A Metalexicographic Investigation into a Set of Complex Modern Greek Verbs: Comparing Dictionary Entries with Corpus Evidence

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Abstract
This paper aims to make a contribution to the field of Modern Greek lexicography, and in particular to the theory of dictionary research. For this reason, it sets out to explore how corpus evidence can shed light on dictionary definitions, senses and examples. To illustrate this, it combines descriptive and empirical approaches to the investigation of the lemmata that have prepositional prefixes and derive from the verb ΒΑΛΛΩ ([válo], ≈ "to fire"; "to attack") thus belonging to the same word family. The study draws upon principles of mainstream lexicography to explore the theoretical premises on which two recent Greek dictionaries are based. For the purposes of comprehensive data analysis both qualitative and quantitative methods are employed.
As this analysis reveals, taking frequencies into consideration would have a profound effect on the existing sense ordering in the dictionary entries. Moreover, it emerges from the results that the entries may be enriched through close scrutiny of the Hellenic National Corpus evidence, which furnishes additional meanings and uses not included in the dictionaries. The outcome of the present paper is of practical use for lexicographers, researchers and linguists concerned with the description and in-depth analysis of the Modern Greek language.

1. The Main Question and its Importance

The overriding concern of this paper is to make a contribution to the broad theoretical branch of lexicography known as 'dictionary research' (Hartmann, 2001: 4-5), with a particular focus on the Modern Greek language, for which little has been written so far. More specifically, it sets out to provide both a descriptive and an empirical approach to linguistic data from Greek dictionary entries and a Greek corpus. To exemplify this, verbs deriving from a 'basic' word of the Greek vocabulary will be utilised[1].

The stimulus for the selection of this topic was the fact that there is only one verb in the Greek language combining with all prepositions as prefixes, namely the verb ΒΑΛΛΩ ([válo], ≈ "to fire"; "to attack", see Holton *et al.*, 1997: 180). The morphological process of derivation, during which the 'prepositional prefixes' (Mackridge, 1985: 184) were attached to the verb stem *βάλλ-* [vál-], has produced 25 cognate verbs. These derivatives are not transparent in terms of their senses to the extent that their meaning is not always the sum of their components. Nevertheless, they belong to the same word family and will be called (morphologically) 'complex verbs' in the present paper.

Word families have received little attention in the past, still less when they are part of a dictionary. By virtue of their background, content, and the timing of their publication, two monolingual and general-purpose dictionaries have been selected for this research, that is,

the *Dictionary of Modern Greek Language* (DMGL) (Babiniotis, 2002), and the *Dictionary of Modern Greek Koine* (DMGK) (Manolis Triandaphyllidis Foundation, 1998). The examples for the empirical part of this paper have been retrieved from the Hellenic National Corpus (HNC), developed by the Institute for Language and Speech Processing in Athens (Greece). Dictionary sense ordering will be compared with evidence extracted from the HNC, and frequencies will be further examined along with additional meanings found in the corpus. As will be argued, all this could eventually imply the need for a reorganisation of the lemmata, since the HNC database captures a large sample of language in use.

The originality of this study lies in that it i) deals with a particular word family, ii) combines dictionary and corpus research, and iii) puts forward improvements for the existing dictionaries through the implementation of a corpus available to the public.

2. A Brief Overview of Mainstream Lexicography: Benefits for Modern Greek Lexicography and Current Research

As a matter of fact, the number of monolingual and general-purpose Modern Greek dictionaries had been significantly low until the 1990s. This may be attributed to the social diglossia, the restricted target market, the insufficient utilisation of corpora, the scarce funding for linguistic projects, the part-time employment of lexicographers, the lack of specialised dictionaries, as well as to the need for an official and up-to-date grammar of the language.

Notwithstanding all these problems that have impeded progress in the field of Modern Greek lexicography, a number of motives facilitated its development over the last years[2]. The advances in Information Technology and computational linguistics in the 1990s have contributed to the construction of corpora used for research purposes, and to the utilisation of existing resources with tools newly developed. Thus, the linguistic analysis of Modern Greek is seen from a different perspective nowadays in an attempt to align practice with language theory.

More reasons enhancing the Greek lexicographic practice, according to Iordanidou (2000: 56), were the following: i) the development of lexicography at an international level, ii) the development of linguistics in Greece, and iii) the increased need for teaching Modern Greek as a first, second and foreign language. With regard to the first point only, the lexicographers themselves have made it clear that their effort was intended to reach high international standards of monolingual lexicography (*e.g.*, Webster, Robert and Duden; see Babiniotis, 1998: 13; Anastasiadis-Symeonidis, 2000: 48).

Certain lexicographic principles, which have been be chosen from a literature survey on mainstream international lexicography, will serve as the theoretical background of the present research, and will have a special focus on the Modern Greek practice. These are: description and prescription at all linguistic levels, careful selection of wording and comprehensiveness of definitions, decoding and encoding of information, intuition and evidence for the examples, consistency, closedness of the dictionaries, and circularity of definitions.

It is interesting to summarise at this point how these principles have been deployed in relation to Modern Greek lexicographic practice. What can be deduced is that, by and large, the lexicographers of the DMGL and the DMGK have made some serious attempt at

employing these 'rules', though not always to the letter. To be more precise, both dictionaries tend to i) be prescriptive, ii) occasionally have problems with the wording of the definitions, iii) be designed to help users with the decoding and encoding of information, iv) consider written evidence (for the examples) along with the lexicographers' intuition, v) be rarely inconsistent in terms of their microstructure, vi) be closed, and vii) avoid circularity of definitions. All this indicates that Greek lexicography is on the way to follow the lead of English, French, and German lexicography; nevertheless, much more work and effort is needed.

3. Research Design

The research methodology for this study was a combination of qualitative and quantitative analysis. Dictionary entries were assessed on the basis of their content in the microstructure, and numerical calculations were facilitated by computer processing of the HNC examples.

On the whole, it was estimated that lexicographic research remains a time-demanding task until the appropriate software for the Greek language is developed[3]. Data collection and analysis problems were compounded, for instance, by i) the lack of an electronic format for the DMGL, ii) the imperfect lemmatiser, which did not always return all the expected tokens, and iii) the robust concordancer of the HNC, which was not flexible enough to perform re-sorting of the examples. These problems were solved by i) converting the lemmata in question to electronic form, ii) adding tokens using the native speaker's intuition, whenever deemed necessary, and iii) combining existing effective tools (*i.e.*, Wordpad, Word and Excel), respectively.

4. Findings from the Data Collection and Analysis Procedures

The data collection procedure introduced the 25 complex verbs that derive from the Modern Greek verb ΒΑΛΛΩ ([válo], ≈ "to fire"; "to attack") and have prepositional prefixes. Most importantly, it showed in numbers why this verb is indeed a basic word in the vocabulary of the Modern Greek language; given that nearly one per thousand tokens of the 32-million-word HNC is a form either of ΒΑΛΛΩ or of the verbs deriving from it, the importance of exploring this lexical item can be justified.

The data analysis, as will be discussed in this paper, has been focused on specific lemmata. These have been considered in terms of i) their definitions and examples both in the DMGL and the DMGK, and ii) corpus evidence. The findings from the data collection procedure provided answers to the research questions that follow.

4.1. What Is the Sense Ordering in the Microstructure of these Headwords?

More often than not, the two dictionaries tend to prioritise the literal senses – or the senses that are close to the original Ancient Greek ones – over the metaphorical ones. However, sense ordering is not *systematically* based on the frequency criterion. Although in the front matter of their dictionaries the compilers claim to be using frequencies, they apparently paid more attention to the logical sequencing of senses, which would presumably be disrupted, if frequency were the first criterion. Their claim cannot be supported, since there is no evidence of any reliable statistics.

4.2. Are there Any Interesting Findings, when this Description Is Compared to the Evidence Extracted from the HNC?

The second research question is strongly connected with what has been noted thus far and pushes the central argument of the research a step further. Since the entries under investigation appeared to have been structured irrespective of any statistics, it was not surprising that they were at odds with the HNC results. What was remarkable, though, was that the picture of the language would be quite different, if frequencies were taken into consideration. Additionally, since no corpus was utilised *systematically*, it was unavoidable that some of the dictionary examples would 'sound unnatural'. Apart from that, it was often the case that dictionaries listed a number of collocations instead of citing examples, whereas methodical investigation into the HNC supplied both.

The data analysis also showed that some dictionary definitions were not supported by corpus evidence at all, even when they were at the beginning of an entry (*e.g.*, ΣΥΜΒΑΛΛΩ [simválo] in the sense "to join/meet"). The other side of the coin was that a number of uses were not included in the dictionaries (*e.g.*, ΕΠΙΒΑΛΛΩ [epiválo] – for a person – meaning "to suggest sb. forcefully for a particular job or purpose", or some other terminology in physics, biology, geometry *etc.*). The last remark cast light on the next research question.

4.3. Are there Any Additional Uses Found in the Corpus, which Are not Covered in the Dictionaries?

Even though a positive answer to this question may be obvious and predictable in theory, there is much documentation for the corroboration of the argument. What can be deduced from the results is that, as long as speakers of the language make conspicuous use of a certain lexical item in a particular sense, it should be recorded in the dictionary.

The lemma ΕΠΙΒΑΛΛΩ (≈ "to impose") has been selected as a first illustration of the above claim. By virtue of the large number of senses and sub-senses in the two dictionaries, on the one hand, and the radical differences in their definitions, on the other, the final picture of the findings is as complicated as Table 1 illustrates:

the DMGL senses	*corpus evidence (hits)*		*the DMGK senses*
1. "to impose"	3,382	1,896	1.α.i. "to impose"
2. "to inspire (respect *etc.*)"	42	1,427	1.α.ii. "to impose (by law)"
3. "to impose oneself"	30	59	1.α.iii. "to impose (by force)"
4. "to beat an opponent"	74	467	1.β. "to render sth. essential"
5. "to gain control over sb."	35	195	1.γ. "it is essential/vital that"
6. "it is essential/vital"	208	33	2.α. "to be imposing"
7. "necessary" (adj.)	0	73	2.β.i. "to establish oneself"
8. "obligatory/imperative" (adj.)	211	28	2.β.ii. "to beat (an opponent)"
uses not covered[4]	762	566	uses not covered
mixed uses[5]	15	15	mixed uses
	4,759		

Table 1: Semantic breakdown of the lemma ΕΠΙΒΑΛΛΩ ([epiválo], ≈ "to impose")

The first sense of the DMGL, "to impose", which recurs most often (3,382 times), was shared out among the first three sub-senses of the DMGK. This was a useful distinction of semantic nuances, the sequence of which was underpinned by corpus evidence. The majority of examples also demonstrated that the *necessity* of imposing something *unpleasant* or *undesirable*, as the DMGK definition specifies it, is very common; however, this negative semantic prosody passes unremarked in the DMGL.

The second most frequent sense in the corpus is "to render sth. essential" (467 hits, DMGK 1.β.), which is again absent from the DMGL. In particular, this sense seems to be exclusively attached to the third person (either singular or plural, irrespective of tense) of the verb in the active voice. Third comes the past participle (ΕΠΙΒΕΒΛΗΜΕΝΟΣ [epivevliménos], ≈ 'obligatory/imperative', as an adjective) with 211 hits, but this is treated as a separate headword in both dictionaries and thus it would be ignored in the rearrangement of senses for this entry.

Another issue that emerges from the observation of language in use is the syntax of the impersonal verb ΕΠΙΒΑΛΛΕΤΑΙ ([epiválete], ≈ 'it is essential/vital'), which does not always require a subordinate *να-* ([na-], ≈ 'that-') clause; this form may be an utterance on its own. Furthermore, the same type, in the passive and in the same sense, may have a subject, as well (*e.g.*, *μία βόλτα στην εξοχή επιβάλλεται* [mía vólta stin eksoçí epiválete], ≈ 'a stroll in the countryside is essential / is a must').

The next two most important senses, that is, "to beat an opponent" and "to establish oneself", have an almost equal distribution in the HNC (74 vs. 73 examples respectively). The former is considered in its broader sense (DMGL 4.), and incorporates the more precise definition of the DMGK (2.β.ii.) (≈ 'to win in a game'). The latter is more adequately expressed in the DMGK (2.β.i.) and applies to some aspects of the second, third, fourth and fifth definition in the DMGL. Another 33 hits that can be explained through the passive "to be imposing" mainly comprise of ideas, beliefs *etc.*, by which people may be impressed.

The present participle ΕΠΙΒΑΛΛΟΜΕΝΟΣ ([epivalómenos], DMGL 7.), could be paralleled to the adjective "necessary" in English, *e.g.*, in the phrase meaning "the necessary respect". This meaning is not recorded in the corpus. However, the three occurrences of the participle (*επιβαλλόμενα μέτρα* [epivalómena métra], ≈ imposed measures; *επιβαλλόμενες ποινές* [epivalómenes pinés], ≈ imposed penalties; *επιβαλλόμενο πρόστιμο* [epivalómeno próstimo], ≈ imposed fine) point towards the sense of something being "imposed".

In addition, the inclusion of the following recurring patterns in the two dictionaries would offer a new perspective on the polysemy of the verb:

(a) *επιβάλλω τον δικό μου ρυθμό / τέμπο* [epiválo ton δikó mu riθmó / témpo]: (used in the description of sports) for a player (or team) who makes the opponent play at their own tempo (*cf.* 'to play at one's tempo'),

(b) *επιβάλλω τον νόμο τής σιωπής / ζούγκλας* [epiválo ton nómo tis siopís / zúŋglas]: to impose the rule of silence / the law of the jungle, and

(c) *επιβάλλω κατάσταση εκτάκτου ανάγκης* [epiválo katástasi ektáktu anágis]: to impose a state of emergency.

Corpus evidence proved to be particularly essential for supplementing dictionary entries, when collocations were scrutinised. For example, a large number of corpus sentences challenged the prevailing view that the verb ΣΥΜΒΑΛΛΩ ([simválo], ≈ "to contribute") has a

positive semantic prosody (*cf.* Louw, 1993). Judging from their definitions and examples, neither the DMGL nor the DMGK underscore the unfavourable semantic prosody that this verb may have. It has to be noted, though, that in more than 10% of the examples this verb means "to help to cause sth.", in other words, has a negative effect as a result (*cf.* the English verb "to contribute"; for details see Christou, forthcoming). The following examples are extracted from the HNC:

(1) *Οι συνεχείς εξεγέρσεις κλονίζουν την αυτοκρατορία και συμβάλλουν στην παρακμή της.* ([I sineçís ekseyérsis klonízun tin aftokratoría ce simválun stin parakmí tis], ≈ 'The constant rebellions cause the empire to totter and contribute to its decay.')

(2) *Μπορεί τα βασανιστήρια να έχουν συμβάλει στο θάνατό τους.* ([Borí ta vasanistíria na éxun simváli sto θánató tus], ≈ 'The tortures may have contributed to their death').

4.4. Do Frequencies in the Corpus Point towards a Rearrangement of Senses in the Dictionaries?

Figure 1 is indicative of the changes in the frequency of dictionary senses, if corpus evidence were taken into consideration. Compared with Table 1, Figure 1 shows a strong preference that speakers have for the sense "to impose" of the verb ΕΠΙΒΑΛΛΩ [epiválo]. This supports the sequencing of senses in the DMGK, by and large, but presents a quite different picture than the one given in the DMGL:
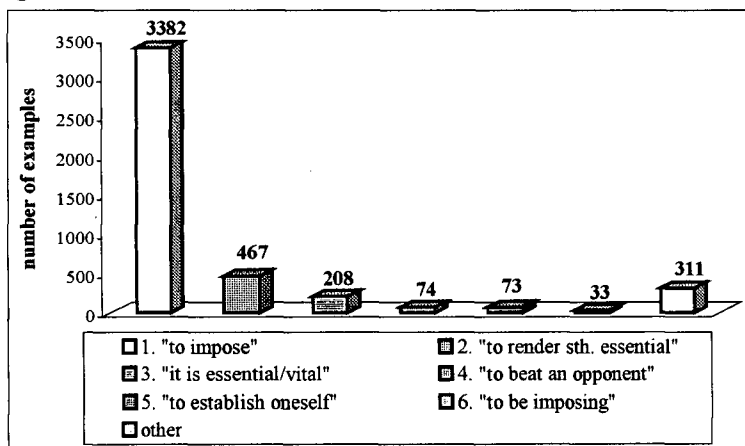

Figure 1: Sense ordering for the lemma ΕΠΙΒΑΛΛΩ ([epiválo], ≈ "to impose") according to corpus frequency

Table 2 is indicative of what the lemma ΕΠΙΒΑΛΛΩ would look like, if lexicographers considered a *systematic* approach to corpus frequencies, in order to support the ordering of senses and enhance the wording of definitions.

SENSE	FREQ.	EXAMPLE FROM THE HNC
1. "to impose"	3,382	*Αυτό που δεν ήθελαν εκείνοι, το επιβάλλουν στα παιδιά τους.* ([Aftó pu δen íθelan ecíni, to epiválun sta peδjá tus], ≈ They impose on their children what they themselves did not want.)
2. "to render sth. essential"	467	*Έπειτα μην ξεχνάμε πως οι καιροί συχνά επιβάλλουν μια αλλαγή στάσης.* ([Épita min ksexnáme pos i cerí sixná epiválun mja alaγí stasis], ≈ After all, let us not forget that a situation often renders essential a change of attitude.)
3. "it is essential/vital"	208	*Μία βόλτα στην εξοχή επιβάλλεται.* ([Mía vólta stin eksoçí epiválete], ≈ A stroll in the countryside is essential / is a must.)
4. "to beat an opponent"	74	*Ένας θεός ή ένας ήρωας επιβάλλεται στον σωματικώς ισχυρότερο αντίπαλό του.* ([Énas θeós i énas íroas epiválete ston somatikós isçirótero andípaló tu], ≈ A god or a hero beats an opponent who is physically stronger than him.)
5. "to establish oneself"	73	*Απαιτεί να τη σέβονται ως άτομο, επιβάλλεται ως παρουσία.* ([Apetí na ti sévondai os átomo, epiválete os parusía], ≈ She demands to be respected as a person, she establishes herself with her presence.)
6. "to be imposing"	33	*Υπήρξαν στον αιώνα μας πολλά εξαιρετικά έργα, αλλά κανένα που να επιβάλλεται.* ([Ipírksan ston eóna mas polá ekseretiká érya, alá kanéna pu na epiválete], ≈ In our century there have been many magnificent pieces of work, but none has been imposing.)
7. other (a variety of senses to be examined more thoroughly)	311	*Αν καταφέρουμε να επιβάλουμε το ρυθμό μας, μπορούμε να πάμε πολύ καλά.* ([An kataférume na epiválume to riθmó mas, borúme na páme polí kalá], ≈ If we manage to make them play at our tempo, we can have a good result.)

Table 2: Sense ordering and corpus frequency for the lemma ΕΠΙΒΑΛΛΩ
([episválo], ≈ "to impose") along with examples from the HNC

One more example supporting the rearrangement of senses according to frequency criteria is the verb ΥΠΟΒΑΛΛΩ [ipoválo], the final results for which are distributed across dictionary senses and corpus examples, as Table 3 shows on the next page. Differences in the dictionary definitions, which were again followed to the letter (*cf.* Table 1), resulted in different numbers of corpus tokens.

The first and most remarkable sense of ΥΠΟΒΑΛΛΩ is "to submit", and indeed according to the definition of the DMGL (3,983 hits), which makes explicit that a suggestion or request (not necessarily in written form) is submitted to an authority for consideration or approval. This is a broader explanation of the verb that is not restricted to the submission of a document only (as is the definition I.i. of DMGK), but also comprises of the second sub-sense of the DMGK, that is, "to ask a question". Common collocations of the verb in this sense, are, in addition to those mentioned in the dictionaries, ΥΠΟΒΑΛΛΩ *καταγγελία* ([ipoválo katangelía], ≈ "to bring a charge against sb."), ΥΠΟΒΑΛΛΩ *ένσταση* ([ipoválo énstasi], ≈ "to raise an objection"), and ΥΠΟΒΑΛΛΩ *υπόμνημα* ([ipoválo ipómnima], ≈ "to submit a memorandum").

the DMGL senses	corpus evidence (hits)		the DMGK senses
1. "to submit"	3,983	3,829	I.i. "to submit"
1. (expr.) "to pay one's respects"	7	154	I.ii. "to ask a question"
2. "to subject sb. to sth."	108	7	I.iii. (expr.) "to pay one's respects"
3. "to influence"	61	565	II.i. "to subject"
4. "to put sth. under sth. Else"	0	0	II.ii. (expr.) "don't put yourself to any trouble"
5. "to prompt (an actor)"	0	61	III.i. "to influence"
6. "to be suggestible"	0	5	III.ii. "to impress"
7. "to undergo"	444		
uses not covered	62	44	uses not covered
Mixed	3	3	mixed
	4,668		

Table 3: Semantic breakdown of the lemma ΥΠΟΒΑΛΛΩ ([ipoválo], ≈ "to submit")

The second most frequent sense is "to subject" (565 hits, DMGK II.i.), which can be found in both the active and the passive form of the verb as "to subject sb. to sth." (DMGL 2.) and "to undergo sth." (DMGL 7.), respectively. The sense "to be subjected to sth.", for which no definition exists in the DMGL, is also included here. For instance, the verb in the phrase *υποβάλλομαι σε έξοδα / σε δαπάνες* ([ipoválome se éksoδa / se δapánes], ≈ 'to be subjected to costs / expenses') is in the passive, but does not mean "to undergo".

ΥΠΟΒΑΛΛΩ in the sense "to influence" occurs 61 times and is covered by the definitions of both dictionaries. In this case, somebody or something has an effect on the way that somebody else thinks, and hence influences him or her. The expression *υποβάλλω σε κάποιον τα σέβη μου* [ipoválo se kápçon ta sévi mu], meaning "to pay one's respects", comes next. The least common sense, *i.e.*, "to impress", is defined by the DMGK only.

Two patterns and senses that were part of the corpus evidence and could be added to the dictionaries are the following:

(d) *υποβάλλω τα συλλυπητήριά μου* ([ipoválo ta silipitíriá mu], ≈ "to offer one's sympathies")

(e) *(ένα χρηματικό ποσόν) υποβάλλεται σε φόρο / φορολογία* [(éna xrimatikó posón) ipoválete se fóro / foroloyía]: for a tax that is imposed on an income.

As the examples from the HNC show, the verb ΥΠΟΒΑΛΛΩ is also used relatively often as a term in biology and physics written reports. These uses could be better clarified with the help of a scientist.

It needs to be remarked at this point that for several senses (DMGL 4., 5., and 6.; DMGK II.ii.) no examples were found in the corpus. However, the lexicographers' claim is that these senses exist in the language. A search in the World Wide Web (Kilgarriff, 2001) could provide useful insights in this direction.

In contrast to Table 3, where dictionary senses are not evenly distributed in a descending order of frequency according to relevant corpus evidence, Figure 2 suggests a clearer picture for the rearrangement of senses within this lemma. The senses "to influence", "to pay one's respects" and "to impress" should be placed towards the end of the entry, whereas "to submit" and "to subject" should be explicated in the first place.
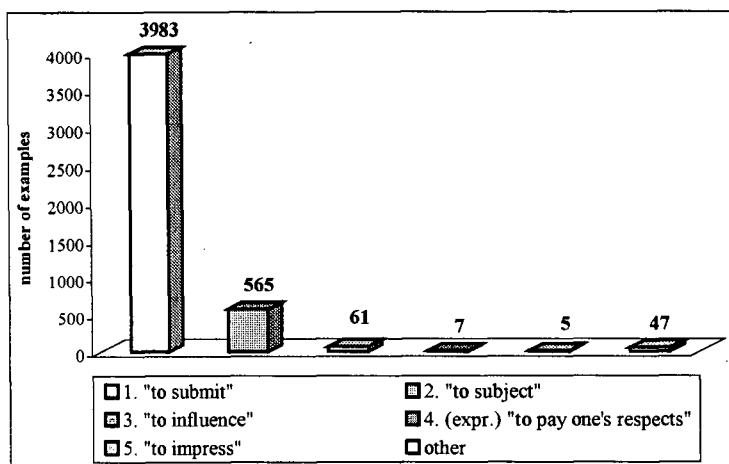
Figure 2: Sense ordering for the lemma ΥΠΟΒΑΛΛΩ ([ipoválo], ≈ "to submit")
according to corpus frequency

5. Conclusion

An idea that underlies the present paper is that research aiming at the improvement of existing Modern Greek dictionaries is nowadays more important than an attempt to compile new dictionaries. On the whole, the DMGL and the DMGK discussed in this study are authoritative and powerful enough; however, the recourse to a corpus in their case is construed as a necessary step towards updating and ranking the senses and sub-senses of the headwords.

The lexicographers of the DMGL and the DMGK could benefit considerably from this research, which has commented on positive and negative aspects of these dictionaries. As has been demonstrated, corpus evidence may corroborate or refute the lexicographers' intuitions as regards a linguistic tendency towards a specific form or structure. Systematic research into corpus examples may also prove to be essential for speakers and learners of the Modern Greek language, who can also benefit from a different ordering of senses. When the commonest senses precede and the most infrequent ones follow, this saves time and effort for the user who decides the extent to which he or she wants to acquire or learn the language. Given that linguistic research systematically employing Greek corpora is not established yet, this practice merits serious consideration, not least because an attempt has been made recently to develop a brand new corpus of Greek (see Goutsos, forthcoming). This 'Corpus of Greek Texts', as it is called, holds special promise on the grounds that it is carefully designed to encompass a variety of sources including spoken material, as well. This will be the object of research of a number of linguists, who are currently involved in the creation of a new large database (30 million words of spoken and written texts) within a short period of time (2 years). It would therefore be interesting to expand the present research by utilising the new corpus for lexicographic purposes, as soon as it is released.

The ultimate contribution of this study to Modern Greek lexicography, in its effort to reach the international lexicographic standards, is an outline of the aforementioned principles using the 'DICTIONARIES' acrostic:

D Escription and
I Nterpretation of
C Orpus examples needs to be based on linguistic
T Endencies that are supported by
I Ntuition, are
O Rdered according to frequency, show the
N Aturalness and
A Ppropriateness of
R Ecurrent items or patterns, provide
I Llustrative
E Vidence of language in use, and are written in a
S Uccinct way.

Acknowledgements

Endnotes

[1] The large number of words that are associated with the verb ΒΑΛΛΩ [válo] either morphologically or semantically, reveals that this word is *basic*, on the premise that Lyons (1995: 87-88) notes:

> "Some words might be more basic than others in that they can be used to define a greater proportion of the total vocabulary or can be used to construct a more elegant and systematic set of interconnected definitions."

[2] A notable appearance of four monolingual and general-purpose Greek dictionaries (Kriaras, 1995; Tegopoulos-Fytrakis, 1997; Babiniotis, 1998; Manolis Triandaphyllidis Foundation, 1998) took place towards the end of the past decade.

[3] Some of the methodological problems encountered during the processing of the HNC results are discussed in Christou (2003).

[4] The uses designated as "not covered" in Tables 1 and 3 may be close to the senses recorded, but they are not fully explicated in the dictionaries, due to differences in the wording of definitions.

[5] The cases in which the same (or similar) node collocates with different words and produces different senses within the same sentence are encoded as 'mixed uses'.

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[NB. Books or articles with an asterisk (*) after the publication date are written in Greek.]

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