.e. the patient/theme argument, which meets the "nonvolitional" condition.

Concluding, I would like to cite an example presented in Lieber (2004: 51–52) which shows how body co-operates with skeleton in *compounding*. The skeleton and body of the copulative compound *clergyman-poet* is given in (6).

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(6) skeleton [+material, dynamic ([i ])] [+material, dynamic ([i ])]

(Lieber 2004: 51)

clergyman poet

body <natural>
<human>
<male>

writes poetry>
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<cleric>

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⁶ According to Lieber (2004), features such as "volitional" and "sentient" in (3) and (4) are not skeletal, i.e. not syntactically relevant. As Lieber (2004: 72) argues: "there are no syntactic processes that depend on the sentience and volitionality of an argument; causatives, for example, are well known to allow both volitional subjects (*I broke the base on purpose*) and nonvolitional subjects (*I broke the vase when I fell off the ladder*), and both sentient subjects (*I broke the vase*) and nonsentient ones (*The falling ladder broke the vase*)".

As can be seen, the skeletons of the nouns *clergyman* and *poet* are directly pulled together for the identification of a single referent because they are identical. The bodies of the same nouns have the identical major attributes <natural> and <human> which also allow for the identification of a single referent. The minor attributes <male>, <writes poetry>, and <cleric> are not identical, but they cannot impede the referential identification.⁷

2.2. The socio-expressive (SE) tier in Modern Greek (MG) verbal derivation

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In this section I will show that body, in the form of an extra SE tier, is an atomistic and decompositional 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 suffix.

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By analysing the MG verb-forming suffixes -iz(o), $-\acute{e}n(o)$, $-\acute{e}v(o)$, $-\acute{o}n(o)$, $-(i)\acute{a}z(o)$, and -in(o), Charitonidis (2011) detected a set of SE elements which interfere in Lieber's DE structure for causative/inchoative verbs (cf. (3) in Section 2.1), such as {+derisive}, {-evaluation}, {+intensive}, etc. According to metaphorical uses of English prepositions, Charitonidis (2012a, 2012b) elaborated a system of SE features which decompose these SE elements. Table 1 displays the process of identification of the SE features.

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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 (Plag 1999, 2000; Lieber 2004, 2007; Melissaropoulou & Ralli 2010; etc.) and are addressed by these features as well.

Table 2 exemplifies the mapping of the SE features onto lexemes – henceforth, the SE features are given in abbreviated form.

⁷ The identification of referents by means of bodily features does not proceed in the case of apparently different bodies; cf. Lieber's (2004: 52) account of the NN root compound *dog bed*. For details on referential identification in compounding, see Lieber (2009).

⁸ For details on the implicational character of spatial prepositions, see Charitonidis (to appear¹).

⁹ In this paper SE features are given in curly brackets and DE features are given in square brackets.

Table 1. Spatial prepositions and SE meaning.

Spatial Prepositions	Example phrases	SE metaphor (SE meaning)	SE features
Motion	turn <u>into</u> a confrontation	Meaning of measurement/ continuation/progress, i.e. size, intensiveness, strength etc., of a higher (e.g. {+intensive}) or lower (e.g. {+diminutive}) degree	{+measure}
Stasis	<u>at</u> home	Invariable SE content	{-measure}
Orientation towards sth.	along the lines of the system	Positive stance towards a situation or entity	{+stance}
Distancing from sth.	<u>below</u> expectations	Negative stance towards a situation or entity	{-stance}
Horizontal orientation	get <u>along</u> with so.	Estimations and stances explicitly involving the domain of interpersonal relations (reliable social interaction)	{+interpersonal}
Vertical orienta- tion	passed <u>over</u> the governor's veto	Estimations and stances that are to a certain degree orthogonal to the domain of interpersonal relations (non- reliable social interaction)	{-interpersonal}

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In Table 2 N $r\acute{e}bel(os)$ 'loafer' is $\{+m\}$ because a person who spends time idly is engaged in various activities to a limited extent. A $\acute{a}lal(os)$ 'stunned', 'dazed' is $\{+m\}$ because an utterly confused or tangled person deviates from a standard psychological or mental state. Standardly, verbs and verbal affixes refer to dynamic situations and have $\{+measure\}$ be default. Accordingly, the verbal suffix $-(i)\acute{a}z(o) - e.g.$ in $alali\acute{a}z(o)$ 'daze', 'drive sb mad' $(\acute{a}lal(os)$ 'stunned', 'dazed'), etc. -is $\{+m\}$ because it denotes progress. N irin(i) 'peace' is $\{-m\}$ because it refers to a situation with an invariable (neutral) socio-expressive content. A $el\acute{e}fther(os)$ 'free' is $\{-m\}$ because it refers to an

¹⁰ The inflectional ending -os in rébel(os) spells out the morphosyntactic properties 'nominative, singular, masculine' (property set determining the citation form of (i) MG adjectives and (ii) MG nouns with a masculine form).

¹¹ The inflectional ending -o in -(i)áz(o) spells out the morphosyntactic properties 'first person, singular, present, active' (property set determining the citation form of MG verbs). Henceforth, I do not give any details on MG citation forms.

SE features Lexemes Examples {+m} Ν rébel(os) 'loafer' 'stunned', 'dazed' Α álal(os) V_{af} $-(i)\acute{a}z(o)$ continuation, progress N $\{-m\}$ 'peace' irín(i) A 'free' eléfther(os) V_{af} -év(o) [stative] invariable SE meaning N $\{+s\}$ mitér(a) 'mother' ghlik(ós) 'sweet' A V fil(ó) 'kiss' N $\{-s\}$ rébel(os) 'loafer' A álal(os) 'stunned', 'dazed' V_{af} $-(i)\acute{a}z(o)$ negative meaning $\{\pm i\}$ N kubár(os) 'best man' A próthim(os) 'eager' V fil(ó) 'kiss' $\{-i\}$ N fádasma 'ghost' 'stunned', 'dazed' Α álal(os) V klév(o) 'steal'

Table 2. The mapping of SE features onto lexemes.

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invariable (independent) attitude or behaviour. The verbal suffix $-\acute{ev}(o)$ in its stative interpretation is $\{-m\}$ because it denotes an invariable state, cf. $vasil\acute{ev}(o)$ 'be a king/queen' ($vasili\acute{a}(s)$ 'king'), etc. N $mit\acute{er}(a)$ 'mother' is $\{+s\}$ because it relates to a positive social role. A $ghlik(\acute{o}s)$ 'sweet' is $\{+s\}$ because it standardly refers to a positive sensation. V $fil(\acute{o})$ 'kiss' is $\{+s\}$ because it is associated with a positive stance towards someone. N $r\acute{e}bel(os)$ 'loafer' and A $\acute{a}lal(os)$ 'stunned', 'dazed' are $\{-s\}$ because they relate to negative evaluations. The verbal suffix $-(i)\acute{a}z(o)$ is $\{-s\}$ because as a DE and SE head it imposes its negative structure onto entities that are not negative by default, cf. the creation $!miteri\acute{a}z(o)$ 'behave annoyingly like a mother' ($mit\acute{e}r(a)$ 'mother') in Charitonidis (2011, 2012a, 2012b). $!^2$ N $kub\acute{a}r(os)$ 'best man', A $pr\acute{o}thim(os)$ 'eager', and V

¹² In Efthymiou (2010, 2013a, 2013b) the preference of $-(i)\acute{a}z(o)$ for negatively marked bases is mentioned, together with its capability to place a negative interpretation on derivatives whose bases are not negatively marked, cf. *throniáz(o)* 'enthrone' (*thrón(os)* 'throne'; ironically), etc. It

fil(ó) 'kiss' are {+i} because they standardly involve reliable interpersonal relations. N fádasma 'ghost' is {-i} because it refers to entities outside the domain of interpersonal relations (non-reliable social interaction). A álal(os) 'stunned', 'dazed' is {-i} because an utterly confused or tangled person cannot fulfil interpersonal relationships properly. V klév(o) is {-i} because its meaning is orthogonal to a reliable social interaction.

In the following, I would like to qualify the SE features presented so far. $\{\pm s\}$ may be assigned to various entities, as an index of a default positive or negative meaning, cf. the institution $aghor(\acute{a})$ 'market' ($\{+s\}$), the human $erast(\acute{i}s)$ 'lover' ($\{+s\}$), the event $kavgh\acute{a}(s)$ 'quarrel' ($\{-s\}$), the property $ghlik(\acute{o}s)$ 'sweet' ($\{+s\}$), etc.

As regards the feature {m}, there can be no clear distinction between DE and SE meaning. For instance, the {+m} lexeme *rébel(os)* 'loafer' denotes a reduction in various activities (DE meaning) and at the same time evokes a pejorative evaluation (SE meaning), etc. For the most part, {+m} in the lexical categories motivates {-s}, cf. the Ns *apateón(as)* 'conman', 'cheat', *xalasm(ós)* 'chaos', 'uproar', *kavghá(s)* 'quarrel', etc., the As *misit(ós)* 'hateful', 'hated', *xaz(ós)* 'silly', *kak(ós)* 'bad', etc., the V *perighel(ó)* 'scoff', etc., all being {+m} {-s} predicates.

The feature {i} largely corresponds to the categories SOCIAL ESTEEM and SOCIAL SANCTION in Martin & White (2005): "Judgements of esteem have to do with 'normality' (how unusual someone is), 'capacity' (how capable they are) and 'tenacity' (how resolute they are); judgements of sanction have to do with 'veracity' (how truthful someone is) and 'propriety' (how ethical someone is)." (Martin and White 2005: 52). \(^{14}\) As with stance, in my system \{\pmii\} can be assigned not only to humans but also to various entities, cf. the thing/substance $farm\acute{a}k(i)$ 'poison', 'venom' (\{-i\}), the institution $aghor(\acute{a})$ 'market' (\{+i\}), the activity/event $p\acute{o}lem(os)$ 'war' (\{-i\}), etc.

should be noted that Efthymiou refers to a {-s} operation of this suffix, whereas my approach refers to a threefold {+m} {-s} cluster in base, suffix, and output (for details see Charitonidis 2012a, 2012b).

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¹³ The author has first reported the entanglement of the features $\{+m\}$ and $\{-s\}$ in the derivation of the MG verbs in $-(i)\dot{a}z(o)$ (Charitonidis 2012a: 311). This entanglement is also evident in the appraisal system of Martin and White (2005: 189): "A good deal of ... criticism and condemnation is strongly amplified with respect to both **graduation: quantity** ... and **graduation: intensity**" (bold face in the original).

¹⁴ In particular, in Martin and Whites's (2005) system POSITIVE SOCIAL ESTEEM (*clever, reliable*, etc.) is juxtaposed to NEGATIVE SOCIAL ESTEEM (*stupid, unreliable*, etc.) and POSITIVE SOCIAL SANCTION (*honest, polite*, etc.) is juxtaposed to NEGATIVE SOCIAL SANCTION (*dishonest, rude*, etc.).

I would like to point out that the SE features presented so far decompose a standard meaning core of specific lexemes and have no absolute character. They can be cancelled by strong counter-evidence in the context. As I mention in Section 5, these features should be empirically validated, e.g. by means of native-speakers' judgments, etc. Let us now see how the proposed SE system addresses MG verbal derivation.

After considering all SE components detected in Charitonidis (2011), Charitonidis (2012a, 2012b) defined two main SE clusters for the MG verbal suffixes. These are given in (7). As can be seen, only $-(i)\acute{a}z(o)$ is negatively marked for stance.

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(7) $\{+m\}\{s\}\{i\}$ default SE matrix for -iz(o), -ón(o), $-\acute{e}v(o)$, $-\acute{e}n(o)$, -in(o) $\{+m\}\{-s\}\{i\}$ default SE matrix for $-(i)\acute{a}z(o)$

The combinatorial properties of the SE features in (7) are given in (8).

- (8) 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. $\{m\}, \{s\}, \text{ and } \{i\}.$
 - (b) Suffixes are compound heads. Their valued features are also heads.
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- (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 (8) works, I give the SE structure of the verbs *alaliáz(o)* and *rebeliáz(o)* in (9) and (10), respectively.
 - (9) álal(os) A 'stunned', 'dazed' > alaliáz(o) 'daze', 'drive sb mad'

[NONHEAD]	[HEAD]	[OUTPUT]
álal(os)	$-(i)\acute{a}z(o)$	alaliáz(o)
{+m}	{+m}	{+m}
{-s}	{-s}	{-s}
$\{-i\}$	{i}	{-i}

(10) rébel(os) N 'loafer' > rebeliáz(o) 'loaf'

[NONHEAD]	[HEAD]	[OUTPUT]
rébel(os)	$-(i)\acute{a}z(o)$	rebeliáz(o)
{+m}	$\{+m\}$	{+m}
{-s}	{-s}	{-s}
$\{-i\}^{15}$	{i}	{-i}

In both (9) and (10), -(i)áz(o) is the DE and SE head of the verbal derivatives. This head has two valued features, i.e. {+m} {-s}. These valued features are also heads because they are within the SE head. Accordingly, {+m} {-s} percolate to the output without modification (i.e. differently valued features in the [NON-HEAD] would not be relevant for the computation of the output). In (9) and (10), the underspecified {i} in -(i)áz(o) is merged with {-i} in álal(os) and rébel(os), respectively, to yield {-i} in the output, independently of the head-nonhead pattern.

In these derivations, three steps are necessary: the referent of the base is evaluated in [NONHEAD] as $\{+m\}$ $\{-s\}$ $\{-i\}$, in [HEAD] as $\{+m\}$ $\{-s\}$ $\{i\}$, and in [OUTPUT] as $\{+m\}$ $\{-s\}$ $\{-i\}$. This three-fold evaluation is relevant for composition: the meaning of the base and the meaning of the suffix should be computed independently. This derivation also defines the right value of the $\{s\}$ feature in the [NONHEAD], i.e. it selects the relevant (negative) sense of $\acute{a}lal(os)$ and $\acute{r}\acute{e}bel(os)$ by means of a head operation – note that the predicates 'stunned' or 'loafer' are not unexceptionally negative.

The re-evaluation of the base referent in the [OUTPUT] validates the head and merging operations of SE features in [NONHEAD] and [HEAD]. In addition, this re-evaluation defines the right feature value to the input items in the absence of further evidence. For instance, the output 'daze', 'drive sb mad' for *alaliáz(o)* in (9) and the output *rebeliáz(o)* 'loaf' in (10), evaluate the base referent as $\{-i\}$. This $\{-i\}$ comes from [NONHEAD] because -(i)áz(o) in [HEAD] is not marked for $\{i\}$ by default (see (7) above).

As can be seen in (9) and (10), the features {+m} {-s} in both the base and the suffix restrict the skeleton operations which would otherwise over-generate verbs by simply embedding [-dynamic, -scalar] adjectives or [+material, dy-

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¹⁵ Rébel(os) 'loafer' is {-i} because it standardly refers to a non-reliable social interaction. It should be noted that this noun was inconsistently tagged as {+i} in Charitonidis (2012a, 2012b, 2013). I ask the reader for his/her understanding for particular tagging inconsistencies at the early stages of the theory.

namic] nouns into the structure in (3), as the [+Loc] argument or the first [+dynamic] argument, respectively.

In particular, the integration of the semantic condition $\{+m\}$ $\{-s\}$ into two different positions of the structure in (3) would result in a bipartite causative/inchoative skeleton and a similative skeleton, see (11) and (12), respectively. These skeletons are two homophonous $-(i)\acute{a}z(o)$ entries, a split pattern which is not called for in Lieber's theory. ¹⁶

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(11) -(i)\acute{a}z(o)_1 \quad [bipartite causative/inchoative; cf. (9)] \\ = \frac{[+dynamic ([volitional-i...], [i...])]; [+dynamic ([i...], [+dynamic, +IEPS ([j...], [+Loc_{(+m}, [-s], ])])])], <base>]
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(12) -(i)\acute{a}z(o)_2 [similative; cf. (10)] [+dynamic ([v_{\text{olitional}}_{\text{f-m}}]_{\text{f-s}}], [ ]), <br/>base>]
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In sum, {+m} {-s} bases are preferred by -(i)áz(o). The DE structures in (11) and (12) are dissociated. Nonetheless, both structures can be subsumed under a single {+m} {-s} structure in [NONHEAD], [HEAD], and [OUTPUT].

Two strong coordination patterns show up, one pattern for the deadjectival - $(i)\dot{a}z(o)$ verbs and one pattern for the denominal - $(i)\dot{a}z(o)$ verbs, see Tables 3 and 4, respectively. A rate of 100% is achieved by considering - $(i)\dot{a}z(o)$'s capacity to impose its $\{+m\}$ $\{-s\}$ structure onto bases other than $\{+m\}$ $\{-s\}$ (for this pattern see the earlier discussion).

¹⁶ Lieber (2004: 86–88) regards the similative skeleton of the English -*ize* and -*ify* verbs as an extension of the bipartite causative/inchoative skeleton of the same verbs. In this structural switch no shift of semantic conditions takes place. The shift of the $\{+m\}$ $\{-s\}$ condition in the MG -(i)áz(o) verbs suggests that no extension is involved.

¹⁷ In the analysis, -(i)áz(o) derivatives formed before the 19th century were not taken into account. Many of these verbs are not mapped onto a negative structure, cf. agaliáz(o) 'embrace', 'hug' (agali(á) 'arms'), aravoniáz(o) 'engage', 'betroth' (aravón(as) 'engagement', 'betrothal'), egomiáz(o) 'praise', 'speak highly of' (egómi(o) 'praise', 'commendation'), kuvediáz(o) 'talk', 'chat' (kuvéd(a) 'talk', 'chat'), etc. In Table 3 the coordination rate of 84.61% refers to the verbs alaliáz(o) 'daze', 'drive sb mad' (álal(os) 'stunned', 'dazed'), anapodhiáz(o) 'become cantankerous/crabby' (anápodh(os) 'cantankerous', 'crabby'), blaviáz(o) 'become dark blue' (bláv(os) 'dark blue'), kaburiáz(o) 'become/be hunch-backed/hump-backed' (kabúri(s) 'hunch-backed', 'hump-backed'), kakomiriáz(o) 'become wretched/miserable', 'have a bad time' (kakomiri(s) 'wretched', 'miserable'), kluviáz(o) 'get addled', 'grow addled-headed' (klúvi(os) 'addled', 'addled headed'), ksefreniáz(o) 'become frenzied/furious' (kséfren(os) 'frenzied', 'furious'), ksethoriáz(o) 'fade' (kséthor(os) 'faded'), neruliáz(o) 'grow watery', 'grow flabby' (nerul(ós) 'watery', 'flabby'), parakseniáz(o) 'grow odd' (paráksen(os) 'odd'), and vathuliáz(o) 'become hollow', 'sag' (vathul(ós) 'hollow'). It should be noted that in Charitonidis (2012a, 2012b) anápodh(os) and pa-

Table 3. Coordination patterns in the deadjectival $-(i)\acute{a}z(o)_1$ verbs [13 verbs, RIMG (approx. 19c.–)].

[NONHEAD]	[HEAD]	[OUTPUT]
[-dynamic, -scalar]	bipartite caus/inch (see (11))	bipartite caus/inch (see (11))
$\{+m\}\{-s\}$	$\{+m\}\{-s\}$	$\{\pm m\}\{-s\}$
84.61% (100%)	84.61% (100%)	84.61% (100%)

Table 4. Coordination patterns in the denominal $-(i)\acute{a}z(o)_2$ verbs [6 verbs, RIMG (approx. 19c.-)].

[NONHEAD]	[HEAD]	[OUTPUT]
[+material, dynamic]	similative (see (12))	similative (see (12))
$\{\pm m\} \{-s\}$	$\{+m\}\{-s\}$	$\{+m\}\{-s\}$
83.33% (100%)	83.33% (100%)	83.33% (100%)

Charitonidis (2012a, 2012b) concluded that one needs both a DE and an SE tier in accounting for verbal 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, in this case $-(i)\acute{a}z(o)$.

It remains to see whether the strong coordination patterns displayed in Tables 3 and 4 are confirmed by other morphological processes in MG or are an isolated phenomenon. In section 4 the coordination patterns of MG compounds will be presented. As will become clear, $-(i)\dot{a}z(o)$ verbs are different than compounds. However, they both refer to a cross-categorial interface mechanism.

But before we proceed to the comparison between $-(i)\dot{a}z(o)$ derivation and compounding let us examine the main classes of MG compounds and how the SE tier shows up within them.

ráksen(os) in anapodhiáz(o) and parakseniáz(o), respectively, were inconsistently tagged as {-m} {-s}. In Table 4 the coordination rate of 83.33% refers to the verbs bekruliáz(o) 'be on the booze' (bekri(s) 'drunkard', 'boozer'), lighuriáz(o) 'feel craving for' (lighúr(a)/lighúri(s) 'craving'/'sharp-set'), papardheliáz(o) 'blabber' (papardhél(as) 'blabbermouth'), papudhiáz(o) 'wrinkle' – esp. for hands or feet after having been a long time in water (papúdhi 'granddad', 'old man'), and rebeliáz(o) 'loaf' (rébel(os) 'loafer'). It should be noted that in Charitonidis (2012a, 2012b) papúdhi in papudhiáz(o) was inconsistently tagged as {+m} {s}.

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3. Compounding in Modern Greek (MG)

3.1. General properties of compounds¹⁸

Compounding is a very productive word-formation process in MG. MG compounds belong to the major grammatical categories, nouns, adjectives, and verbs, and have a binary structure. In Table 5 the categorial status of compound constituents is given, together with examples. On the categorial status of compound constituents is given, together with examples.

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Table 5. The main categories of MG compounds.

Nouns	[N N]	alatopíper(o)	<	alát(i)	pipér(i)
		salt-pepper		salt	pepper
	[A N]	stenosókak(o)	<	sten(ó)	sokák(i)
		narrow street		narrow	street
Adjectives	[A A]	asprokókin(os)	<	áspr(os)	kókin(os)
		white-red		white	red
	[N A]	iliokamén(os)	<	íli(os)	kamén(os)
		sunburnt		sun	burnt
	[Adv A]	kakodimén(os)	<	kak(á)	dimén(os)
		badly dressed		badly	dressed
Verbs	[V V]	anighoklín(o)	<	anígh(o)	klín(o)
		open-close		open	close
	[N V]	xartopéz(o)	<	xart(iá)	péz(o)
		play cards		cards	play
	[Adv V]	arghopethén(o)	<	argh(á)	pethén(o)
		lit. slowly die		slowly	die
		'die slowly'			

In a stem-word view such as that adopted in Ralli (2007, 2013) four morphological structures are possible in MG compounding, i.e. [stem-stem], [stem-word], [word-stem] and [word-word], whereby a stem is defined as a word stripped off its inflectional ending. Standardly, the right-hand element is the DE head and carries the inflectional ending. In the most of the cases a linking vowel *-o*-shows up between the two constituents.

¹⁸ This section follows Ralli's (2013) description.

¹⁹ Adverbial compounds are secondary formations (Ralli 2013: 37).

²⁰ For secondary combinations of constituents see Ralli (2013: 29–44).

Regular compounds such as those presented up to this point are phonological words and bear one stress. From this crucial property are excluded two-word NPs with a compound-like behaviour. Following the terminology in Ralli (2013), these NPs are (a) phrasal compounds, (b) phrasal compound-like phrases, and (c) constructs – see Table 6.²¹

Table 6. NPs with a compound like behaviour.

N 1.0 1	E 4 3 T1	1 1 () 11 (/)
Phrasal Compounds	[A N]	ethnik(í) odh(ós)
		national road
	[N N _{GEN}]	aghor(á) erghasí(as)
		lit. market.NOM.SG job.GEN.SG
		'job market'
Phrasal-Compound-	[N N] attributive	nóm(os) plési(o)
Like Phrases		law-frame
	[N N] appositive	metafrast(ís)-dhierminéa(s)
		translator-interpreter
Constructs	[A N]	theatrik(í) kritik(í)
		lit. theatrical criticism
		'drama review'
	[N N _{GEN}]	paraghogh(í) kapn(ú)
		lit. production tobacco.GEN
		'tobacco production'
	[N N _{ACC}]	xim(ós) portokáli
		lit. juice orange.ACC
		'orange juice'

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According to Ralli (2013: 250) only phrasal compounds belong to compounding since they are "semi-visible to syntax". Similarly, some of the attributive phrasal-compound-like phrases are in a process of desyntacticization. They respond, among others, negatively to tests regarding the change of inflection of the non-head, cf. the non-head *plésio* in *nómos plésio* 'law frame' (nominative), *nómu plésio* (genitive), etc. ²³

²¹ For a detailed presentation of these NPs see Ralli (2013: 243–270).

²² According to Ralli (2013: 250), the semantics of the phrasal compounds may be non-compositional, but "their structure is derived in syntax, in that, it is not based on morphologically proper units and is not the product of a morphological process". For further properties of phrasal compounds see Ralli (2013: 246–252).

²³ For further details see Ralli (2013: 254–255).

Appositive phrasal-compound-like phrases and constructs are products of syntax. The former are examined in Section 3.3.5. For the latter see Ralli (2013: 258–261).

3.2. The socio-expressive (SE) tier in compounding

The first goal of this paper set out in the Introduction was to validate the SE operations attested in $-(i)\dot{a}z(o)$ derivation. As already mentioned, the rest of the native verb-forming suffixes in MG are not appropriate for this enterprise because they are not explicitly marked for stance (see (7) in Section 2.2).

Charitonidis (2012a) has already pointed out the similarity of the operations in verbal derivation and (nominal) compounding. In compounding, body plays a major role since the constituents involved usually have an explicit SE content. For instance, the SE structure of the verbal derivative *rebeliáz(o)* 'loaf' in (10), repeated below as (13), is apparently similar to the SE structure of the adjectival compound *gheroparáksen(os)* 'old geezer' in (14). In both words, not only the same underlying head-nonhead relations are evident, but also the same threefold {+m} {-s} cluster.²⁴

(13) rébel(os) 'loafer' > rebeliáz(o) 'loaf'

[NONHEAD]	[HEAD]	[OUTPUT]
rébel(os)	$-(i)\acute{a}z(o)$	rebeliáz(o)
{+m}	{+m}	{+m}
{-s}	{-s}	{-s}
{-i}	{i}	{-i}

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(14) [NONHEAD] [HEAD] [OUTPUT]

ghér(os)	paráksen(os)	gheroparáksen(os)
'old'	'odd', 'geezer'	'old geezer'
{+m}	{+m}	$\{+m\}$
{-s}	{-s}	{-s}
{i}	{-i}	$\{-i\}$

²⁴ As with the suffix -(i)áz(o) in (13), paráksen(os) in (14) is the SE head and imposes its valued features to the output word (for details see the later discussion).

In the following, I would like to give a justification of the SE features assigned to the compound *gheroparáksen(os)* in (14) so that the analysis in Section 3.3 becomes more eligible.

In [NONHEAD], *ghér(os)* 'old' is {+m} because being an old person refers to an extreme on the age scale, {-s} because an old person evokes various negative connotations as regards his health condition, intellectual capacity, etc., ²⁵ and {i} because his involvement in a reliable social interaction depends on the particular situation (underspecification). In [HEAD], *paráksen(os)* 'odd man', 'geezer' is {+m} because a peculiar/odd person represents an intensification or absence of standard human properties, {-s} because he is evaluated negatively, and {-i} because this negative evaluation relates to a non-reliable social interaction.

The computation of the SE output in (14) proceeds according to the properties of the SE tier in relation to compounding (see (15)).

(15) The properties of the SE tier in relation to compounding

(a) Both constituents in the compounds refer to the same set of features, i.e. $\{m\}, \{s\},$ and $\{i\}.$

- (b) SE heads can be right-hand or left-hand. Valued features in the SE heads are also heads.
- (c) Underspecified features in the first or second constituent are merged regardless of their head role.
- (d) The SE arguments linked to the single compound referent are addressed by the features throughout the derivation, i.e. the SE arguments are evaluated anew in every derivational step including output.

The properties in (15) compute the output in (14) as follows: First, the DE head is identified by means of a simple hyponymy test: *gheropáksen(os)* 'old geezer' is a kind of *paráksen(os)* 'geezer', hence the right-hand constituent *paráksen(os)* is the DE head of the compound (the "IS A" condition; Allen 1978:

11, in Scalise and Fábregas 2010: 111). According to the linking patterns of MG SE-compounds only the classes A (one-word endocentric compounds), B (one-word exocentric compounds), and D_1 (phrasal-compound-like (endocentric) phrases) have a right-hand DE head (see Table 9 in Section 3.3).

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²⁵ Because the DE and SE head *paráksen(os)* 'odd man', 'geezer' is {-s}, it defines {-s} in *ghéros* (cf. the discussion on this head operation in various parts of this paper).

Gheroparáksen(os) is not a class-B compound because it is not exocentric: its head paráksen(os) sufficiently identifies the compound referent without a metonymy shift (cf. Sections 3.3.1 and 3.3.2). Gheroparáksen(os) is not a class-D₁ compound either, because it is not phrasal (see Section 3.3.4). Therefore, gheroparáksen(os) is assigned to the A class, as a non-phrasal (one-word) compound whose right-hand constituent is not subject to a metonymy shift.

In the A class, the right-hand constituent is also the SE head of the compound. $par\'{a}ksen(os)$ is thus the SE head of $gherop\'{a}ksen(os)$. This SE head has three valued features, i.e. $\{+m\}, \{-s\},$ and $\{-i\}$. These valued features are also heads because they are within the SE head. Accordingly, $\{+m\}, \{-s\}, \{-i\}$ percolate to the output without modification (differently valued features in the [NONHEAD] would not be relevant for the computation of the output). The underspecified $\{i\}$ in $gh\'{e}r(os)$ is merged with $\{-i\}$ in $par\'{a}ksen(os)$ to yield $\{-i\}$ in the output, independently of the head-nonhead pattern.

In this derivation, three steps are necessary: in [NONHEAD] the compound referent is evaluated as $\{+m\}$ $\{-s\}$ $\{i\}$, and in both [HEAD] and [OUTPUT] as $\{+m\}$ $\{-s\}$ $\{-i\}$. This three-fold evaluation is relevant for composition: the meaning of the compound constituents should be computed independently. This derivation also defines the right value of the $\{s\}$ feature in the [NONHEAD], i.e. it selects the relevant (negative) sense of *ghéros* by means of a head operation – note that an old person can also be a $\{+s\}$ entity, cf. the compound *gherólik(os)* 'old timer', 'veteran' (lit. *ghér(os)* 'old' + *lík(os)* 'wolf'), etc.

The re-evaluation of the compound referent in [OUTPUT] validates the head and merging operations of SE features in [NONHEAD] and [HEAD]. In addition, this re-evaluation defines the right feature value to the input constituents in the absence of further evidence. For instance, the output 'old geezer' in (14) evaluates the compound referent as {-i} while making clear that {-i} comes from [HEAD] (ghér(os) 'old' in [NONHEAD] is not necessarily a {-i} term, whereas paráksen(os) 'odd man', 'geezer' in [HEAD] is; it should be noted that {-i} cannot be assigned to ghér(os) by means of a head operation). For the opposite merging pattern, cf. the MG endocentric compound xazokórits(o) 'silly girl' (xaz(ó) 'silly', 'stupid' + koríts(i) 'girl'). In this compound, the {-i} output suggests {-i} for xaz(ó) in [NONHEAD], since koríts(i) in [HEAD] is standardly underspecified for {i}. Concluding, without the evaluative (SE) hints from the output, the head and merging operations cannot be sufficiently defined.

Having introduced the basic machinery, let us now address the second goal of this study, i.e. the categorization of MG compounds by integrating SE meaning.

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3.3. The linking of denotational (DE) and socio-expressive (SE) heads in Modern Greek (MG) compounding²⁶

As already mentioned, the majority of MG compounds have a single DE head at their right side. In one-word endocentric compounds such as *gheroparáksen(os)* 'old geezer' in (14) the linking of the DE with the SE tier is straightforward since *paráksen(os)* 'odd man', 'geezer' is not only the DE head but also the SE head of the construction. However, there are cases in which DE heads combine with SE heads in a very different manner. In the analysis to follow I will show that in MG compounding a distinct set of classes can be defined according to a different linking of DE with SE heads. These linking patterns subsume different morphophonological and syntactic properties and at the same time restrain overgeneration.

In Ralli (2007, 2013) six main classes of MG compounds are presented. By showing distinct properties these classes constitute a well-defined set, see Table 7. Table 8 gives one example for each class.²⁷

Table 7. The main classes of MG compounds (Ralli 2007, 2013).

A One-word endocentric compounds

B One-word exocentric compounds

C One-word copulative compounds

D Phrasal (endocentric) compounds

E Phrasal-compound-like (endocentric) phrases

F Compounds with a bound stem (endocentric)

In the analysis to follow, compounds with a bound stem as a second constituent (class F in Tables 7 and 8) were not taken into account.²⁸ These compounds are (i) old formations with a potential left-hand or right-hand {-s} head, cf. *thanati*-

²⁶ The linking patterns referred to in this section (for an overview see Table 9) were first presented at the Conference "Universals and Typology in Word-Formation II" (Šafárik University, Košice, Slovakia. Conference date: August 26–28, 2012).

²⁷ The class labels in Tables 7 and 8 have been adapted by the author to meet the requirements of the analysis. In Ralli (2013) class C is labelled as "coordinative compounds". In Ralli (2007) classes D and E are labelled as "loose multi-word compounds" and "special nominal phrases", respectively

²⁸ The compounds of this class are endocentric and right-headed. The right-hand stems are nominal and derive from verbal bases of AG origin, usually by means of a simple change of their steminternal vowel. However, these stems cannot become words in combination with inflectional suffixes (see Ralli 2013: 201-203).

Examples (SE Compounds L-constituent R-constituent compounds) One-word endokosmoxalasm(ós) kósm(os) xalasm(ós) centric 'uproar of people' 'people' 'chaos', 'uproar' В kardh(iá) One-word exocen- anixtókardh(os) anixt(í) 'open', 'unbigoted' 'open-hearted' 'heart' tric pikr(ós) One-word copulapikróghlik(os) ghlik(ós) 'bitter-sweet' 'bitter' 'sweet' tive D1 Phrasal [A N] mávr(i) aghor(á) mávr(i) aghor(á) 'black market' 'black' ('illegal') 'market' D2 Phrasal [N N_{GEN}] zón(i) asfalí(as) zón(i) asfalí(as) lit. 'belt safety' 'belt' 'safety' 'safety belt' eterí(a) maimú Phrasaleterí(a) maimú compound-like lit. company mon-'monkey' ('fake') 'company' phrases ([N N], key attributive) 'fake company' Compounds with a thanatifór(os) thánat(os) -fór(os) bound stem 'fatal', 'lethal' 'death' 'who carries/bears'

Table 8. Classes of MG compounds: examples (SE compounds).

fór(os) 'fatal', 'lethal' (thánat(os) 'death' + -fór(os) 'who carries/bears') and laoplán(os) 'demagogue' (la(ós) 'people' + -plán(os) 'who seduces/tempts'), respectively, etc., and (ii) new formations with a potential left-hand and/or right-hand and/or right-hand {-s} head, cf. burdhológh(os) 'who talks trash' (búrdh(a) 'trash' + -lógh(os) 'talker'), kukulofór(os) 'hooded' (kukúl(a) 'hood' + -fór(os) 'who carries/bears'), katsaridhoktón(o) 'cockroach repellent' (katsaridh(a) 'cockroach' + -któn(os) 'killer'), etc. However, despite the possibility of marking one or both compounded constituents socio-expressively, the learned character of these words imposes major problems for a synchronic and conclusive SE (evaluative) analysis.

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Accordingly, without taking compounds with a bound stem into account, from a raw number of 421 compounds in Ralli (2007: 269–275) 63 compounds marked for positive or negative stance (SE compounds) were extracted. After considering ik(os) anox(is) 'brothel' (lit. house tolerance/sufferance) found in

²⁹ *Appositive* phrasal-compound-like phrases are products of syntax. They are examined in Section 3.3.5 together with the attributive phrasal-compound-like phrases.

Ralli (2013) the list ended up containing 64 compounds. The consideration of compounds having the same DE and SE structure defined 57 types.³⁰

As will become clear in Sections 3.3.1–3.3.5, Ralli's (2007, 2013) main classes of compounds are largely justified by the different linking patterns of DE and SE heads. To anticipate the analysis to follow, (a) one-word endocentric compounds (class A) are compounds with a right-hand DE head and a right-hand SE head, (b) one-word exocentric compounds (class B) are compounds with a right-hand DE head and a left-hand SE head, (c) one-word copulative compounds (class C) are compounds with two DE heads and one right-hand or left-hand {+m} {-s} head, (d) phrasal compounds (class D) are compounds with a right-hand or left-hand DE head and a left-hand {-s} or right-hand {+s}/{-s} head, respectively, and (e) attributive phrasal-compound-like phrases (class E) are compounds with a left-hand DE head and a right-hand SE head. Table 9 summarizes the patterns in (a)–(e).

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Table 9. Linking patterns of MG SE compounds.

	R{SE}	L{SE}	$\begin{array}{c} R\left\{+m\right\}\left\{-s\right\} \ \veebar \\ L\left\{+m\right\}\left\{-s\right\} \end{array}$	$R\{+s\}/\{-s\}$	L{-s}
R[DE]	A	В			D1
L[DE]	E			D2	
[DE][DE]	_		C		

Let us now discuss the classes A–E in detail.

3.3.1. One-word endocentric compounds (Class A)

One-word endocentric compounds are the largest class within the one-word MG compounds. Correspondingly, 30 of a total of 57 SE compounds (types) in Ralli's (2007: 269–275) sample belong to this class. As already mentioned, these compounds have a right-hand DE head and a right-hand SE head (see 16).

³⁰ The full list of compounds can be found in the Appendix.

³¹ The combinations R[DE] \Leftrightarrow L{-s} and L[DE] \Leftrightarrow R{+s}/{-s} correspond to the categories D1 and D2, respectively (see Tables 8 and 9).

(16) [NONHEAD] [HEAD] [OUTPUT]
$$k \acute{o}sm(os) + xalasm(\acute{o}s) \rightarrow kosmoxalasm(\acute{o}s)$$

$$`people' `chaos', `uproar' `uproar of people'$$

$$[+material] [-material, dynamic] [-material, dynamic]$$

$$\{+m\}\{s\}\{+i\} + \{+m\}\{-s\}\{-i\} + \{+m\}\{-s\}\{-i\}\}$$

The composition of this class is extremely heterogeneous with words, bound or unbound stems of various categories as a first constituent and bound stems or words as a second constituent. Some of the first constituents are in a process of morphologization, having lost their immediate reference to independent words, cf. the first constituent *theo-* 'extremely' in *theonistik(os)* 'famished', 'starving' (nistik(ós) 'not having eaten') derived from the independent word the(ós) 'god', etc. Nonetheless, the heterogeneity of morphological units and the concomitant diversity of relations between them are compensated by the strict right-hand position of both the DE and SE head.

This strict head alignment in both tiers is a much more distinctive criterion than simple DE headedness according to which the compound as a whole is a hyponym of its head (cf. Ralli 2013: 105). For instance, *xazokúti* 'boob tube' (lit. silly box; for a television set) is not a kind of box as its head constituent *kut(i)* 'box' suggests or similarly *xarokamén(os)* 'bereaved' (lit. death seared/burnt) is not a seared/burnt entity as its head constituent *kamén(os)* 'seared', 'burnt' suggests, etc. By means of SE operations we get a much more restricted interpretation. In both *xazokút(i)* and *xarokamén(os)* the SE head interacts with the SE cluster in the first constituent to yield {+m} {-s} {-i} entities, i.e. entities expressing diminution (pejoration or privation), negative stance and a drawback in interpersonal relations, see (17) and (18), respectively.

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(17) [NONHEAD] [HEAD] [OUTPUT]
$$xaz(\acute{o}) + kut\acute{\iota} \rightarrow xazok\acute{\iota}ti$$
 'silly', 'stupid' 'box' 'boob tube' (for a TV set)
$$\{+m\}\{-s\}\{-i\} \qquad \{m\}\{s\}\{i\} \qquad \{+m\}\{-s\}\{-i\}$$

(18) [NONHEAD] [HEAD] [OUTPUT]
$$x\acute{a}r(os) + kam\acute{e}n(os) \rightarrow xarokam\acute{e}n(os)$$
 'death' (pers.) 'seared', 'burnt' 'bereaved'
$$\{+m\}\{-s\}\{-i\} + \{+m\}\{-s\}\{i\} + \{+m\}\{-s\}\{-i\}\}$$

In other words, in both (17) and (18) the SE operations subsume various lexical-polysemy or metaphorical accounts of the DE heads. *kut(i)* or *kamén(os)* are just

615 members of two large classes of words which could have been used to refer to the clusters {m} {s} {i} and {+m} {-s} {i}, respectively. In sum, in order to access the essential/generative structure in the compounds we can rely on a simple [HEAD]–[NONHEAD] configuration and the operations in the SE tier.

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3.3.2. One-word exocentric compounds (Class B)

One-word exocentric compounds represent the second largest class within one-word compounds. Correspondingly, there are 15 exocentric SE compounds within Ralli's (2007: 269–275) sample. These compounds have a right-hand DE head and a left-hand SE head. The first constituent is standardly more explicitly valued than the second one (see (19)).

(19) [NONHEAD] [HEAD] [OUTPUT]
$$elafr(o) + mial(o) \rightarrow elafromial(os)$$
 'light' 'mind' 'light-minded'
$$\{+m\}\{-s\}\{-i\} \qquad \{m\}\{+s\}\{i\} \qquad \{+m\}\{-s\}\{-i\}$$

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The present analysis is in line with Booij's (1992), Lieber's (2004: 52–54) and Ralli's (2007, 2013: 110–126) accounts who argue that "exocentric" compounds do contain a right-hand head and thus are endocentric. In particular, Booij (1992) and Lieber (2004) argue for a metonymy mechanism which shifts the reference from a part, denoted by the right-hand constituent, to its whole. Ralli (2007, 2013) argues for a derivational or zero suffix before the inflectional ending. By regarding the right-hand constituent as a metonymical, self-contained predicate, the SE operations yield the right output in all cases. For instance, in (6) the output {+m} {-s} {-i} for *elafrómial(os)* 'light-minded' sufficiently evaluates the metonymic head, i.e. a human, without reference to further information about this human, etc.

The patterns presented in Sections 3.3.1 and 3.3.2 are explicitly regular and borne out by a sufficient number of compounds. The patterns in Sections 3.3.3—3.3.5 refer only to a small number of compounds but, nonetheless, they are quite distinctive.

3.3.3. One-word copulative compounds (Class C)

In Ralli's (2007: 269–275) sample there are four types of one-word copulative compounds explicitly marked for stance.³² These compounds are exclusively adjectives having two adjectival DE heads in free order and a right-hand or left-hand {+m} {-s} head (see (20) and (21), respectively). It should be noted that in contrast to these [AA] formations, copulative [N N] and [V V] compounds have a fixed constituent order in MG (see Ralli 2013: 168).³³

In (20) and (21), two [AA] formations with an alternating constituent order are given. The marking {-s} in the output of *ghlikópikr(os)/pikróghlik(os)* 'bitter-sweet' refers to a standard (spontaneous) reaction of a human having tasted or eaten/drunk something he/she had expected to be sweet.³⁴

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(20) [HEAD] [HEAD] [OUTPUT]
$$ghlik(\acute{o}s)$$
 'sweet' + $pikr(\acute{o}s)$ 'bitter' $\rightarrow ghlik\acute{o}pikr(os)$ 'bitter-sweet' $\{+m\}\{+s\}\{i\}$ $\{+m\}\{-s\}\{i\}$ $\{+m\}\{-s\}\{i\}$

(21) [HEAD] [HEAD] [OUTPUT]
$$pikr(\acute{o}s)$$
 'bitter' + $ghlik(\acute{o}s)$ 'sweet' $\rightarrow pikr\acute{o}ghlik(os)$ 'bitter-sweet' $\{+m\}\{-s\}\{i\}$ $\{+m\}\{+s\}\{i\}$ $\{+m\}\{-s\}\{i\}$

As regards the DE tier, the compounds of this class could be considered as headless since, as Ralli (2013: 166) notes, "headedness in [N N] and [AA] coordinative (i.e. copulative, CC) compounds cannot be tested and confirmed on the basis of the features of gender and inflection class". I propose that the headedness issue can be decided at the level of tier coordination. For instance, in alternating orders like those in (20) and (21) it is always the {-s} feature *in only one* constituent which percolates to the output word. ³⁵ Accordingly, this {-s} constituent defines the main head of the compound. In other words, two DE heads are

³² The actual number of copulative SE compounds is six (see Appendix).

³³ Ralli (2013: 168) reports that "only few cases of [A A] constructions show a fixed order which is due either to phonology or to lexicalization". For instance, the compound *ghlikanálat(os)* 'namby-pamby', 'insipid' (lit. sweet unsalted) never shows up as **analatóghlikos* because of the considerable length of *análat(os)* (four syllables), etc.

³⁴I exclude from the analysis lexicalized {+s} instances of *ghlikópikr(os)/pikróghlik(os)* referring to things with a standard bittersweet flavour, such as specific types of chocolate, fruits, etc.

³⁵ In simple terms, the negative sensation referred to by the compounds is called for by the {-s} constituent, respectively.

mapped onto one SE head. Since, under the current approach, the existence of the SE tier presupposes the existence of the DE tier, the headlessness option mentioned above comes out of the question.³⁶

The class of copulative compounds was the last one-word class under examination. Let us now see how the DE tier combines with the SE tier in multi-word compounds, i.e. phrasal (endocentric) compounds (Section 3.3.4) and phrasal-compound-like (endocentric) phrases (Section 3.3.5).

680 3.3.4. Phrasal (endocentric) compounds (Class D)

In this multi-word class there are two distinct patterns, i.e. one right-hand DE head with one left-hand {-s} head (class D1, see (22)) and one left-hand DE head with one right-hand {+s} head in genitive (class D2, see (23)). Compounds such as ik(os) anox(is) 'brothel' (lit. house tolerance/sufferance) found in Ralli (2013: 244) suggest that in D2 the right-hand SE head can also be {-s} (see (24)).³⁷

(22) [NONHEAD] (A) [HEAD] (N) [OUTPUT] (N) $m\acute{a}vr(i)$ + $aghor(\acute{a})$ \rightarrow $m\acute{a}vr(i)$ $aghor(\acute{a})$ 'black' ('illegal') 'market' 'black market' $\{+m\}\{-s\}\{-i\}$ $\{-m\}\{+s\}\{+i\}$ $\{+m\}\{-s\}\{-i\}$

(23) [HEAD] (N) [NONHEAD] (N_{GEN}) [OUTPUT] (N)
$$z \acute{o}n(i) + asfali(as) \rightarrow z \acute{o}n(i) asfali(as)$$
 'safety' 'safety belt' $\{m\}\{s\}\{i\}$ $\{+m\}\{+s\}\{i\}$

(24) [HEAD] (N) [NONHEAD] (N_{GEN}) [OUTPUT] (N) ik(os) + anox(is) 'tolerance', $\rightarrow ik(os) \ anox(is)$ 'brothel' $\{m\} \{+s\} \{i\}$ $\{-m\} \{-s\} \{+i\}$ $\{-m\} \{-s\} \{+i\}$

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³⁶ This approach is more close to pragmatic accounts of headedness like those presented in Anastassiadis-Simeonidis (1996) and Ralli (2007). For objections to pragmatic approaches of MG copulative compounds see Ralli (2013: 169–170).

 $^{^{37}}$ In MG the noun anox(i) 'tolerance', 'sufferance' predominantly expresses a non-acceptance attitude, i.e. negative stance.

As can be seen, the crucial unifying factor in these denotationally different structures is the SE tier. The DE heads in two different configurations, i.e. [NONHEAD A] \sim [HEAD N] (see 22) and [HEAD N] \sim [NONHEAD N_{GEN}] (see (23) and (24)) combine with reverse SE heads, respectively. I introduce the term "SE bounding" for this linking type.

Following the analysis in Weiskopf (2007) I argue that none of the compounds in this class have a straightforward interpretation based on set intersection, e.g. λx (mávr(os)' (x) & aghor(á)' (x)) for mávr(i) aghor(á) 'black market' (see (22)), etc. ³⁸ 'Black market' is not an x that is both a market and black. Statements containing mávr(i) aghor(á) together with "hedges" such as 'literally' or 'strictly' shift the reference of these compounds to extremely counterfactual conditions (Weiskopf 2007: 170).

In the present framework the pragmatic context can change the value of the SE features in the SE head, prior to the semantic composition between the constituents. The SE features in the SE head can be thought of as context-sensitive indices, similar to the indexical, context-sensitive expressions which Weiskopf (2007: 175ff) introduces for the English compound nominals. For instance, in the case of $m\acute{a}vr(i)$ $aghor(\acute{a})$ 'black market' in (22) the SE head $m\acute{a}vr(os)$ 'black' does not enter the construction with the meaning '(of colour) black' i.e. as a $\{-m\}\{s\}\{i\}$ entity, but referring to an activity outside of government-sanctioned channels, i.e. as a $\{+m\}\{-s\}\{-i\}$ entity. In combination with the DE head $aghor(\acute{a})$ 'market' this SE head determines the meaning of the whole construction. The consistency of the respective pragmatic context establishes this construction as a compound. The same argumentation holds for the rest of the compounds in this class.³⁹

Let us now turn to the second multi-word class, i.e. the phrasal-compound-like phrases.

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³⁸ Weiskopf's (2007) analysis relies considerably on the notion of "primary pragmatic processes" (Recanati 1993, 2004).

 $^{^{39}}$ As an anonymous referee noted, the $\{-s\}$ shift in lexemes such as $m\acute{a}vr(i)$ 'black' in $m\acute{a}vr(i)$ aghor(\acute{a}) 'black market' seems arbitrary. An underlying mechanism that motivates this shift is not in evidence. As a matter of fact, the heavy SE shift for $m\acute{a}vr(i)$ is stipulated in order to validate the compositional patterns (see (22)). I assume that certain elements or features in lexemes such as black, etc., give rise to a valued interpretation within compounds. This is a working hypothesis in my ongoing empirical research, mainly based on interviews with native speakers of Modern Greek and English.

3.3.5. Phrasal-compound-like (endocentric) phrases (Class E)

Attributive phrasal-compound-like phrases are [N N] constructs having one left-hand DE head and one right-hand SE head, see (25).

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(25) [HEAD] [NONHEAD] [OUTPUT]
$$eteri(a)$$
 + $maim\acute{u}$ 'monkey' \rightarrow $eteri(a)$ $maim\acute{u}$ 'fake company' [+material] [+material] [+material] [+m\{-s\}{-i\}

Attributive phrasal-compound-like phrases have properties similar to common NPs but the [NONHEAD] may not agree with the [HEAD]. In many cases the [NONHEAD] has an invariable form (nominative singular) independent of the case and number marking of the [HEAD], cf. (26). This invariance suggests that attributive phrasal-compound-like phrases are under the process of becoming phrasal compounds (Ralli 2013: 252–255).

- (26a) etería maimú
 lit. company.NOM.SG monkey.NOM.SG
 'fake company'
 - (26b) eterías maimú company.GEN.SG monkey.NOM.SG

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(26c) eterión maimú company.GEN.PL monkey.NOM.SG

As with the phrasal compounds in Section 3.3.4, attributive phrasal-compound-like phrases do not have a straightforward interpretation. They resist an intersection mapping of their constituents and are pragmatically exceptional when combined with hedges such as 'literally' or 'strictly' and the like. For instance, if eteri(a) maimú in (25) were to denote an entity which is both a company and a monkey, then we would have to refer to a highly counterfactual context according to which this entity can exist, etc.

As with the phrasal compounds, a recurrent pragmatic context can change the value of the SE features in the SE head, prior to the semantic composition between the constituents. In the case of *eteri(a) maimú* 'fake company' in (25) the SE head *maimú* does not enter the construction with the meaning 'monkey',

i.e. as an {m} {s} {i} entity, but with the meaning 'fake', 'crafty', and the like, i.e. as a {+m} {-s} {-i} entity. In combination with the DE head *eteri(a)* 'company', this SE head determines the meaning of the whole phrase.

Within the general class of phrasal-compound-like phrases there is another subcategory of [N N] constructions which mostly denote professions and are *appositive*, such as *metafrast(is) dhiermin(éas)* 'translator-interpreter', *arxitékton(as) arxeológh(os)* 'architect-archaeologist', etc. These constructions are similar to the copulative compounds in several European languages (Ralli 2013: 255). ⁴⁰ Contrary to the attributive phrasal-compound-like phrases, the [NON-HEAD] must always agree with the [HEAD].

Appositive phrasal-compound-like phrases are not included in the present analysis, because they are not explicitly marked for stance. A certain pragmatic conditioning is also evident in these phrases since a more prominent role is assigned to the constituent appearing first (Anastassiadis-Simeonidis 1996: 108; Ralli 2013: 256). Accordingly, both constituents can be thought of as DE heads and the first constituent as the single SE head of the construction.⁴¹

This SE head is affected only slightly in composition – contrary to the phrasal compounds and the attributive phrasal-compound-like phrases in which the SE head is mostly subject to a heavy SE shift. Since there is no SE (pragmatic) bounding in these phrases, the order of their constituents can vary.

Concluding, I regard appositive phrasal-compound-like phrases as "products of syntax" in line with Ralli's (2013: 256) description.

4. The coordination of denotational (DE) with socio-expressive (SE) tier in Modern Greek (MG) compounding

The third goal of this study set out in the introduction was to find out whether or not the strong DE-SE coordination in $-(i)\acute{a}z(o)$ derivation is an isolated phenom-

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 $^{^{40}}$ Lieber (2009) labels the corresponding English compounds as "coordinate compounds with a simultaneous interpretation".

⁴¹ In line with my analysis, Scalise et al. (2009, n. 13) argue that coordinative compounds of the type *poet painter* have two semantic heads while denoting subsets of the two constituents (see also Guevara and Scalise 2009: 112). As regards the salience of the first constituent, Scalise and Fábregas (2010: 21) report: "in the Italian *prete-operaio* 'priest worker', the semantic head seems to be solely the first constituent, since the usual interpretation of the word is a priest who, in addition to being a priest, has another occupation" (italics in the original, CC).

⁴² The SE head (first constituent) of one-word exocentric compounds (class B, Section 3.3.2) bears an explicit SE marking, as well. However, this SE head is not subject to an SE shift.

enon in MG morphology. As already shown in Section 2.2 the {+m} {-s} cluster

785 in [NONHEAD], [HEAD], and [OUTPUT] of the MG -(i)áz(o) verbs seems to

886 subsume Lieber's (2004, 2007) DE structures in a highly restrictive manner. In

887 particular, -(i)áz(o) verbs refer to two distinct patterns, i.e. [-dynamic, -scalar]

888 in [NONHEAD] and a bipartite causative/inchoative skeleton in [HEAD] and

889 [OUTPUT], or [+material, dynamic] in [NONHEAD] and a similative skeleton

790 in [HEAD] and [OUTPUT]. If such a strong coordination is involved in MG

890 compounding as well, then it may be possible to implement an SE (pragmatic)

991 component, which, in the ideal case, will subsume specific sets of DE structures

992 and thus restrain over-generation across morphological processes. In other

993 words, we may be able to articulate a combinatorial system addressing the mor
994 phology-pragmatics interface sufficiently.

To attain the relevant coordination patterns in compounding I will use a simple method which first tracks down threefold {+m} {-s} patterns within the main classes of compounds, and then aligns DE clusters to these SE patterns. My method is described in (a.-e.) in detail. For both the DE and SE tier I assume a binary constituent structure.

- (a) The SE compounds in Ralli (2007, 2013) are analysed according to the properties of the SE tier presented in Section 3.2.
- (b) The head–nonhead requirements are met in both the DE and SE tier according to the properties of each tier.
 - (c) Within the main classes of compounds subclasses are defined according to the same clusters of SE features in [NONHEAD], [HEAD], and [OUT-PUT].
- (d) In each subclass the SE structures are paired with the DE structures in order to define the relevant type configurations.
 - (e) In accepting feature variants in the coordination patterns, the keeping of the (sub)class-defining SE features takes priority over the different DE features.

As regards the results of the analysis, threefold {+m} {-s} patterns were found only in one-word endocentric compounds (class A) and phrasal compounds (classes D1 and D2). Tables 10, 11, and 12 contain the full set of compounds, respectively.

Table 10. One-word endocentric compounds with a threefold $\{+m\}\{-s\}$ cluster (Class A).

[NONHEAD]	[HEAD]	[OUTPUT]
		gheroparákse-n(os)
'old'	'odd', 'geezer'	'old geezer'
[+material]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{i\}$	$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$
the(ós) + (centremely' (lit. 'God')	nistik(ós) → 'not having eaten'	theonistik(os) 'famished', 'starving'
[+Loc]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{\pm m\} \{-s\} \{i\}$	$\{+m\}\{-s\}\{i\}$	$\{\pm m\} \{-s\} \{i\}$
the(ós) + cextremely' (lit. 'God')	palav(ós) → 'mad', 'crazy'	theopálav(os) 'completely mad/crazy'
[+Loc]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{i\}$	$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$
xár(os) + death' (pers.)	kamén(os) → 'seared', 'burnt'	xarokamén(os) 'bereaved'
[+material, dynamic]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{i\}$	$\{+m\}\{-s\}\{-i\}$
psevdh(is) + 'pseudo-'	anarxik(ós) → 'anarchic'	psevdhoanarxi-k(ós) 'pseudo-anarchic'
[-Loc]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$
psixr(ós) +	polemik(ós) → 'war-'	psixropolemi-k(ós) ⁴³ 'cold-war-'
[-dynamic, +scalar]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{-i\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\{+m\}\{-s\}\{-i\}$

[»] Right-hand DE head | Right-hand SE head

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⁴³ The adjective *psixropolemik(ós)* 'cold-war-' derives from the phrasal compound *psixr(ós) pólem(os)* 'cold war' by means of the suffix -ik-. This type of derivation is very marginal in MG. For this reason, I suggest a common [stem-word] structure for this adjective (cf. section 3.1).

Table 11. Phrasal compounds with a threefold $\{+m\}\{-s\}$ cluster (Class D1).

[NONHEAD]		[HEAD]		[OUTPUT]
psixr(ós) 'cold'	+	pólem(os) 'war'	\rightarrow	psixr(ós) pólem(os) 'cold war'
[-dynamic, +scalar]		[-material, dynamic]		[-material, dynamic]
$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$		$\{+m\}\{-s\}\{-i\}$		$\{+m\}\{-s\}\{-i\}$

[»] Right-hand DE head | Left-hand SE head.

Table 12. Phrasal compounds with a threefold {+m} {-s} cluster (Class D2).

[HEAD]	[NONHEAD]	[OUTPUT]
pólem(os) 'war' +	$n\acute{e}vr(on)$ 'nerves' (gen.) \rightarrow	pólem(os) névr(on) 'war of nerves'
[-material, dynamic]	[+material]	[-material, dynamic]
	$\{+m\}\{-s\}\{i\}$	$\{\pm m\}\{-s\}\{-i\}$

[»] Left-hand DE head | Right-hand SE head.

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Tables 13 and 14 summarize the patterns in Tables 10–12 while displaying the respective coordination rates. DE-SE pairs containing feature variants are given in bold. For the sake of comparison, the coordination patterns in the $-(i)\acute{a}z(o)$ verbs (Tables 3 and 4, section 2.2) are repeated in Tables 15 and 16.

Table 13. Coordination patterns in A [6 compounds/types, (approx. 19c.-)].

[NONHEAD]	[HEAD]	[OUTPUT]
[Various] (6 options)	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{\pm m\} \{-s\}$	$\{+m\}\{-s\}$	$\{+m\}\{-s\}$
33.33%	33.33%	33.33%

Table 14. Coordination patterns in D [2 compounds/types, (approx. 19c.-)].

[NONHEAD]	[HEAD]	[OUTPUT]
[-dynamic, +scalar] / [+material]	[-material, dynamic]	[-material, dynamic]
$\{+m\}\{-s\}$	$\{+m\}\{-s\}$	$\{+m\}\{-s\}$
50.00%	50.00%	50.00%

Table 15. Coordination patterns in the deadjectival $-(i)\dot{a}z(o)_1$ verbs [13 verbs, RIMG (approx. 19c.–)].

[NONHEAD]	[HEAD]	[OUTPUT]
[-dynamic, -scalar]	bipartite caus/inch	bipartite caus/inch
$\{\pm m\}\{-s\}$	$\{+m\}\{-s\}$	$\{+m\}\{-s\}$
84.61% (100%)	84.61% (100%)	84.61% (100%)

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Table 16. Coordination patterns in the denominal $-(i)\dot{a}z(o)_2$ verbs [6 verbs, RIMG (approx. 19c.-)].

[NONHEAD]	[HEAD]	[OUTPUT]
[+material, dynamic]	similative	similative
$\{+m\}\{-s\}$	$\{+m\}\{-s\}$	$\{+m\}\{-s\}$
83.33% (100%)	83.33% (100%)	83.33% (100%)

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The comparison of the patterns in Tables 13 and 14 with the patterns in Tables 15 and 16 suggests that there is no strong DE-SE coordination in MG compounding as opposed to $-(i)\acute{a}z(o)$ derivation. In particular, there are two main differences between the patterns of $-(i)\acute{a}z(o)$ verbs and the patterns of compounds.

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First, the coordination in the $-(i)\dot{a}zo$ verbs is potentially exhaustive, i.e. is at a rate of 100% for $-(i)\dot{a}zo_1$ and $-(i)\dot{a}zo_2$ (see Tables 15 and 16, respectively) as opposed to one-word endocentric compounds and phrasal compounds showing a coordination rate of 33.33% and 50%, respectively (see Tables 13 and 14).

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875 Second, whereas there is a mutual entailment between the DE and SE tier in $-(i)\dot{a}z(o)_1$ and $-(i)\dot{a}z(o)_2$ classes which refers to the total number of verbs, in compounding there is only unilateral entailment. In particular, the threefold {+m} {-s} cluster implies a [-dynamic, -scalar] constituent or [-material, dynamic] constituent in [HEAD] and [OUTPUT] in classes A and D, respectively, 880 but the opposite is not true: there are one-word endocentric compounds such as kosmoksákust(os) 'world famous' (kósm(os) 'world' + ksakust(ós) 'famous') with a $[-dynamic, -scalar] \mid \{+m\} \{+s\}$ constituent in [HEAD] and [OUTPUT], etc. or the phrasal compound $m \dot{\alpha} v r(i)$ aghor($\dot{\alpha}$) 'black market' with a [-material. dynamic] | {-m}{+s} constituent in [HEAD] and a [-material, dynamic] | 885 {+m} {-s} constituent in [OUTPUT] (see also Appendix). Consequently, it is not possible to add a $\{+m\}$ $\{-s\}$ condition to the argument structure of one-word endocentric compounds or phrasal compounds and at the same time define these classes exhaustively, as in the case of $-(i)\dot{a}z(o)_1$ and $-(i)\dot{a}z(o)_2$ verbs, cf. the structures (11) and (12) in section 2.2, respectively.

However, there is an important similarity. A pragmatic context which defines $\{+m\}$ $\{-s\}$ in [NONHEAD], [HEAD], and [OUTPUT] will always give one-word endocentric compounds which are [-dynamic, -scalar] in [HEAD] and [OUTPUT] and phrasal compounds which are [-material, dynamic] in [HEAD] and [OUTPUT]. That is, we obtain a pattern similar to the pattern of $(i)\dot{a}z(o)$ verbs in which $\{+m\}$ $\{-s\}$ in [NONHEAD], [HEAD], and [OUTPUT] results in two distinct morphological processes, that is $-(i)\dot{a}z(o)_1$ and $-(i)\dot{a}z(o)_2$ derivation, referring to a bipartite causative/inchoative or similative skeleton in [HEAD] and [OUTPUT], respectively.

Concluding, notwithstanding the unilateral coordination of DE with SE tier in one-word endocentric compounds and phrasal compounds, it seems that, in both verbal derivation and compounding, the morphology-pragmatics interface recruits specific morphological subprocesses for its expression.

905 5. Conclusions and prospectus

The analysis in the previous sections addressed the three objectives of this paper set out in the Introduction. In particular:

910 – At the level of SE meaning the unification of verbal derivation and compounding is feasible. The SE operations attested in the MG verbal derivatives in -(i)áz(o) (Charitonidis 2012a, 2012b) apply to the MG SE compounds as well. -(i)áz(o) derivatives have the same threefold {+m} {-s}

- structure as a particular subset of one-word endocentric compounds and a particular subset of phrasal compounds.
 - The categorization of MG compounds by integrating SE meaning was effective. In particular, the combination of left-hand or right-hand DE heads with left-hand or right-hand SE heads define five distinct classes of compounds sufficiently, in line with Ralli's (2007, 2013) categorization.
 - The strong coordination in -(i)áz(o) derivation is an isolated phenomenon in MG morphology, for that matter. The mutual entailment of structures in the DE and SE tier defines the -(i)áz(o) verbs exhaustively, as opposed to the one-word endocentric compounds and phrasal compounds, in which the mapping of structures is partial and unilateral, i.e. only from the SE tier onto the DE tier. Nonetheless, it was shown that the threefold {+m} {-s} cluster is a powerful morphology-pragmatics interface in MG. This structure cuts across different grammatical categories and morphological processes and at the same time is sensitive to Lieber's (2004, 2007) ontology.

In the $-(i)\dot{a}z(o)$ verbs and SE compounds, stance was marked explicitly. However, such an explicit marking does not show up in all compounds. One task for future research is to isolate the full set of contextual (pragmatic) elements which are relevant in the formation of compounds and instantiate them as context-sensitive features in the compound constituents. It should be noted that cognitive factors may be involved in this process – cf. the evolutional analysis of MG and English colour verbs in Charitonidis (to appear²).

Another task for future research is to find out further interfaces between the SE (pragmatic) level and Lieber's (2004, 2007) DE level. As has been shown, in both verbal derivation and compounding, only two types of DE structure in [HEAD] and [OUTPUT] spell out the threefold {+m} {-s} cluster. This pattern cannot be by chance. The comparison of the interfaces in MG with the corresponding interfaces in other languages will ultimately pave the way towards a restricted – and perhaps universal – theory of morphology-pragmatics interface.

Last but not least, the SE features referred to in this paper should be validated empirically, e.g. by means of simple evaluation tasks with native speakers, etc. Sets of parameters should be developed for defining each SE feature in a restricted way, e.g. in form of sub-conditions, etc.

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⁴⁴ It should be noted that such a distinct categorization is not possible by linking the same SE heads to Lieber's (2004, 2007) DE categories. The latter are too fine to enter the linking task (see also Appendix).

ABBREVIATIONS

AN analogical formation CCauthor's note DE denotational **GEN** genitive LEX lexicalization loan translation LT MDG Medieval Greek MEL meliorative MET metonymy Modern Greek MG **PERS** personified SE socio-expressive

REFERENCES

955

960

965

970

Allen, M.R. 1978. Morphological investigations. (PhD Dissertation, University of Connecticut, Storrs, CT.)

Anastassiadis-Simeonidis, A. 1996. "Η Νεοελληνική Σύνθεση" [Compounding in Modern Greek]. In: Katsimali, G. and F. Kavoukopoulos (eds.), Ζητήματα Νεοελληνικής Γλώσσας [Studies on Modern Greek language]. Rethymno: University of Crete. 97–120.

Anastassiadis-Simeonidis, A. 2002. Αντίστροφο Λεξικό της Νέας Ελληνικής [Reverse index of Modern Greek, RIMG]. Thessaloniki: Institute of Modern Greek studies.

Berlin, B. and P. Kay. 1969. *Basic color terms. Their universality and evolution*. Berkeley, CA: University of Los Angeles Press.

Booij, G. 1992. "Compounding in Dutch". Rivista di Linguistica 4. 37-59.

Charitonidis, C. 2011. Making verbs happen: Interviews on Greek verb endings. (Languages of the World 43.). München: Lincom Europa.

Charitonidis, C. 2012a. "The coordinative structure of the Greek -(i)ázo verbs". *Linguistische Berichte* 231. 299–315.

Charitonidis, C. 2012b. "The interaction between affixes and bases: The case of the Greek verb suffixes". In: Gavriilidou Z., A. Efthymiou, E. Thomadaki and P. Kambakis-Vougiouklis (eds.), *Selected Papers of the 10th International Conference on Greek Linguistics*. Komotini, Greece: Democritus University of Thrace. 202–212.

975 Charitonidis, C. 2013. "On the denotational and socio-expressive properties of the Greek verbal derivatives in *apo-*, *ek(s)-*, and *kse-*". *Bucharest Working Papers in Linguistics* 15(1), 79–112.

Charitonidis, C. To appear¹. "The linking of denotational and socio-expressive heads in Modern Greek and English compounding". *Rivista di Linguistica*.

980 Charitonidis, C. To appear². "Colour verbs in Modern Greek: A cognitive approach". *Word Structure* 7(2).

Efthymiou, A. 2010. "How many factors influence the meaning of denominal verbs? The case of Modern Greek verbs in -(i)ázo." Talk presented at the Workshop "Meaning and Lexicalization", 14th International Morphology Meeting, Budapest, 13–16 May 2010.

985

990

- Efthymiou, A. 2013a. "On the interaction between semantics and phonetic iconicity in evaluative morphology". SKASE Journal of Theoretical Linguistics 10(1). 152–166.
- Efthymiou, A. 2013b. "How many factors influence the meaning of denominal and deadjectival verbs? The case of Modern Greek verbs in -(ι)άζω". In: ten Hacken, P. and C. Thomas (eds.), *The Semantics of Word Formation and Lexicalization*. Edinburgh: Edinburgh University Press. 225–246.
 - Guevara, E. and S. Scalise. 2009. "Searching for universals in compounding". In: Scalise, S., E. Magni and A. Bisetto (eds.), *Universals of language today*. Springer. 101–128.
- 995 Λεζικό της Κοινής Νεοελληνικής [Dictionary of Common Modern Greek, DCMG]. 1999. Thessaloniki: Institute of Modern Greek Studies.
 - Lieber, R. 2004. Morphology and lexical semantics. Cambridge: Cambridge University Press.
 - Lieber, R. 2007. "The category of roots and the roots of categories: What we learn from selection in derivation". *Morphology* 16(2). 247–272.
 - Lieber, R. 2009. "A lexical semantic approach to compounding". In: Lieber, R. and P. Štekauer (eds.), *The Oxford handbook of compounding*. Oxford: Oxford University Press. 78–104.
- Martin, J. and P. White. 2005. *The language of evaluation: Appraisal in English.* Basingstoke and New York: Palgrave Macmillan.
 - Melissaropoulou, D. and A. Ralli. 2010. "Greek derivational structures: Restrictions and constraints". *Morphology* 20. 343–357.
 - Plag, I. 1999. Morphological productivity. Structural constraints in English derivation. Berlin: Mouton de Gruyter.
- Plag, I. 2000. "On the mechanisms of morphological rivalry: A new look at competing verb-deriving affixes in English". In: Reitz, B. and S. Rieuwerts (eds.), *Anglistentag 1999 Mainz*. Trier: Wissenschaftlicher Verlag Trier. 63–76.
 - Pustejovsky, J. 1995. The generative lexicon. Cambridge, MA: MIT Press.
 - Ralli, A. 2007. Η σύνθεση λέζεων [Compounding]. Athens: Patakis.
- Ralli, A. 2013. Compounding in Modern Greek. Dordrecht: Springer.
 - Recanati, F. 1993. *Direct reference: From language to thought*. Oxford and Cambridge, MA: Blackwell.
 - Recanati, F. 2004. Literal meaning. Cambridge: Cambridge University Press.
- Scalise, S., A. Fábregas and F. Forza. 2009. "Exocentricity in compounding". *Gengo Kenkyu* 135. 49–84.
 - Scalise, S. and A. Fábregas. 2010. "The head in compounding". In: Scalise, S. and I. Vogel (eds.), *Cross-disciplinary issues in compounding*. Amsterdam and Philadelphia: John Benjamins. 109–125.
- Weiskopf, D.A. 2007. "Compound nominals, context, and compositionality". *Synthese* 156. 161–204.

APPENDIX: FULL LIST OF SOCIO-EXPRESSIVE COMPOUNDS

Shaded areas indicate compounds with a threefold $\{+m\}\{-s\}$ cluster (see section 4).

CLASS A: ONE-WORD ENDOCENTRIC COMPOUNDS

[NONHEAD]	[HEAD]	[OUTPUT]
ghér(os) 'old'	+ paráksen(os) 'odd', 'geezer'	→ gheroparákse-n(os) 'old geezer'
[+material]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{i\}$	$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$
the(ós) 'extremely' (lit. 'God')	+ nistik(ós) 'not having eaten'	→ theonistik(os) 'famished', 'starving'
[+Loc]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{i\}$	$\{+m\}\{-s\}\{i\}$	$\{+m\}\{-s\}\{i\}$
the(ós) 'extremely' (lit. 'God')	+ palav(ós) 'mad', 'crazy'	→ theopálav(os) 'completely mad/ crazy'
[+Loc]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{i\}$	$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$
xár(os) 'death' (pers.)	+ kamén(os) 'seared', 'burnt'	→ xarokamén(os) 'bereaved'
[+material, dynamic]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{-i\}$	$\{\pm m\} \{-s\} \{i\}$	$\{+m\}\{-s\}\{-i\}$
psevdh(ís) 'pseudo-'	+ anarxik(ós) 'anarchic'	→ psevdhoanarxi-k(ós) 'pseudo-anarchic'
[-Loc]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$
psixr(ós) 'cold'	+ polemik(ós) 'war-'	→ psixropolemi-k(ós) 'cold-war-'
[-dynamic, +scalar]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{-i\}$	$\{\pm m\} \{-s\} \{-i\}$	$\{+m\}\{-s\}\{-i\}$

ásxim(o) 'ugly'	+ pap(i) 'duck'	→ asximópap(o) 'ugly duckling'
[-dynamic, +scalar]	[+material]	[+material]
$\{\pm m\}\{-s\}\{i\}$	$\left\{ m\right\} \left\{ s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ i\right\}$
krif(á) 'secretly', 'stealthily'	+ kitáz(o) 'look', 'see'	→ krifokitáz(o) 'peep', 'steal a glance at'
[-dynamic, -scalar]	[+dynamic]	[+dynamic]
$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\left\{ +m\right\} \left\{ s\right\} \left\{ i\right\}$	$\{+m\}\{-s\}\{-i\}$
la(ós) 'people'	+ misit(ós) 'hateful', 'hated'	→ laomísit(os) 'hated by the people'
[+material]	[-dynamic, +scalar]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ s\right\} \left\{ +i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\{+m\}\{-s\}\{-i\}$
meghál(os) 'big', 'large'	+ apateón(as) 'conman', 'cheat'	→ meghaloapateó-n(as) 'notorious conman'
[-dynamic, +scalar]	[+material, dynamic]	[+material, dynamic]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$
ksaná 'again'	+ perighel(ó) 'scoff'	→ ksanaperighe-l(ó) 'scoff again'
[+Loc]	[+dynamic]	[+dynamic]
$\{\pm m\}\{s\}\{i\}$	$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$
xaz(ó) 'silly', 'stupid'	+ kutí 'box'	→ xazokúti 'boob tube' (for a TV set)
[-dynamic, +scalar]	[+material]	[+material]
$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\left\{ m\right\} \left\{ s\right\} \left\{ i\right\}$	$\{+m\}\{-s\}\{-i\}$
alil(on) each-other. GEN.PL	+ sevasm(ós) 'respect'	→ alilosevasm(ós) 'mutual respect'
[+Loc]	[-material, dynamic]	[-material, dynamic]
$\{+m\}\{s\}\{+i\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$
amerikán(os) 'American'	+ fil(os) 'pro-'	→ amerikanófil(os) 'pro-American'
gherman(ós) 'German'	+ fil(os) 'pro-'	→ ghermanófil(os) 'pro-German'

élin(as) 'Greek'	+ fil(os) 'pro-'	→ elinófil(os) 'pro-Greek'
zó(o) 'animal'	+ fil(os) 'pro-'	→ zoófil(os) 'animal-loving'
[+material]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\left\{ -m\right\} \left\{ s\right\} \left\{ i\right\}$	$\{+m\}$ $\{+s\}$ $\{+i\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$
kardh(iá) 'heart'	+ kataktit(ís) 'conqueror'	→ kardhiokatakti-t(is) 'heartbreaker'
[+material]	[+material, dynamic]	[+material, dynamic]
$\{m\} \{+s\} \{i\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$
kósm(os) 'world'	+ ksakust(ós) 'famous'	→ kosmoksáku-st(os) 'world famous'
[+material]	[-dynamic, +scalar]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ s\right\} \left\{ +i\right\}$	$\{+m\}\{+s\}\{+i\}$	$\{+m\}\{+s\}\{+i\}$
monáx(o) 'alone', 'single'	+ <i>pedhí</i> 'child'	→ monaxopédhi 'only child'
[-dynamic, +scalar]	[+material]	[+material]
$\overline{\{\pm m\}\{-s\}\{-i\}}$	$\{+m\}$ $\{+s\}$ $\{+i\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$
trel(ó) 'crazy'	+ korits(i) 'girl'	→ <i>trelokórits(o)</i> 'crazy girl'
[-dynamic, +scalar]	[+material]	[+material]
$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{+s\}\{i\}$	$\{+m\}\{+s\}\{-i\}$
xaz(ó) 'silly', 'stupid'	+ koríts(i) 'girl'	→ xazokórits(o) 'silly girl'
[-dynamic, +scalar]	[+material]	[+material]
$\{+m\}\{-s\}\{-i\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ -i\right\}$
dhiávol(os) 'devil'	+ ghinék(a) 'woman'	→ dhiavologhiné-k(a) 'hellcat'
[+material, dynamic]	[+material]	[+material, dynamic]
$ \begin{array}{l} \{+m\} \{-s\} \\ \overline{\{-i\}} \end{array}$	$\left\{m\right\}\left\{s\right\}\left\{i\right\}$	$\{+m\}\{-s\}\{-i\}$

kósm(os) 'people'	+ xalasm(ós) 'chaos', 'uproar'	→ kosmoxala-sm(ós) 'uproar of people'
[+material]	[-material, dynamic]	[-material, dynamic]
$\left\{ +m\right\} \left\{ s\right\} \left\{ +i\right\}$	$\{+m\}\{-s\}\{-i\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$
skíl(os) 'dog'	+ kavghá(s) 'quarrel'	→ skilokavghá(s) 'dogfight', 'brawl'
[+material]	[-material, dynamic]	[-material, dynamic]
$\left\{ m\right\} \left\{ s\right\} \left\{ i\right\}$	$\{+m\}\{-s\}\{-i\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$
eghó 'ego'	+ kedrik(ós) 'centric'	→ eghokedrik(ós) (LT) 'egocentric'
[-material]	[-dynamic, +scalar]	[-dynamic, -scalar]
$\left\{ -m\right\} \left\{ s\right\} \left\{ -i\right\}$	$\left\{ m\right\} \left\{ s\right\} \left\{ i\right\}$	$ \begin{cases} -m \end{cases} \{-s\}^* $ $ \{-i\} $
kal(á) 'well'	+ pián(o) 'catch', 'grasp'	→ kalopián(o) (MDG) 'cajole', 'coax'
[-dynamic]	[+dynamic]	[+dynamic]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{m\right\}\left\{s\right\}\left\{i\right\}$	{+m} {+s} {+i}* *LEX
malí 'hair'	+ trávighma 'pull', 'jerk'	→ maliotrávighma 'hair-pulling', 'tussle'
[+material]	[-material, dynamic]	[-material, dynamic]
$\{+m\}\{s\}\{i\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ i\right\}$	$\{+m\}\{-s\}\{+i\}*$ *LEX
pedh(i) 'child'	+ erast(ís) 'lover'	→ pedherast(is) (AG) 'pederast'
[+material]	[+material, dynamic]	[+material, dynamic]
$ \begin{array}{l} \{\pm m\} \left\{\pm s\right\} \\ \{\pm i\} \end{array}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$	$\{+m\}\{-s\}^*\{+i\}$ *LEX
pali(ós) 'nasty'	+ ánthrop(os) 'man', 'person'	→ paliánthrop(os) 'villain'
[-Loc]	[+material]	[+material, dynamic]

sinxor(ó) 'forgive'	+ xartí '(piece of) paper'	→ sinxoroxárti (MDG) 'indulgentia' 'for- giveness'
[+dynamic]	[+material]	[+material]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$	$\left\{ m\right\} \left\{ s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$
meghál(os) 'great' (intens.)	+ ghiatr(ós) 'doctor'	→ meghaloghia-tr(ós) 'famous doctor'
[+Loc]	[+material, dynamic]	[+material, dynamic]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{m\right\}\left\{+_S\right\}\left\{+i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$
meghál(i) 'big', 'large'	+ ghinék(a) 'woman'	→ meghaloghiné-k(a) 'mature woman'
[+Loc]	[+material]	[+material]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\{m\}\{s\}\{i\}$	$\{+m\}\{+s\}\{i\}$
ómorf(os) 'beautiful', 'hand- some	+ ánthrop(os) 'man', 'person'	→ omorfánthro-p(os) 'handsome man'
[-dynamic]	[+material]	[+material]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\{m\}\{s\}\{i\}$	$\left\{ +m\right\} \left\{ +_{S}\right\} \left\{ i\right\}$
spit(i) 'home'	+ ghát(os) 'tomcat'	→ spitóghat(os) 'home-bird' (lit. 'home-tomcat')
[+material]	[+material]	[+material]
$\left\{ m\right\} \left\{ +_{S}\right\} \left\{ i\right\}$	$\left\{ m\right\} \left\{ s\right\} \left\{ i\right\}$	$\{m\}\left\{ +_{S}\right\} \left\{ i\right\}$

CLASS B: ONE-WORD EXOCENTRIC COMPOUNDS

[NONHEAD]	[HEAD]	[OUTPUT] +MET
xaz(ó) 'silly'	+ violí 'self-righteous behaviour' (lit. 'violin')	→ xazovióli(s) 'goofball', 'silly person'
[-dynamic, +scalar]	[-material, dynamic]	[+material, dynamic]
$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$

<i>elafr(ó)</i> 'light'	+ <i>mial(ó)</i> 'mind'	→ elafrómial(os) 'light-minded'
[-dynamic, +scalar]	[+material]	[-dynamic, -scalar]
$\{\pm m\} \{-s\} \{-i\}$	$\left\{ m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$
kak(i) 'bad'	+ tíx(i) 'luck', 'fortune'	→ kakótix(os) 'unlucky', 'unfortunate'
[-dynamic, +scalar]	[-material]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ -s\right\} \left\{ i\right\}$	$\left\{ m\right\} \left\{ +_{S}\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ i\right\}$
kser(ó) 'stubborn'	+ kefál(i) 'head'	→ kserokéfal(os) 'pigheaded'
[-dynamic, +scalar]	[+material]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\{m\}\{s\}\{i\}$	$\{+m\}\{-s\}\{-i\}$
pólem(os) 'war'	+ xér(o) 'be glad', 'enjoy'	→ polemoxar(is) (MDG) 'warlike'
[-material, dynamic]	[+dynamic]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$
farmák(i) 'poison', 'venom'	+ ghlós(a) 'tongue'	→ farmakóghlo-s(os) 'sharp-tongued'
[-material]	[+material]	[-dynamic, -scalar]
$\{+m\}\{-s\}\{-i\}$	$\left\{ m\right\} \left\{ s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$
xán(o) 'loose', 'waste'	+ mér(a) 'day'	→ xasoméri(s)'loafer'
[+dynamic, +IEPS, -Loc]	[-material]	[+material, dynamic]
$\{\pm m\} \{-s\} \{i\}$	$\left\{ m\right\} \left\{ s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ i\right\}$
anixt(i) 'open', 'unbigoted'	+ kardh(iá) 'heart'	→ anixtókardh(os) 'open-hearted'
[-dynamic, +scalar]	[+material]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$	$\left\{ m\right\} \left\{ +_{S}\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$
ghlik(iá) 'sweet'	+ fon(i) 'voice'	→ ghlikófon(os) 'sweet voiced'
[-dynamic, +scalar]	[+material]	[-dynamic, -scalar]
$\{+m\}\{+s\}\{i\}$	$\left\{ m\right\} \left\{ s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$

kal(i) 'good'	+ kardh(iá) 'heart'	→ kalókardh(os) 'good hearted'
[-dynamic, +scalar]	[+material]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{m\right\}\left\{+_S\right\}\left\{i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$
kal(i) 'good'	+ tix(i) 'luch', 'fortune'	→ kalótix(os) 'lucky', 'fortunate'
[-dynamic, +scalar]	[-material]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{m\right\}\left\{+_S\right\}\left\{i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$
pón(os) 'compassion'	+ <i>psix(i)</i> 'soul'	→ ponópsix(os) 'compassion-ate'
[-material]	[-material]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$	$\left\{ m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\{+m\}\{+s\}\{+i\}$
vath(is) 'deep'	+ plút(os) 'riches', 'wealth'	→ vathiplut(os) (AG) 'immensely wealthy'
[-dynamic, +scalar]	[+material]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ s\right\} \left\{ i\right\}$	$\{+m\}\{+s\}\{i\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$
eksusi(a) 'power', 'authority'	+ mani(a) 'obsession', 'mania'	→ eksusioman(is) (AN) 'obsessed with power', 'power maniac'
[-material, dynamic]	[-material, dynamic]	[-dynamic, -scalar]
$ \begin{array}{l} \{+m\}\{+_S\} \\ \{+i\} \end{array}$	$\{+m\}\{-s\}\{-i\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ +i\right\}$
psix(i) 'psyche'	+ páth(os) 'suffering'	→ psixopath(is) (LT) 'psychopath'
[-material]	[-material]	[-dynamic, -scalar]
$\left\{ m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ i\right\}$	$\{+m\}?\{-s\}\{i\}$

CLASS C: ONE-WORD COPULATIVE COMPOUNDS

[HEAD]	[HEAD]	[OUTPUT]
ghlik(ós) 'sweet'	+ análat(os) 'unsalted', 'insipid'	→ ghlikanálat(os) 'namby-pamby', 'insipid'
[-dynamic, +scalar]	[-dynamic, -scalar]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ i\right\}$	$\{+m\}\{-s\}\{i\}$
ghlik(ós) 'sweet'	+ ksin(ós) 'sour'	→ ghlikóksin(os) 'sweet-sour'
ghlik(ós) 'sweet'	+ <i>pikr(ós)</i> 'bitter'	→ ghlikópikr(os) 'bitter-sweet'
[-dynamic, +scalar]	[-dynamic, +scalar]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\{+m\}\{-s\}\{i\}$	$\{\pm m\}\{-s\}\{i\}$
kut(ós) 'dull', 'unintelligent'	+ ponir(ós) 'cunning', 'sly'	→ kutopónir(os) 'naively cunning/sly'
[-dynamic, +scalar]	[-dynamic, +scalar]	[-dynamic, -scalar]
$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\{\pm m\}\{-s\}\{-i\}$
ksin(ós) 'sour'	+ ghlik(ós) 'sweet'	→ ksinóghlik(os) 'sweet-sour'
pikr(ós) 'bitter'	+ ghlik(ós) 'sweet'	→ pikróghlik(os) 'bitter-sweet'
[-dynamic, +scalar]	[-dynamic, +scalar]	[-dynamic, -scalar]
$\{\pm m\}\{-s\}\{i\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\{+m\}\{-s\}\{i\}$

CLASS D1: PHRASAL [A N] COMPOUNDS

1050

[NONHEAD]	[HEAD]	[OUTPUT]
mávr(i) 'black' ('illegal')	+ <i>aghor(á)</i> 'market'	→ mávr(i) aghor(á) 'black market'
[-dynamic, +scalar]	[-material, dynamic]	[-material, dynamic]
$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\left\{ -m\right\} \left\{ +_{S}\right\} \left\{ +i\right\}$	$\{+m\}\{-s\}\{-i\}$
psixr(ós) 'cold'	+ pólem(os) 'war'	→ psixr(ós) pólem(os) 'cold war'
[-dynamic, +scalar]	[-material, dynamic]	[-material, dynamic]
$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$	$\{+m\}\{-s\}\{-i\}$

CLASS D2: PHRASAL [N N_{GEN}] COMPOUNDS

[HEAD]	[NONHEAD]	[OUTPUT]
pólem(os) 'war'	+ névr(on) 'nerves' (gen.)	→ pólem(os) névr(on) 'war of nerves'
[-material, dynamic]	[+material]	[-material, dynamic]
$\{+m\}\{-s\}\{-i\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ i\right\}$	$\{+m\}\{-s\}\{-i\}$
zón(i) 'belt'	+ asfali(as) 'safety' (gen.)	→ zón(i) asfalí(as) 'safety belt'
[+material]	[-material]	[+material]
$\{m\}\{s\}\{i\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$
ik(os) 'house' (MEL)	+ anox(is) 'tolerance', 'sufferance' (gen.)	ík(os) anox(ís) 'brothel'
[+material]	[-material]	[+material]
$\left\{ m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\left\{ -m\right\} \left\{ -s\right\} \left\{ +i\right\}$	$\left\{ -m\right\} \left\{ -s\right\} \left\{ +i\right\}$

CLASS E: PHRASAL-COMPOUND-LIKE PHRASES (ATTRIBUTIVE)

[HEAD]	[NONHEAD]	[OUTPUT]
eteri(a) 'company'	+ maimú 'monkey' ('fake')	→ eterí(a) maimú 'fake company'
[+material]	[+material]	[+material]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\{+m\}\{-s\}\{-i\}$
eteri(a) 'company'	+ fádasma 'ghost'	→ eterí(a) fádasma 'ghost company'
[+material]	[-material]	[+material]
$\left\{ +m\right\} \left\{ +s\right\} \left\{ +i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$	$\left\{ +m\right\} \left\{ -s\right\} \left\{ -i\right\}$
pedhí 'child'	+ thávma 'prodigy'	→ pedhí thávma 'child prodigy'
[+material]	[-material]	[+material]
$ \left\{ +m \right\} \left\{ +s \right\} $ $\left\{ +i \right\}$	$\left\{ +m\right\} \left\{ +s\right\} \left\{ i\right\}$	$\{+m\}\{+s\}\{+i\}$

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