

The coordinative structure of the Greek -(i)ázo verbs

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Abstract

This paper examines the semantic structure of the Greek verb derivatives in *-(i)ázo*. At the level of socio-expressive meaning *-(i)ázo* structures show a coordinative character which is much more different than the denotational structures assumed in the generative linguistic tradition for verb suffixes. To show this, an extra semantic representation is introduced, i.e. the ‘socio-expressive tier’. This tier properly restricts the denotational operations so that a base can be selected by a particular suffix.

1 Introduction¹

The Greek verb-deriving suffix *-(i)ázo*² combines with adjectival and nominal bases. The variants *-ázo* and *-iázo* have the same origin, but in Standard Modern Greek *-iázo* is preferred which nowadays seems to be developing its own semantics. As Eftymiou (2011) reports, “the relationship of *-ázo* to *-iázo* and *-ízo* has been traditionally regarded as unclear”. According to Ralli (2005: 147, f.147) in the *-iázo* form, *-i-* is the product of the reanalysis of the root of the neuter forms as a part of the derivational suffix, cf. *teri-ázo* > *ter-iázo* ‘fit’, ‘match’ (*téri* ‘match’, ‘mate’), etc.³ The number of transparent *-ázo* forms is very small. *-ázo* appears with feminine nominal bases in *-í* or in *-a* (stressed on

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¹ In this section I largely follow Eftymiou’s (2011) description.

² The derivational suffix is actually *-(i)áz* - without the inflectional end vowel *-o* for the first person singular – the standard citation form for Greek verbs. In the following, I give verbs and suffixes together with the inflectional ending.

³ Eftymiou (2011) mentions some different views on the relationship between *-ázo*, *-iázo*, and *-ízo*.

the penultimate syllable) and with adjectival bases in *-os* stressed on the antepenultimate syllable.

Overall, *-ázo/-iázo* attaches primarily to consonant-final base stems. Particularly, *-(i)ázo* attaches primarily to nominal feminine bases in *-a* or neutral bases in *á+C+i* (stressed on the penultimate syllable), e.g. *komatiázo* ‘break/tear into pieces’ (*komáti* ‘piece’), to feminine nouns in *-iá* and *-i*, e.g. *angaliázo* ‘to embrace’ (*angaliá* ‘arms’), to bases in *-io(s)*, e.g. *dhiplasiázo* ‘to double’ (*dhiplásios* ‘double’), and to imparisyllabic masculine nouns, e.g. *papudhiázo* ‘become like an old person’ (*papús* ‘grandfather’, ‘old person’). *-(i)ázo*, when pronounced [jázo] or [çázo] – but not in the form *-ázo* – usually attaches to [–learned] bases denoting something negative and derives verbs characterized as [–learned].

In Table 1 all semantic patterns of *-(i)ázo* derivatives are given, together with examples. The most robust pattern is INCHOATIVE.⁴

Table 1: The semantics of the Greek verb derivatives in *-(i)ázo*

Label	Meaning	Verb		Base	
INCHOATIVE	become/ be provided with x	<i>skulikiázo</i>	‘be wormy/ Wormeaten’	<i>skuliki</i>	‘worm’
RESULTATIVES	turn into x, make (more) like x	<i>etimázo</i>	‘to prepare, to ready’	<i>étimos</i>	‘ready’
SIMILATIVES	do/ make/ act in the manner of/ like x	<i>neázo</i>	‘act as a young Person’	<i>néos</i>	‘young, new’
ORNATIVES	provide with x	<i>dropiázo</i>	‘to disgrace’	<i>dropí</i>	‘disgrace’
LOCATIVES	put in(to) x	<i>tsuvaliázo</i>	‘to bundle into a sack’	<i>tsuvalí</i>	‘sack’
INSTRUMENTALS	use x	<i>nixiázo</i>	‘scratch with one’s nails’	<i>níxi</i>	‘nail’
PERFORMATIVES	perform/ do/ make x	<i>kuvendiázo</i>	‘chat, discuss’	<i>kuvénda</i>	‘chat’

Both the percolation of the [–learned] feature of *-(i)ázo* to the output verbs and the preference of this suffix for negatively marked bases (see INCHOATIVE), suggest a coordinative structure for the *-(i)ázo* derivatives in which both suffixes and bases are marked negatively. Before I proceed to the formalization of the respective patterns, I would first like to present Lieber’s (2004, 2007) theoretical framework which will be used as basis for the analysis.

2 Theoretical framework

The great advantage of Lieber’s (2004, 2007) model is the efficient handling of transpositional effects between a derivative and its base on a semantic basis.

⁴ Semantic labels and examples were taken from Efthymiou (2011). Efthymiou considers INCHOATIVE as the inchoative/anticausative version of the ornative pattern. RESULTATIVE is a label for both causative and resultative meanings. The semantic labels used by Efthymiou can also be found in Plag (1999), Lieber (2004), and Gottfurcht (2008).

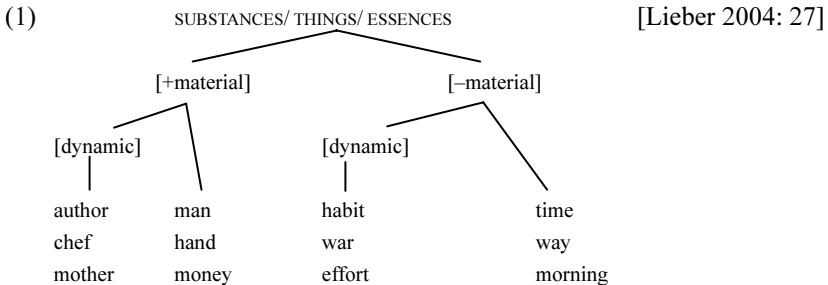
Affixes are regarded as linguistic signs equivalent to the bases onto which they attach (the sign-based hypothesis; see Plag 1999, 2000). They operate on bases, while producing derivatives which are allocated to the same set of featural combinations as the bases themselves. According to Lieber (2004: 9–10) there is a fundamental distinction in the lexical semantic representations of lexical items: the Semantic/Grammatical Skeleton (*skeleton*, for short) and the Semantic/Pragmatic Body (*body*, for short). The skeleton seeks to isolate “all and only those aspects of meaning which have consequences for the syntax”, while the body is “encyclopedic, holistic, nondecompositional, not composed of primitives, and perhaps only partially formalizable”. In the following, I give a comprehensive illustration of Lieber’s (2004, 2007) morphological system.

2.1 Skeleton

Lieber (2004) defines two conceptual categories (major ontological classes) for the skeletons: SUBSTANCES/THINGS/ESSENCES and SITUATIONS. These categories are used as mnemonic labels for different combinations of semantic features, and not as primitives. The very essence of her system is formed by the features [material] and [dynamic]. These features can be positive or negative, whereas in the case of nominal forms, the feature [dynamic] may be totally absent (see (1) below).

As regards the decomposition of the major lexical categories by means of features, Lieber assumes that nouns have at least the feature [material] in their skeleton, verbs and adjectives have the feature [dynamic] without the feature [material], verbs may be [+dynamic], i.e. EVENTS, or [–dynamic], i.e. STATES. Adjectives bear the feature [–dynamic], i.e. they are STATES. In Lieber (2007) the features [+scalar] and [–scalar] for adjectives are introduced, cf. the adjectives *wide* and *pregnant*, respectively.

The system of SUBSTANCES/THINGS/ESSENCES is found in (1).

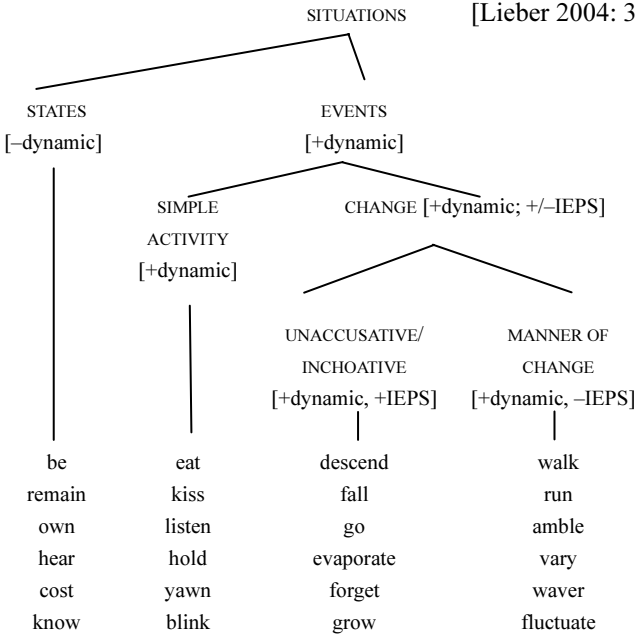


The semantic features presented so far are used as functions which take arguments. Lexical items will always have at least one argument – in the case of nouns at least one argument called “R”-argument (referential argument) – but they may also have more than more argument, see (2) below.

- (2) [Lieber 2004: 25]
 - leg* [+material ([], [])] (e.g. *the leg of the table*)
 - fond* [-dynamic ([], [])] (e.g. *fond of pickles*)
 - kiss* [+dynamic ([], [])] (e.g. *kiss frogs*)

Another important feature is [IEPS] (Inferable Eventual Position or State) used for verbal SITUATIONS. Its presence signals the addition of a sequence of PLACES or STATES. In particular, [+IEPS] signals the existence of a directed PATH, cf. the UNACCUSATIVE verb *fall* and the INCHOATIVE verb *grow*; and [-IEPS] signals the existence of a random PATH, cf. the verbs *walk* and *vary*. If [IEPS] is absent, the notion of PATH is irrelevant, cf. the verb *hold*. The basic system of SITUATIONS is given in (3).

- (3) [Lieber 2004: 30]



Causative verbs consist of two subevents: an ACTIVITY (*x* does something to *y*) and a RESULT (such that *x* causes *y* to become/go to *z*). In (4) the semantic skeleton for the causative verb *grow* is given.

- (4) *grow* (causative) [Lieber 2004: 33]
 - [+dynamic ([*i*...], [*j*...])];
 - [+dynamic ([*i*...], [+dynamic, +IEPS ([*j*], [*Path*])])]

As already mentioned, affixes are signs in Lieber’s theory. It should not surprise us then if the causative verb suffixes *-ize* and *-ify* were to have the same structure as *grow*; see (5) – the argument of [+Loc] refers to an end state or an end location.

- (5) *-ize, -ify* [Lieber 2004: 82]
 [+dynamic ([volitional-i...], [i...])]; [+dynamic ([i...],
 [+dynamic, +IEPS ([j], [+Loc ([])]), <base>]

In both (4) and (5) the causative bipartite structure results into inchoative by dropping its first underlined part. Indexing conforms to the Principle of Co-indexation (Lieber 2004: 61).

2.2 Body

As already mentioned at the beginning of section 2, Lieber (2004, 2007) regards body as encyclopaedic, holistic, nondecompositional, and not composed of primitives. It refers to perceptual and cultural knowledge while including many of the aspects of meaning that Pustejovsky encodes in his Qualia Structure, i.e. information concerning material composition, part structure, orientation, shape, colour, dimensionality, origin, purpose, function, etc. (Lieber 2004: 10; see Pustejovsky 1995: 85–86 for a short description of Qualia Structure). I would like to cite an example presented in Lieber (2004: 51–52) which shows what body looks like and how it co-operates with skeleton. The skeleton and body of the copulative compound *clergyman-poet* is given in (6).

- (6) [Lieber 2004: 51]
- | | | |
|------|--------------------------------------|-----------------------------|
| | skeleton [+material, dynamic ([i])] | [+material, dynamic ([i])] |
| | <i>clergyman</i> | <i>poet</i> |
| body | <natural> | <natural> |
| | <human> | <human> |
| | <male> | <writes poetry> |
| | <cleric> | |

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.⁵

To conclude, the combinatorial properties of the skeleton features are for the most part traceable. Bodily attributes do not constitute a restricted class, and their combinations cannot be sufficiently explained.

⁵ About how Lieber's system works in the case of apparently different bodies, see Lieber's example on the interpretation of the NN root compound *dog bed* (Lieber 2004: 52).

2.3 The issue

As Lieber rightly argues, her framework rather falls within the tradition of ‘Item and Arrangement’ (Lieber 2004: 3). Even in complex affixal structures like that in (5) above recursion is limited whereby two partial structures are simply coordinated. However, the obvious question which emerges from the comparison of derivational structures like that in (5) with compositional structures like that in (6) is why morphology should employ two completely different strategies for the formation of new items. In particular, why body plays almost no role in the identification of referents in verb derivation,⁶ whereas in the formation of root compounds body becomes *the* crucial issue? In other words, why should we deprive verb derivation of a powerful generative component, i.e. body, as licenser of output forms? As it will become clear in section 3, the formalization of bodily structures by means of *socio-expressive features* is feasible, contrary to Lieber’s (2004) assumptions. This fact brings verb derivation closer to root compounding since in the latter body plays a crucial role.

For the integration of a separate socio-expressive level of meaning into my analysis I follow Lyons’s (1995: 65) insight that “knowing the expressive (or socio-expressive) meaning of a lexeme is just as much part of one’s competence in a language as knowing its descriptive meaning”. If affixes are signs, i.e. a kind of lexemes, as Lieber (2004, 2007) assumes, then these affixes also have a socio-expressive (SE) meaning on a par with their denotational (DE) one.

3 The socio-expressive tier

Charitonidis (2011) conducted four language experiments with 28 native speakers of Greek in February 2009, in Athens, Greece. His main goal was to detect the semantic profile of the native Greek verb suffixes *-ízo*, *-éno*, *-évo*, *-óno*, *-(i)ázo*, and *-íno*. The experiments had the form of four interview tasks referring to predictions and evaluations as regards *lexical* knowledge. This means that no context was given together with the tested material.

In the first interview task the test persons (henceforth “TPs”) were asked to force (=create) new verbs by using the suffixes *-ízo*, *-éno*, *-évo*, *-óno*, *-(i)ázo*, and *-íno* and a variety of bases which conformed to the ontological distinctions made in Lieber (2004). In the second task the TPs were asked to evaluate three groups of forced verbs with a noun, an adjective, and an adverb, respectively, by using one (best/highly acceptable verb) to six (worst/unacceptable verb) points. In the third task nineteen established verb pairs with different suffixes and the ending *-áo/-ó* were presented. The TPs were asked to report whether there was some difference between them and what exactly this difference was. The differ-

⁶ An exception for this is the semantic feature ‘volitional’, which according to Lieber (2004: 72) can be inferred from the composition of the semantic body of the verb arguments, e.g. from features such as <animate> or <human> (see (5) in section 2.1).

ences reported were transformed into 16 alternations. In the fourth task 21 established verbs with different suffixes were presented. The TPs were asked to give the “opposite” or “near opposite” expression for each verb. The rationale behind this task was to arrive at the meaning of the suffixes through the semantics of the opposites.

In the first two tasks described above were examined the effects of online combination of linguistic signs, i.e. of bases and of suffixes, under the condition of forcing, irrespective of output restrictions, e.g. blocking, etc. (Plag 1999). In the analysis the suffixes were considered as lexical heads which keep their semantic composition independent of the word structure they appear in (the sign-based hypothesis; see Lieber 2004, 2007, Melissaropoulou & Ralli 2010, Plag 1999, 2000, etc.). The comparison of the operations in created verbs with the operations in existing/established verbs validated the former. The validated features are presented in Table 2. DE features are enclosed in square brackets and SE features in curly brackets. The {+intensive} feature for *-ízo* was assessed in relation to the semantics of the verb ending *-áo/-ó* (see Charitonidis 2011 for details). In the analysis to follow, it is assumed that the rest of the suffixes carry this feature as well (cf. (7) below in which the {+intensive} feature is subsumed under {+m}).

Table 2: The meaning of the native Greek verb suffixes

	[+dynamic]	[-dynamic]	[+dynamic, +IEPS, +Loc]	[+dynamic, +simulative]	[+accumulation]	{+intensive}	{-evaluation}
<i>-ízo</i>	✓		✓	✓		✓	
<i>-éno</i>	✓		✓				
<i>-évo</i>	✓	✓	✓				
<i>-óno</i>	✓		✓				
<i>-(i)ázo</i>	✓		✓		✓		✓
<i>-íno</i>			✓				

IEPS: ‘Inferable Eventual Position or State’ (Lieber 2004)

In addition to the validated components {+intensive} for *-ízo* and {-evaluation} for *-(i)ázo* in Table 2, further interfering SE components in the structure of the verb suffixes were detected, e.g. {+evaluation}, {±aesthetic/correct}, {+derivative}, {+diminutive}, etc. (see Charitonidis 2011). According to the denotations of English spatial prepositions⁷ and a metaphor I would like now to introduce a set of features which formalize the SE meaning. In the transferring task

⁷ The complete system of English spatial prepositions can be found in Lieber (2004: 107). It should be noted that both spatial prepositions and verb suffixes are closed-class items. This common categorization points to a fundamental affinity between them (cf. Beard 1995).

to follow, three levels are addressed: (i) a (perhaps purely) expressive level, (ii) an evaluation level, and (iii), an interpersonal level. Prepositions are conceived as relating elements or functors within these levels.

(i) Motion prepositions (*onto, into, etc.*) in phrases such as *turn into a confrontation* suggest a meaning of measurement/continuation/progress, i.e. size, intensesness, strength etc., of a higher (cf. {+intensive}) or lower (cf. {+diminutive}) degree, i.e. they introduce the SE feature {+measure}. The suffix *-iázo* in the creation *!míteriázo* “behave annoyingly like a mother” (*mítéra* “mother”) carries this feature.⁸ Stasis prepositions (*at, on, etc.*) in phrases such as *at home* suggest an invariable SE content, i.e. they introduce the feature {-measure}; cf. the meaning of the base noun *mítéra* in *!míteriázo*.

(ii) Prepositions denoting an orientation towards sth. (*to, toward, etc.*) in phrases such as *along the lines of the system* suggest a positive stance towards a situation or entity, i.e. they introduce {+stance}. The noun *mítéra* in *!míteriázo* and perhaps the suffix *-évo* in *proedhrévo* ‘preside’, ‘chair’ (*próedhros* ‘chairman’, ‘president’) carry this feature.⁹ Prepositions denoting distancing from sth. (*below, from, etc.*) in phrases such as *below expectations* suggest a negative stance towards a situation or entity, i.e. they introduce {-stance}; cf. again *-iázo* in *!míteriázo* above.

(iii) Prepositions of horizontal orientation (*along, across, etc.*) in phrases such as *get along with so.* suggest estimations and stances explicitly involving the domain of interpersonal relations, i.e. they introduce {+interpersonal}; cf. again *mítéra* in *!míteriázo*. Finally, prepositions of vertical orientation (*up, down, etc.*) in phrases such as *passed over the governor’s veto* suggest estimations and stances that are to a certain degree orthogonal to the domain of interpersonal relations, i.e. they introduce {-interpersonal}; cf. *nerulós* ‘watery’, ‘flabby’ in *neruliázo* ‘grow watery’, ‘grow flabby’, etc. As will become apparent in section 4, the value of the {i} feature is always a function of the base.

The SE features and their meaning are comprehensively given in Table 3.

⁸ From now creations are indicated with ‘!’.

⁹ I would only reluctantly assume a suffixal {+stance} feature. In Charitonidis (2011) the respective component was indicated as {+evaluation}. It was assigned only to *-évo* in relation to the meaning of existing antonymous verbs (see Charitonidis 2011: 28). More experiments should be made to validate this feature.

Table 3: The SE features and their meaning

{-m}	Invariable socio-expressive content	{+m}	Meaning of measurement/continuation/ progress, i.e. size, intensesness, strength etc., of a higher (cf. {+intensive}) or lower (cf. {+diminutive}) degree
{+s}	Positive stance towards a situation or entity	{-s}	Negative stance towards a situation or entity
{+i}	Estimations and stances explicitly involving the domain of interpersonal relations	{-i}	Estimations and stances that are to a certain degree orthogonal to the domain of interpersonal relations

For the readers of this article who may have found the motivation of the SE features described above as unprincipled or incoherent, I counter that these features are sufficiently mapped onto the meanings of the existing verbs and creations, cf. the analysis in section 4.

The SE patterns of the verb suffix *-(i)ázo* detected in Charitonidis (2011) are given in Table 4. The very fresh neologism *?kitriniázo* is indicated with ‘?’. ‘[TP]’ refers to a direct TP comment.

Table 4: The SE patterns of the Greek verb suffix *-(i)ázo*. [Charitonidis (2011)]

SE components (suffix)	SE features (suffix)	Verbs	Bases
{-evaluation}, {+derivative} [TP], {-aesthetic/correct}[TP]	{+m}, {-s}, {i}	<i>?kitriniázo</i> ‘become yellow/pale’	<i>kítrinos</i> ‘yellow’, ‘pale’
{-evaluation}	{+m}, {-s}, {i}	<i>!potiriázo</i> ‘I fume at/ over having washed a lot of drinking glasses’	<i>potíri</i> ‘glass’

In the interviews *?kitriniázo* was juxtaposed with the existing/established verb *kítrinízo* which did not receive negative evaluations. Accordingly, the {-s} feature was assigned to the suffix *-(i)ázo* and not to the body of the ADJ *kítrinos*. The same argument holds for *!potiriázo* which was juxtaposed with creations having the same base but suffixes other than *-(i)ázo*.

After considering all detected SE components and the interpretations/evaluations of all created and existing verbs in Charitonidis (2011) we arrive at two main SE clusters for the Greek verb suffixes. These are given in (7).

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

The introduced SE features would be ad hoc conceptions, if they could not sufficiently explain the combinatorial properties of the suffixes in existing derivatives and creations. In (8) I give the combinatorial system of these features.

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

Up to this point, the atoms of the SE tier and their combinatorial properties were presented. What we now need to validate this system are exemplifying SE operations in existing verbs, neologisms, and creations. This task is accomplished in the next section.

4 Application

This section is divided into three subsections according to the lexical category and the featural decomposition of the derivation base. This strategy is important because it will immediately confront Lieber's DE system with my SE system.

In the analysis to follow I present three cases of derivation which cover an acceptability continuum, i.e. existing/established verbs, fresh neologisms, and forced verbs. The existing/established verbs refer to new formations, approx. from the 19c. onwards, found in the Reverse Index of Modern Greek (RIMG). I examine how their SE composition correlates with the patterns in fresh neologisms and forced/created verbs. In doing so, I assume a tripartite template, in which bases, suffixes, and output verbs refer to the same set of features, i.e. {m}, {s}, and {i}.

4.1 Deadjectival [-dynamic, -scalar] verbs

The deadjectival [-dynamic, -scalar] verbs in *-(i)ázo* found in RIMG are given in Table 5. As can be seen {+m} {-s} {-i} bases are preferred by *-(i)ázo*.

Table 5: Existing *-(i)ázo* verbs with an adjectival [–dynamic, –scalar] base [RIMG (approx. 19c.–)]

Verb		Base		SE cluster (base)
<i>alaliázo</i>	‘daze’, ‘drive sb mad’	<i>álos</i>	‘stunned’, ‘dazed’	{+m}{-s}{-i}
<i>anapodhiázo</i>	‘become cantankerous/crabby’	<i>anápodhos</i>	‘cantankerous’, ‘crabby’	{-m}{-s}{+i}
<i>apagiázo</i>	‘offer/find shelter from the weather’	<i>apágio</i>	‘lee[ward]’	{-m}{+s}{-i}
<i>blaviázo</i>	‘become dark blue’	<i>blávos</i>	‘dark blue’	{+m}{-s}{-i}
<i>kaburiázo</i>	‘become/be hunch-backed/hump-backed’	<i>kabúris</i>	‘hunch-backed’, ‘hump-backed’	{+m}{-s}{-i}
<i>kakomiriázo</i>	‘become wretched/miserable’, ‘have a bad time’	<i>kakomiris</i>	‘wretched’, ‘miserable’	{+m}{-s}{-i}
<i>kluviázo</i>	‘get addled’, ‘grow addled-headed’	<i>klúvios</i>	‘addled’, ‘addled-headed’	{+m}{-s}{-i}
<i>ksefreniázo</i>	‘become frenzied/furious’	<i>kséfrenos</i>	‘frenzied’, ‘furious’	{+m}{-s}{+i}
<i>ksethoriázo</i>	‘fade’	<i>kséthoros</i>	‘faded’	{+m}{-s}{-i}
<i>neruliázo</i>	‘grow watery’, ‘grow flabby’	<i>nerulós</i>	‘watery’, ‘flabby’	{+m}{-s}{-i}
<i>parakseniázo</i>	‘grow odd’	<i>paráksenos</i>	‘odd’	{-m}{-s}{+i}
<i>varvatiázo</i>	‘rut’, ‘be in heat’	<i>varvátos</i>	‘virile’, ‘in heat’	{+m}{+s}{-i}
<i>vathuliázo</i>	‘become hollow’, ‘sag’	<i>vathulós</i>	‘hollow’	{+m}{-s}{-i}

By way of example, the SE structure of *alaliázo* is given in (9).

- (9) *álos* ‘stunned’, ‘dazed’ > *alaliázo* ‘daze’, ‘drive sb mad’
álos *-(i)ázo* *alaliázo*
 {+m} {+m} {+m}
 {-s} {-s} {-s}
 {-i} {i} {-i}

As can be seen, the features {+m}{-s} both in the base and in the suffix suggest a coordinative structure for *alaliázo*.

In (10) the SE structure of the very fresh neologism *?kitriniázo* is given.

- (10) *kítrinos* ‘yellow’/‘pale’ > *?kitriniázo* ‘become yellow/pale’
kítrinos *-(i)ázo* *?kitriniázo*
 {-m} {+m} {+m}
 {-s} ✓pref {-s} {-s}
 {-i} ✓pref {i} {-i}

As can be seen in (10), the base *kítrinos* addresses two of the three features in the preferred base structure of the existing verbs (compare *kítrinos* with the verb

bases in Table 5). This must be the reason why *?kitriniázo* is for some native speakers of Greek ungrammatical.¹⁰ As regards the TP interpretation ‘become yellow/pale’ for *?kitriniázo*, this very fresh neologism is motivated by a degradation of the properties of *kítrinos*, i.e. the referent acquires a hue close to the focal colour YELLOW (cf. Berlin & Kay 1969). It should be noted that the output cluster $\{+m\}\{-s\}\{-i\}$ in *?kitriniázo* is identical with the preferred base cluster in the existing verbs (compare (10) with (9)).

The comparison of the SE operations in the verb derivative *?kitriniázo* in (10) with the SE operations in the root compound *kítrinos típos* ‘yellow press’ in (11) below shows how similar verb formation and root compounding can be.

(11)	<i>kítrin-os</i>		<i>típ-os</i>
	yellow.ADJ-M.NOM.SG		press-M.NOM.SG
	‘yellow press’		
	<i>kítrinos</i>	<i>típos</i>	<i>kítrinos típos</i>
	$\{-m\}$	$\{-m\}$	$\{-m\}$
	$\{-s\}$	$\{s\}$	$\{-s\}$
	$\{-i\}$	$\{+i\}$	$\{+i\}$

The output SE cluster in (11) defines *kítrinos típos* as an invariable ($\{-m\}$), negatively oriented ($\{-s\}$), and communicational ($\{+i\}$) entity.

4.2 Denominal [+material, dynamic] verbs

The denominal [+material, dynamic] verbs in *-(i)ázo* found in RIMG are given in Table 6. As can be seen $\{+m\}\{-s\}\{+i\}$ bases are preferred by *-(i)ázo*.

¹⁰ In this case the rival form *kitrinízo* with a more neutral meaning is preferred (see section 3).

Table 6: Existing *-(i)ázo* verbs with a nominal [+material, dynamic] base [RIMG (approx. 19c.–)]

Verb		Base		SE cluster (base)
<i>bekruliázo</i>	‘be on the booze’	<i>bekrís</i>	‘drunkard’, ‘boozer’	{+m}{-s}{i}
<i>kubariázo</i>	‘become the best man of so.’	<i>kubáros</i>	‘best man’	{-m}{+s}{+i}
<i>lighuriázo</i>	‘feel craving for’	<i>lighúra/ lighúris</i>	‘craving’/ ‘sharp-set’	{+m}{-s}{i}
<i>papardheliázo</i>	‘blabber’	<i>papardhélas</i>	‘blabbermouth’	{+m}{-s}{+i}
<i>papudhiázo</i>	‘wrinkle’ – esp. for hands or feet after having been a long time in water	<i>papúdhi</i>	‘granddad’, ‘old man’	{+m}{s}{+i}
<i>rebeliázo</i>	‘loaf’	<i>rébelos</i>	‘loafer’	{+m}{-s}{+i}

By way of example, the SE structure of *rebeliázo* is given in (12).

- (12) *rébelos* ‘loafer’ > *rebeliázo* ‘loaf’
rébelos *-(i)ázo* *rebeliázo*
 {+m} {+m} {+m}
 {-s} {-s} {-s}
 {+i} {i} {+i}

As in the case of *alaliázo* in (9), the features {+m}{-s} both in the base and in the suffix suggest a coordinative structure for *rebeliázo*.

In (13) the SE structure of the creation *!miteriázo* is given.

- (13) *mitéra* ‘mother’ > *!miteriázo* ‘behave annoyingly like a mother’
mitéra *-(i)ázo* *miteriázo*
 {-m} {+m} {+m}
 {+s} {-s} {-s}
 {+i} ✓pref {i} {+i}

As can be seen, the base *mitéra* addresses only one of the three features in the preferred base structure of the existing verbs. This must be the reason for the forced character of the creation *!miteriázo* (compare *mitéra* in (13) with the verb bases in Table 6). As regards the TP interpretation ‘behave annoyingly like a mother’ for *!miteriázo*, the creation is motivated by an intensification of the properties of the mother which leads to a negative stance towards her.¹¹ It should be noted that the output cluster {+m}{-s}{+i} in *!miteriázo* is identical with the preferred base-cluster in the existing verbs (compare (13) with (12)).

¹¹ The implicational nature of this pattern should be examined in future research.

4.3 Deverbal [\pm dynamic] verbs

In Modern Greek there are no suffixed verbs, and hence there are no SE preferences for verbal bases. Nevertheless, in Charitonidis (2011) the TPs were instructed to give derivatives by using two verbal bases. The rationale behind this task is that forcing consolidates the meaning cores of the suffixes, whereby the meaning of the suffixes as lexical units remains intact. In (14) and (15) two examples of operations in deverbal creations are given.

- (14) *trógho* ‘eat’ [+dynamic] > *!troghiázo* ‘fret’, ‘put oneself in a fatigue’
- | | | |
|---------------|----------------|-------------------|
| <i>trógho</i> | <i>-(i)ázo</i> | <i>!troghiázo</i> |
| {m} | {+m} | {+m} |
| {s} | {-s} | {-s} |
| {i} | {i} | {i} |
- (15) *éxo* ‘eat’ [-dynamic] > *!exiázo* ‘demonstrate (negatively) my riches’
- | | | |
|------------|----------------|----------------|
| <i>éxo</i> | <i>-(i)ázo</i> | <i>!exiázo</i> |
| {m} | {+m} | {+m} |
| {s} | {-s} | {-s} |
| {i} | {i} | {i} |

As can be seen, the SE features in the bases of *trógho* and *éxo*, respectively, are underdetermined. An NP or an ADV next to these verbs would introduce a valued feature. As regards the interpretation ‘fret’, ‘put oneself in a fatigue’ for *!troghiázo* and the interpretation ‘demonstrate (negatively) my riches’ for *!exiázo*, the creations are motivated by an intensification of the properties of the bases on a par with negative evaluations, cf. {+m}{-s} in both suffix and output in (14) and (15), respectively.

5 Conclusions

As became apparent from the analysis in sections 3 and 4, the formalization of bodily structures by means of *socio-expressive features* is feasible, contrary to Lieber’s (2004) assumptions. Accordingly, it is not necessary that morphology should employ two completely different strategies for the formation of new items, one strategy for derivation and another strategy for (root) compounding (cf. (5) with (6) in sections 2.1 and 2.2, respectively). The SE tier/body can play a major role in verb derivation, similar to the role of the SE tier/body in the formation of root compounds. Accordingly, we don’t have to consider a system of DE entities and structures as the only determinants of the selectional properties of the verb-deriving suffixes.¹²

¹² Lieber (2010) has already made a first attempt to address the issue of selectional restrictions of English noun-deriving suffixes by using her DE structures and categories alone.

In the case of the deadjectival and denominal verbs (see sections 4.1 and 4.2, respectively) $\{+m\}\{-s\}\{\pm i\}$ bases are preferred by *-(i)ázo*. The DE clusters [–dynamic, –scalar] for ADJs and [+material, dynamic] for Ns are too general to account for this preference and would over-generate verbs. This is obviously a consequence of their syntactic motivation (see section 2). For example, we have *kluviázo* ‘get addled’, ‘grow addled-headed’ derived from the $\{+m\}\{-s\}\{-i\}$ ADJ *klúvios* ‘addled’, ‘addled headed’ but not **iperoxiázo* having as base the $\{+m\}\{+s\}\{i\}$ ADJ *ipéroxos* ‘excellent’. Similarly, we have *rebeliázo* ‘loaf’ derived from the $\{+m\}\{-s\}\{+i\}$ N *rébelos* ‘loafer’ but not **ghoitiázo* having as base the $\{-m\}\{+s\}\{+i\}$ N *ghóis/ghóitas* ‘charmer’.¹³ On top of this, the features $\{-i\}$ in the base of the deadjectival verbs and $\{+i\}$ in the base of the denominal verbs do not strictly correlate to the ontological distinctions [–dynamic, –scalar] and [+material, dynamic], respectively. This means that we have again to resort to the SE cluster $\{+m\}\{-s\}$ both in the base and in the suffix in order to explain the generation of the verbs more accurately.

In addition, the bipartite structure which Lieber proposes for causative/inchoative and causative/unaccusative verbs (see (5) in section 2.1) embeds the entities [+material, dynamic] and [–dynamic, –scalar] in two different ways, i.e. as agent or goal, respectively, so that the formation of new-*(i)ázo* verbs becomes a complicated issue. In contrast, the proposed SE operations define the process of derivation in a straightforward manner.

Last but not least, in the case of the deverbal verbs in section 4.3, there is a mirroring of all features in both suffix and output. The creation of verbs is still possible because head and merging requirements are met (cf. (8) in section 3). Even in this case, suffixes show up as compound lexical heads in the same way as in the denominal and deadjectival creations.

6 Implications

The operations in the SE tier of the Greek *-(i)ázo* verbs suggest that morphemic configurations are a case of interplay of compound heads with compound bases and not simply a case of unilateral percolation of syntactically motivated suffixal features to the output word (cf. the argumentation on this topic in Melissaropoulou & Ralli 2010). That bases sometimes appear as heads of verbal constructions is an artefact of the combinatorial properties of the SE tier whereby a valued base feature is merged with an underspecified suffix feature so that this base feature shows up as it stands in the output verb (cf. base $\{-i\}$ in *kitrinos* and base $\{+i\}$ in *mitéra*, in (10) and (13) in section 4, respectively). Therefore, the counter-positions which regard either bases or suffixes as heads (see a comprehensive presentation of these two positions in Melissaropoulou & Ralli

¹³ I assign $\{-m\}$ to *ghóis/ghóitas* because charm cannot be thought of as a scalar or controllable property. It should be noted that in Modern Greek the established verb *ghoitévo* ‘fascinate’ is in everyday use. This verb has no negative connotations (cf. f. 9).

(2010) should be reformulated by means of compound heads and compound bases in interaction. It should be noted that even in the case of the SE tier, valued suffixal features are unequivocally heads so that the percolation argument is not completely demoted or rejected (cf. (8) in section 3).

Secondly, we saw that the SE tier can be associated with different DE structures, cf. *?kitriniázo* vs. *!miteriázo* in sections 4.1 and 4.2, respectively. In the case of *?kitriniázo* (see (10)) the base *kítrinos* appears in the [+Loc] slot of the structure in (5) whereas in the case of *!miteriázo* (see (13)) the base *mitéra* appears in the first slot of the same structure (see also Lieber 2004: 87–88). Accordingly, the coordination of the DE with the SE tier becomes a major issue. The question which must be answered is at which point of derivation the SE tier does change the DE structures or the opposite. As it seems, we need both a DE and an SE tier in accounting for verb derivation. The DE tier relates to syntax and the identification of referents, whereby the inner-word structure is grossly addressed. The SE tier restricts the syntactically motivated patterns so that bases with a specific composition can be selected by a particular suffix.

References

- Anastasiadis-Simeonidis, Anna 2002. *Αντίστροφο Λεξικό της Νέας Ελληνικής* [Reverse Index of Modern Greek, RIMG]. Thessaloniki: Institute of Modern Greek Studies.
- Beard, Robert 1995. *Lexeme-morpheme base morphology*. Albany: State University of New York Press.
- Berlin, Brent & Paul Kay 1969. *Basic color terms. Their universality and evolution*. Berkeley, CA: University of Los Angeles Press.
- Charitonidis, Chariton 2011. *Making Verbs Happen: Interviews on Greek Verb Endings* [=Languages of the World 43]. München: Lincom Europa.
- Efthymiou, Angeliki 2011. The semantics of verb forming suffixes in Modern Greek. In *Proceedings of the 19th International Symposium of Theoretical and Applied Linguistics*, 3–5 April 2009, School of English, Aristotle University of Thessaloniki. 174–184.
- Gottfurcht, Carolyn A. 2008. *Denominal Verb Formation in English*. PhD Dissertation, Northwestern University Evanston, Illinois. www.linguistics.northwestern.edu/people/recent_grads/dissertations/gottfurchtDissertation.pdf.
- Lieber, Rochelle 2004. *Morphology and lexical semantics*. Cambridge, UK: Cambridge University Press.
- Lieber, Rochelle 2007. The category of roots and the roots of categories: what we learn from selection in derivation. In *Morphology*, 16(2). 247–272.
- Lieber, Rochelle 2010. Towards an OT Morphosemantics: The Case of *-hood*, *-dom*, and *-ship*. In Olsen, S. (ed.), *New Impulses in Word Formation* [=Linguistische Berichte Sonderheft 17], 61–79. Hamburg: Helmut Buske Verlag.
- Lyons, John 1995. *Linguistic Semantics*. Cambridge: Cambridge University Press.
- Melissaropoulou, Dimitra & Angela Ralli 2010. Greek derivational structures: restrictions and constraints. In *Morphology*, 20. 343–357.
- Plag, Ingo 1999. *Morphological Productivity. Structural Constraints in English Derivation*. Berlin: Mouton de Gruyter.

- Plag, Ingo 2000. On the mechanisms of morphological rivalry: A new look at competing verb-deriving affixes in English. In: Bernhard Reitz and Sigrid Rieuwerts (eds.), *Anglistentag 1999 Mainz*, 63–76. Trier: Wissenschaftlicher Verlag Trier.
- Pustejovsky, James 1995. *The Generative Lexicon*. Cambridge, MA: MIT Press.
- Ralli, Angela 2005. *Μορφολογία* [Morphology]. Athens: Patakis.

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