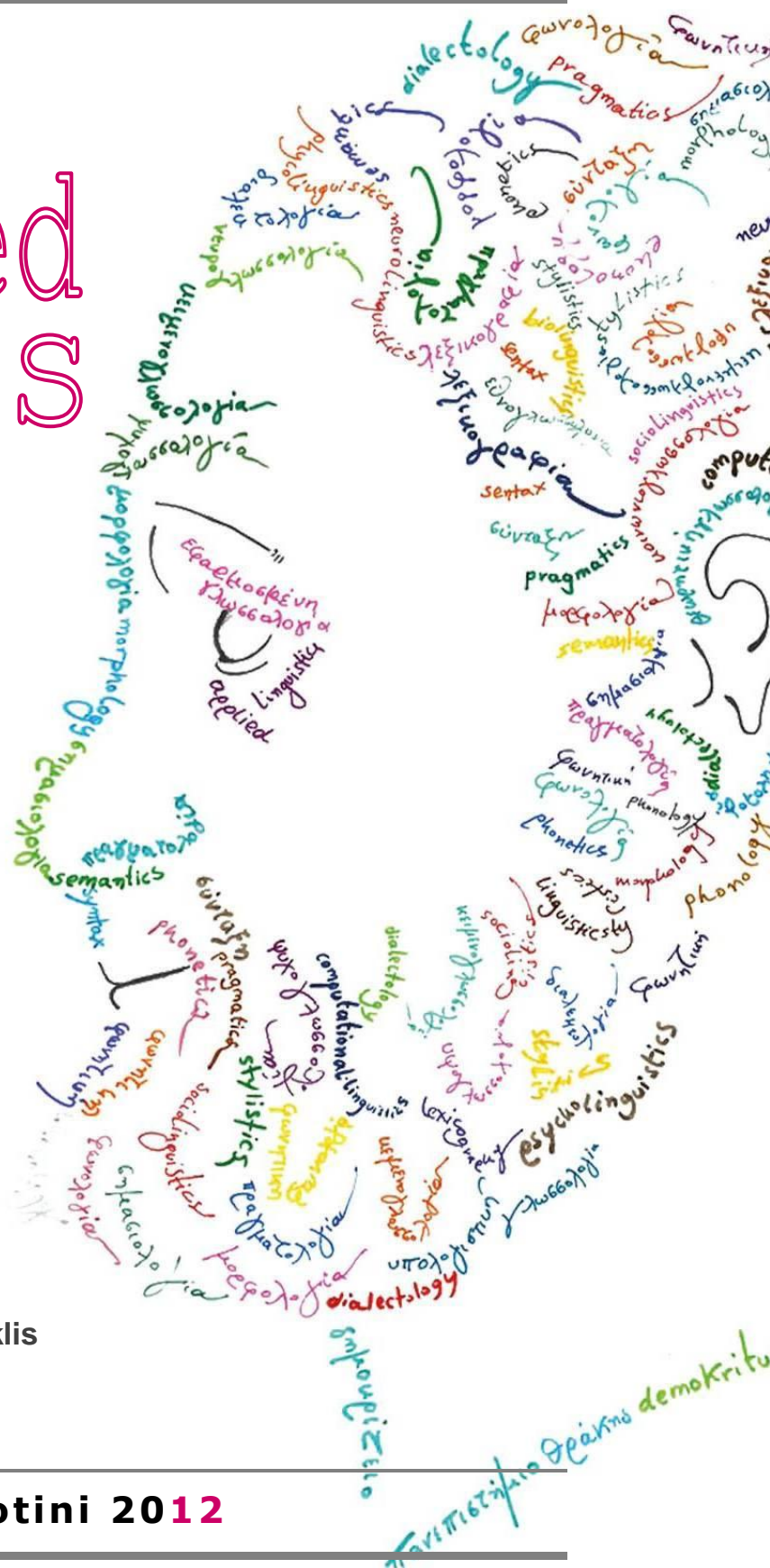


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Zoe Gavriilidou
Angeliki Efthymiou
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THE INTERACTION BETWEEN AFFIXES AND BASES: THE CASE OF THE GREEK VERB SUFFIXES

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ABSTRACT

In the first part of this study the semantics of the Greek verb-deriving suffixes -ízo(o), -én(o), -év(o), -ón(o), -(i)áz(o), and -ín(o) are presented. The description is based on an empirical analysis of data extracted from 28 interviews conducted with native speakers of Greek, in Athens, Greece. In the analysis Rochelle's Lieber's (2004) theoretical framework is used. In the second part are presented the properties of an interfering socio-expressive level of meaning, i.e. the 'socio-expressive tier', on the example of -(i)áz(o) verbs. The analysis suggests the coordination of Lieber's denotational structures with the author's socio-expressive structures so that a base can be selected by a particular suffix.

Keywords: verb suffixes, morphological theory, lexical semantics, socio-expressive meaning

1. Introduction

Efthymiou (2011) dealt with the semantics of the verb-forming suffixes -ízo, -(i)ázo, -óno, -évo and -éno in Modern Greek (MG).¹ She used the following labels to describe their meaning: RESULTATIVE (turn into x, make (more) like x; cf. *mavrízo* 'cause to become black, blacken' (*mávros* 'black')), INCHOATIVE (become x; cf. *skulikíazo* 'be wormy/wormeaten' (*skuliki* 'worm')), ORNATIVE (provide with x; cf. *vutiróno* 'to butter' (*vútiro* 'butter')), LOCATIVE (put in(to) x; cf. *tsepóno* 'to pocket' (*tsépi* 'pocket')), PERFORMATIVE (perform/do/make x; cf. *taksidhévo* 'to travel' (*taksídi* 'travel')), SIMILATIVE (do/make/act in the manner of/like x; cf. *pithikízo* 'imitate ape's behaviour, to ape' (*píthikos* 'ape')), and INSTRUMENTAL (use x; cf. *nixíazo* 'scratch with one's nails' (*níxi* 'nail')). Table 1 summarizes Efthymiou's analysis.

	-ízo	-(i)ázo	-óno	-évo	-éno
RESULTATIVE	✓	✓	✓	✓	✓
INCHOATIVE	✓	✓	✓	✓	✓
ORNATIVE	✓	✓	✓	✓	✓
LOCATIVE	✓	✓	✓	✓	
PERFORMATIVE	✓	✓		✓	
SIMILATIVE	✓	✓		✓	
INSTRUMENTAL	✓	✓	✓	✓	

Table 1 The semantics of the native Greek verb suffixes [Efthymiou 2011]

As Efthymiou (2011) notes, the meanings of -óno and -éno are more restricted than the meanings of -ízo, -(i)ázo, and -évo, and all suffixes seem to share a common causative/resultative meaning (see Table 1). Accordingly, she proposes the semantic structure CAUSE [x BE y LOC z] for all denominal and deadjectival verbs in MG.

Efthymiou's (2011) analysis revealed many overlaps in the selectional properties of the suffixes, but also in the phonological shape of the bases onto which they attach. For example, both -óno and -évo prefer nominal bases, both -ízo and -(i)ázo prefer nominal and adjectival base stems which end in a consonant, etc.

¹ The suffix -ino was not examined by Efthymiou (2011). Her analysis for the suffix -áro and for the confix -pió is not relevant for this study. The former has a strong preference for nominal bases of non-Greek origin, the latter has an unclear status. Verb forms and endings are given together with the inflectional ending -o in the first person singular – the standard citation form for Greek verbs.

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 two tasks were examined the effects of online combination of bases and suffixes under the condition of forcing, irrespective of output restrictions, e.g. blocking, etc. (Plag 1999). The other two tasks referred to existing/established verbs. In the analysis of the elicited data Lieber's (2004, 2007) theoretical framework was used. The comparison of the patterns in created verbs with the patterns in existing/established verbs validated the former.²

The present paper is within the scope of the project "The Integration of Socio-expressive Meaning into Verb Structures" conducted by the author at the University of Cologne, Germany.

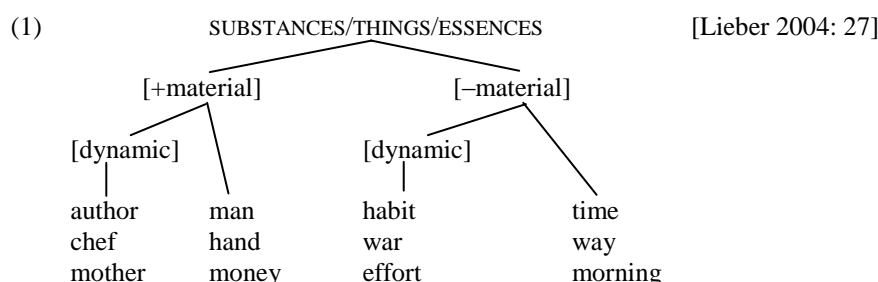
2. Theoretical framework

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. Affixes are regarded as linguistic signs equivalent to the bases onto which they attach (the sign-based hypothesis; see Plag 1999, 2000, Melissaropoulou & Ralli 2010). They operate on bases, while producing a derivative which is 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".

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).

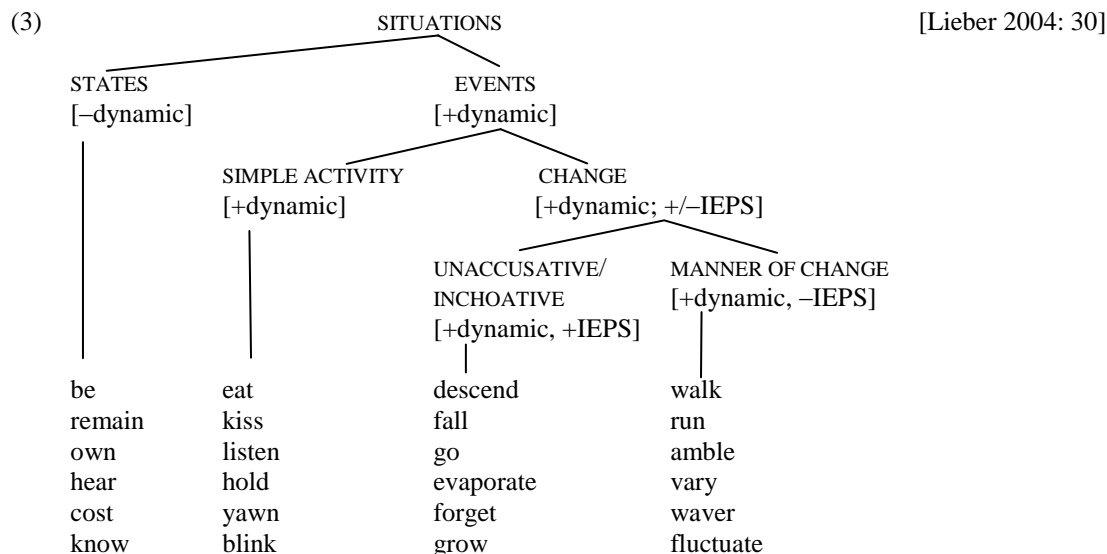


The semantic features presented so far are used as functions which take arguments. Lexical items will always have at least one argument – in the case of nouns at least one argument called "R"-argument (referential argument) – but they may also have more than more argument, see (2) below.

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

² The analysis and the results in Charitonidis (2011) are presented in sections 3 and 4, respectively.

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



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]))]

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

3. The interviews and the features used in the analysis

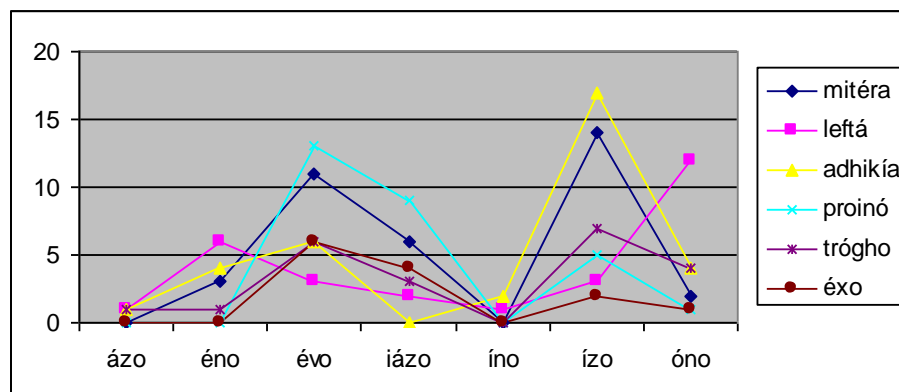
In sections 3.1–3.4 the four interview tasks are comprehensively presented. For details the reader is referred to Charitonidis (2011).

3.1 Creation of derivatives

In the first interview task the test persons (henceforth 'TPs') were asked to force(=create) 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). Table 2 helps us to identify the interaction patterns between suffixes and bases, and Figure 1 displays these interactions. In the last row of Table 2 ('No V'), the number of the TPs who did not give any derivatives is given.

Bases	Ontology	-ázo	-éno	-évo	-iázo	-íno	-ízo	-óno	Total	No V
<i>mitéra</i> 'mother'	[+material, dynamic]	0	3	11	6	0	14	2	36	0
<i>lefía</i> 'money'	[+material]	1	6	3	2	1	3	12	28	3
<i>adhikía</i> 'injustice'	[-material, dynamic]	1	4	6	0	2	17	4	34	0
<i>proino</i> 'breakfast/' 'morning'	[+material]/ [-material]	0	0	13	9	0	5	1	28	4
<i>trógho</i> 'eat'	[+dynamic]	1	1	6	3	0	7	4	22	8
<i>éxo</i> 'have'	[-dynamic]	0	0	6	4	0	2	1	13	16
Total		3	14	45	24	3	48	24	161	

Table 2 Bases and suffixes in interaction



Created using Microsoft Excel 2003
Figure 1 Bases and suffixes in interaction

3.2 Evaluation of created derivatives

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. The aim of this task was to detect the selectional properties of the suffixes in relation to the lexical category of the base. The averages are given in Table 3.³

N <i>potíri</i> 'glass'	Average	A <i>xlorós</i> 'green', 'unseasoned'	Average	ADV <i>káto</i> 'down'	Average
!potirízo	3.86	!xlorízo	2.96	!katízo	3.93
!potirévo	4.04	!xlorévo	3.50	!katévo	3.82
!potiréno	4.21	!xloréno	2.29	!katéno	3.54
!potiróno	2.39	!xloróno	3.93	!katóno	3.68
!potiriázo	3.64	!xloriázo	3.25	!katiázo	3.57
!potiríno	5.39	!xloríno	4.25	!katíno	4.68
Mean	3.92	Mean	3.36	Mean	3.87

Table 3 Evaluation of created derivatives

3.3 Detection of differences in verb doublets (existing/established verbs)

In the third task 19 existing/established verb pairs with different suffixes and the ending -áo/-ó were presented. All pairs contained one verb in -ízo. The TPs were asked to report whether there was some difference between the members of the pairs and what exactly this difference was. The differences reported were transformed into 16 alternations. The alternations most relevant for the present study are given in Table 4 together with examples.

Alternations	Rival endings	Example verbs	Base
literal/similative (6)	-iázo vs. -ízo	<i>maniázo</i> vs. <i>manízo</i> 'get angry'	<i>manía</i> 'mania', 'fury', 'anger'
semelfactive-simple/habitual (8)	-ízo vs. -áo/-ó	<i>serghianízo</i> vs. <i>serghianáo</i> 'take so./go for a walk'	<i>serghiani</i> 'walk'
non-intensive/intensive (9)	-áo/-ó vs. -ízo	<i>stúbáo</i> vs. <i>stúbízo</i> 'pestle'	<i>stúbos</i> 'pestle'
non-fullness/fullness (10)	-ízo vs. -iázo	<i>luludhízo</i> vs. <i>luludhiázo</i> 'flower', 'blossom', 'bloom'	<i>luludhi</i> 'flower', 'blossom', 'bloom'

³ In the present study creations are indicated with '!'.

more/less (phonologically) aesthetic/correct (12)	-ízo vs. -iázo	<i>kitrinízo</i> vs. <i>?kitriniázo</i> 'become yellow/pale'	<i>kítrinos</i> 'yellow/pale'
standard/low class- provincial (16)	-ízo vs. -áo/-ó	<i>kutsulízo</i> vs. <i>kutsuláo</i> 'throw droppings', 'dirty with droppings'	<i>kutsuliá</i> 'droppings' (dung of an animal)

Table 4 Alternations in verb doublets

3.4 Emergence of suffix meanings in (near) antonyms (existing/established verbs)

In the fourth task 21 existing/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 meaning of the opposites. For example, a feature [+dynamic] was assigned to -évo according to the TP response *káno to sostó* 'do the right thing' for *lathévo* 'be at fault' (*láthos* 'error', 'wrong'), etc.

3.5 The suffix features used in the analysis

Table 5 contains the most relevant features used in the analysis of the elicited data. Denotational (DE) features are enclosed in square brackets, and socio-expressive (SE) features in curly brackets. Features 1–4 directly correspond to Lieber's (2004, 2007) DE features and are adopted as such. Features 5–7 are mnemonic labels for extra DE structures emerged from the analysis. Features 8–15 are SE features introduced by the author.

	Feature	Meaning	Example endings	Example verbs
1.	[+dynamic]	Event	-ázo	<i>!leftázo</i> 'make money' (<i>leftá</i> 'money')
2.	[–dynamic]	State	-évo	<i>!mitérévo</i> 'be a mother' (<i>mitéra</i> 'mother')
3.	[+dynamic, +IEPS, +Loc]	Unaccusative/inchoative	-éno	<i>!mitéréno</i> 'become a mother' (<i>mitéra</i> 'mother')
4.	[–dynamic, +Loc]	Location or end of a change of state/end of a transfer	-évo	<i>!proinévo</i> 'be in the morning time' (<i>proinó</i> 'morning')
5.	[+accumulation] ('fullness' in section 3.3)	Accumulation of some referent in the described event/state	-iázo	<i>!lexiázo</i> 'be a materialist', 'want many things' (<i>éxo</i> 'have')
6.	[+habitual] (TP comment)	Habitual action	-áo	<i>serghianáo</i> 'take so./go for a walk' (<i>serghiani</i> 'walk')
7.	[+similative]	Similarity of the behaviour of an individual to that of another individual (usually denoted by the base)	-ízo	<i>!miterízo</i> 'behave like a mother' (<i>mitéra</i> 'mother')
8.	{+aesthetic/correct} (TP comment)	Aesthetic/correct form	-ízo	<i>kitrinízo</i> 'become yellow' (<i>kítrinos</i> 'yellow')
9.	{–aesthetic/correct} (TP comment)	Non-aesthetic/incorrect form	-iázo	<i>?kitriniázo</i> 'become yellow' (<i>kítrinos</i> 'yellow')
10.	{+derisive} (TP comment)	Derisive use	-iázo	<i>?kitriniázo</i> 'become yellow' (<i>kítrinos</i> 'yellow')
11.	{+diminutive}	Small referent	-ízo	<i>!troghízo</i> 'eat a small amount' (<i>trógho</i> 'eat')
12.	{+evaluation} ⁴	Positive evaluation	-évo	<i>taksidhévo</i> 'journey', 'travel' (<i>taksidhi</i> 'journey', 'travel')
13.	{–evaluation}	Negative psychology, pejorative meanings, and negative ethical views	-iázo	<i>!miteríázo</i> 'behave annoyingly like a mother' (<i>mitéra</i> 'mother')

⁴ In Charitonidis (2011) {+evaluation} was assigned only to -évo according to the meaning of existing antonymous verbs (see Charitonidis 2011: 28). More experiments should be made to validate this feature.

14.	{+intensive} (TP comment)	Intense activity	-ízo	<i>serghianízo</i> 'take so./go for a walk' (<i>serghiáni</i> 'walk')
15.	{+low class/provincial}	Low class/provincial form	-áo	<i>kutsuláo</i> 'throw droppings', 'dirty with droppings' (<i>kutsuliá</i> 'droppings')

Table 5 Features for suffixes/endings

4. Results

The repetition of a pattern in at least two interview parts introduces a feature or feature cluster for each suffix. As an exception, special focus is placed on the alternations of section 3.3, which introduces several features. Table 6 summarizes the results of the analysis.

	[+dynamic]	[-dynamic]	[+dynamic, +IEPS, +Loc]	[+dynamic, +simulative]	[+accumulation]	[+habitual]	{+intensive}	{-evaluation}	{+low class/provincial}
-ízo	✓ ^a		✓ ^b	✓ ^c			✓ ^d		
-éno	✓ ^e		✓ ^f						
-évo	✓ ^g	✓ ^h	✓ ⁱ						
-óno	✓ ^j		✓ ^k						
-iázo	✓ ^l		✓ ^m		✓ ⁿ			✓ ^o	
-íno			✓ ^p						
-áo/-ó						✓ ^q			✓ ^r
Sections	^a 3.1, 3.4 ^j 3.1, 3.4	^b 3.1, 3.4 ^k 3.2, 3.4	^c 3.1, 3.3 ^l 3.1, 3.4	^d 3.3 ^m 3.1, 3.4	^e 3.1, 3.4 ⁿ 3.1, 3.3, 3.4	^f 3.1, 3.4 ^g 3.1, 3.4	^h 3.1, 3.4 ^p 3.1, 3.4	ⁱ 3.1, 3.4 ^q 3.3	^r 3.3

Table 6 The meaning of the native Greek verb suffixes and the verb ending -áo/-ó

The features ticked off for -áo/-ó represent only suggestions. The restricted number of the TP reactions and the regional/dialectal character of this ending⁵ do not allow further generalizations.

4.1 The results regarding denotational (DE) meaning

As can be seen in Table 6, the suffixes are not very different from one another. To show this more clearly, I give Lieber's (2004) bipartite structure for the English verb derivatives in -ize and -ify in (see (5)).

- (5) -ize, -ify [Lieber 2004: 82]
 [+dynamic ([_{volitional-i}], [_j])] ; [+dynamic ([_i], [+dynamic, +IEPS ([_j], [+Loc])))] ; <base>

In Table 6 the cluster [+dynamic, +IEPS, +Loc] shows up most often across the different suffixes. This cluster corresponds to the subevent (6), extracted from the structure in (5).

- (6) [+dynamic, +IEPS ([], [+Loc])]

The crucial semantic core [+dynamic, +IEPS ([], [+Loc])] in (6) shows that on the level of DE meaning the suffixes are similar. The pattern [+dynamic] in Table 6 can be regarded as an extension of this core connected with various manipulations of the bipartite structure in (5) – cf. Lieber (2004: 86–88). It should be noticed, however, that simple [+dynamic] is not a preferred option for the suffix -íno which resists manipulations of its causative structure. Suffix -óno has a strong [+Loc] component, i.e. it standardly combines with [+material] themes (see sections 3.1 and 3.2).

⁵ -áo is characteristic of southern – mainly Peloponnesian – dialects. In certain northern Greek dialects, only the -ó variant exists (see also Melissaropoulou 2010).

The feature [+habitual] for *-áo/-ó* in Table 6 is too broad a feature to be integrated in Lieber's system, since its classifying power and hence its contribution to the identification of referents is restricted (see section 2).

The feature [+accumulation] for *-iázo* in Table 6 is represented in Lieber's system through the function [+CI] ('composed of individuals') which accounts for separable similar internal units (see Lieber 2004: 136–139).

The cluster [+dynamic, +similative] for *-ízo* in Table 6 corresponds to the first subevent of (5) whereby the referent of the base shows up in the first slot (see Lieber 2004: 87–88).

Up to this point, Lieber's system properly accommodates the DE content of the Greek verb suffixes. It should be noted, however, that the [–dynamic] and [+dynamic] patterns of *-évo* in Table 6 are the strongest argument against a single, perhaps bipartite, structure like this in (5), because contradictory outermost features are not licensed in Lieber's system.

4.2 The results regarding socio-expressive (SE) meaning

Let us now turn to the SE features of Table 6. The feature {+intensive} is a relational feature which emerged out of the comparison of the suffix *-ízo* with the ending *-áo/-ó* (section 3.3). I assume that the rest of the suffixes relate to this feature as well. According to the analysis in section 5 below, {+intensive} is subsumed under the super-category {+measure} (see Table 7).

{–evaluation} for *-iázo* in Table 6 is a powerful selectional feature. The entities which can occupy the empty slots in structure (5) are nominal [+material, dynamic] agents (the first argument of the first partial structure) or adjectival [–dynamic, +scalar] goals (the [+Loc] argument). However, {–evaluation} cuts across these categorial and structural preferences. It prefers {–evaluation} bases such as the [+material, dynamic] entity *rébelos* 'loafer' in *rebeliázo* 'loaf' or the [–dynamic, –scalar] entity *paráksenos* 'odd' in *parakseniázo* 'grow odd' (see section 6).

In addition, I would like to underscore some selectional patterns emerged from the analysis in section 3.1. *-ízo* is a similative suffix and because of this it prefers entities referring to a social role, such as *mitéra* 'mother'. *-évo* is often used with nominal bases denoting a specific social role, esp. a profession or an office (Efthymiou 2011). This SE preference is capable of changing the [+dynamic] structure of *-évo* into [–dynamic]. *-iázo* conflicts with socio-expressively neutral bases, such as *adhikía*, since it is negatively marked (see Table 2 and Fig. 1).

To conclude, the patterns presented in this section suggest a major interference of the SE level of meaning with Lieber's (2004) DE structures. Both levels of meaning must be addressed in order to account for the selectional properties of the suffixes and hence for productivity.

5. The socio-expressive (SE) tier

In Charitonidis (2011) a group of interfering SE components in the structure of the verb suffixes were detected, e.g. {±evaluation}, {±aesthetic/correct}, {+derivative}, {+diminutive}, etc. (see Table 5). In Table 7 I introduce a set of features which formalize the SE level of meaning – the motivation of the features can be found in Charitonidis (2012).

{+m}	Meaning of measurement/continuation/progress, i.e. size, intenseness, strength etc., of a higher (cf. {+intensive}) or lower (cf. {+diminutive}) degree	{–m}	Invariable SE content
{+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

Table 7 The SE features and their meaning

According to Efthymiou's (2011, submitted) analysis and the results in the previous section, the percolation of the [–learned] feature of *-(i)ázo* to the output verbs and the preference of this suffix for

negatively marked bases, suggest a coordinative structure for the *-(i)ázo* derivatives in which both suffixes and bases are marked negatively.⁶

The SE patterns of *-(i)ázo* detected in Charitonidis (2011) are given in Table 8. '[TP]' refers to a direct TP comment.

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'

Table 8 The SE patterns of the Greek verb suffix *-(i)ázo*

In the interviews ?*kitriniázo* was juxtaposed with the existing/established verb *kitrinízo* which did not received 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 different suffixes.

After considering the interpretations and 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*, *-éno*, *-évo*, *-óno*, *-íno*
 {+m}{-s}{i} default SE matrix for *-(i)ázo*

The SE features in (7) 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

- Derivation bases refer to the same set of features as suffixes, i.e. {m},{s}, and {i}.
- Suffixes are compound heads. Their valued features are also heads.
- Underdetermined features are merged regardless of their head role.
- 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 on the example of *-(i)ázo* verbs.

6. Application

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. 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}.

6.1 Deadjectival [-dynamic, -scalar] verbs in *-(i)ázo*

The deadjectival [-dynamic, -scalar] verbs in *-(i)ázo* found in the Reverse Index of Modern Greek (RIMG) are given in Table 9. As can be seen {+m}{-s}{-i} bases are preferred by *-(i)ázo*.

⁶ In Efthymiou (submitted) the preference of *-(i)ázo* for negatively marked bases is mentioned, together with its capability to place a negative interpretation on derivatives whose bases are not negatively marked, cf. *thróniázo* 'enthroned' (ironically; *thrónos* 'throne'), etc.

Verb		Base		SE cluster (base)
<i>alaliázo</i>	'daze', 'drive sb mad'	<i>álalos</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>blávōs</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>klívios</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}

Table 9 Existing *-(i)ázo* verbs with an adjectival [–dynamic, –scalar] base [RIMG; approx. 19c.–]

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

(9) *álalos* 'stunned', 'dazed' > *alaliázo* 'daze', 'drive sb mad'

<i>álalos</i>	<i>-(i)ázo</i>	<i>alaliázo</i>
{+m}	{+m}	{+m}
{-s}	{-s}	{-s}
{-i}	{i}	{-i}

As can be seen, the features {+m}{-s} in both 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'

<i>kítrinos</i>	<i>-(i)ázo</i>	<i>?kitriniázo</i>
{-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 9). This must be the reason why *?kitriniázo* is for some native speakers of Greek ungrammatical.⁷ 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)).

6.2 Denominal [+material, dynamic] verbs in *-(i)ázo*

The denominal [+material, dynamic] verbs in *-(i)ázo* found in RIMG are given in Table 10. As can be seen {+m}{-s}{+i} bases are preferred by *-(i)ázo*.

⁷ In this case the rival form *kitrinízo* having a more neutral meaning is preferred (cf. Table 5).

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 sb'	<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}

Table 10 Existing *-(i)ázo* verbs with a nominal [+material, dynamic] base [RIMG; approx. 19c.–]

By way of example, the SE structure of *rebeliázo* is given in (11).

- (11) *rébelos* 'loafer' > *rebeliázo* 'loaf'
- | | | |
|----------------|----------------|------------------|
| <i>rébelos</i> | <i>-(i)ázo</i> | <i>rebeliázo</i> |
| {+m} | {+m} | {+m} |
| {-s} | {-s} | {-s} |
| {+i} | {i} | {+i} |

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

In (12) the SE structure for the creation *!miteriázo* is given.

- (12) *mitéra* 'mother' > *!miteriázo* 'behave annoyingly like a mother'
- | | | |
|---------------|----------------|------------------|
| <i>mitéra</i> | <i>-(i)ázo</i> | <i>miteriázo</i> |
| {-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 (12) with the verb bases in Table 10). 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.⁸ 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 (12) with (11)).

7. Conclusion

The analysis in this paper suggests (i) a sign-based treatment of affixes, (ii) a vertical preference structure in the semantic structure of the head suffixes which takes into account the semantic make-up of the bases, and (iii) the integration of SE meaning into verb structures. Sections 5 and 6 showed that the formalization of bodily structures by means of SE features is feasible, contrary to Lieber's (2004) assumptions. In the case of the deadjectival and denominal verbs in sections 6.1 and 6.2, respectively, {+m}{-s}{±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 *klívios* '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'.⁹

To conclude, it seems that 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

⁸ The implicational nature of this pattern should be examined in future research.

⁹ I assign {-m} to *ghóis/ghóitas* because charm cannot be thought of as a scalar or derived property. It should be noted that in Modern Greek the established verb *ghoitévo* 'fascinate' is in everyday use. This verb has no negative connotations.

addressed. The SE tier restricts the syntactically motivated patterns so that bases with a specific semantic composition can be selected by a particular suffix.

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