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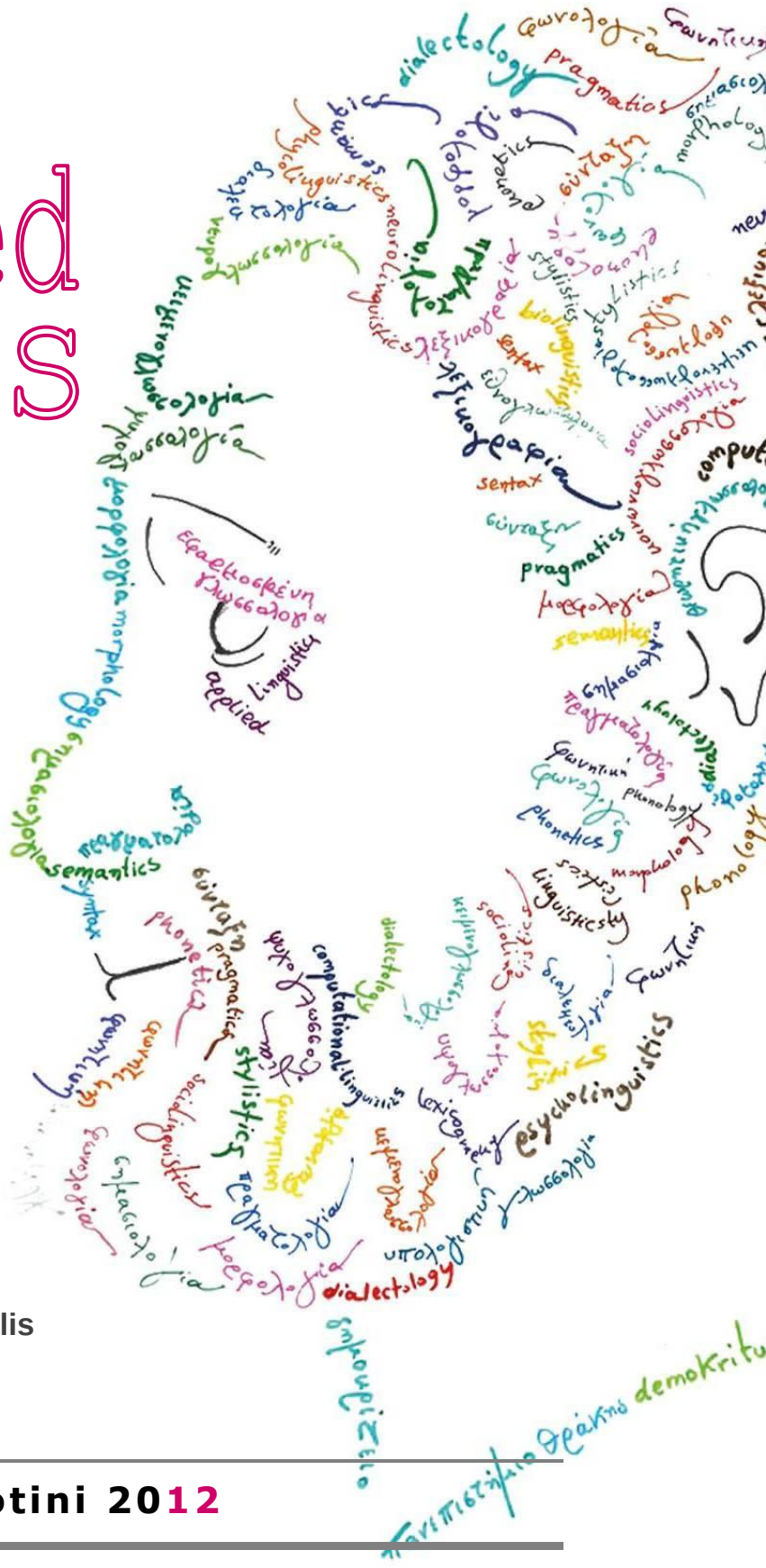

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ACRONYMS AND THE PLACEMENT OF DEFAULT STRESS IN GREEK

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ABSTRACT

This paper aims to identify the stress pattern of Greek acronyms experimentally and to provide insights over default stress, in light of work suggesting that this arises in morphologically-bare forms (Krämer 2009), such as acronyms. Two experiments with novel acronyms were conducted. The first tested stress preferences; the second attempted to understand those by deliberately priming speakers to attend to morphology through the use of suffix-like endings in acronyms. A clear preference for final stress was evident throughout; in acronyms with suffix-like endings, this is attributed to a combination of morphology and lexical frequency effects of the least frequent words. In acronyms ending in non-native codas - thus free of such influences - this is due to default stress placement, a finding that challenges previous work on Greek default stress.

1. Introduction and Aims

The study of nonce words, and acronyms in particular, has gained momentum in recent years, as a source able to reveal the underlying linguistic knowledge that speakers have when they are confronted with new data of their language. Following this trend in Greek acronyms, we find a general survey of acronyms by Vazou & Xydopoulos (2007) who briefly touch upon their phonological properties, with further elaboration by Nikolou (2010) on the number of phonological words acronyms consist of and by Malikouti-Drachman & Drachman(2011) on factors that may affect their stressing. In this paper, we explore acronym-stress too, but focus on production and stress patterns as revealed by quantitative data. To our knowledge, this is the first work to do that, along with the independently conducted work by Nikolou, Papadopoulou and Revithiadou (2011), that was also presented at ICGL 10 and can be found in this volume.

The present investigation aspires, first, to identify the stress pattern(s) characteristic of Greek acronyms. To this end, we constructed two experiments investigating various phonological, morphosyntactic, morphological and lexical frequency factors that can potentially regulate the attested stress distribution. Our second aim is a consequence of the first; as it will become obvious in the course of this paper, we establish that the default pattern for acronyms (final stress) does not coincide with that generally claimed for the language (see below) and we therefore briefly discuss the consequences of this result.

Our main finding is that the preferred pattern in acronyms is ultimate stress. This is especially the case in C-final acronyms that end in non-native codas, e.g. p, v, θ, etc. However, when the acronym ends in a string of sounds like *-os* or *-i* that can be construed as suffixes, speakers may divert from the default[1]; in that case, the emerging stress distribution matches the frequency patterns of the *least* frequent words. It is thus the combined effect of morphology and lexical frequency that becomes relevant in acronyms. In addition, the preference for final stress comes at odds with claims that the antepenult is the default (Revithiadou 1999) or the more recent proposal that the penult is instead the default (Malikouti-Drachman 2001, Kappa 2002, Protopapas et al. 2006).On the contrary, it is compatible with work by Apoussidou (on virtual learners and her finding (2011: 125) that "neither

[1] We take it that final stress is at the very least the default pattern in acronyms. On the *general* default pattern in Greek, see section 4.

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stress on the antepenult… nor the penultimate syllable… were the default pattern for untrained forms; rather, the final syllable was a preferred position".

The paper is structured as follows: Sections 2 and 3 describe the first and second experiments respectively and outline their major findings. Section 4 briefly considers issues stemming out from the findings regarding the final default stress in acronyms.

2. 1st Experiment (Exp.1)

2.1 Methodology

Our 1st experiment involved a written task whose aim was to identify whether there was any clear pattern in acronym stressing. 17 subjects – first year undergraduate students of Linguistics at the University of Ioannina – were tested, but eventually 2 were excluded, as their responses indicated a lack of understanding of the instructions. The choice of subjects was driven by their ability to use IPA for phonemic transcription, which was integral for the experiment's purposes. The experiment consisted of two sub-tasks, henceforth referred to as *1A* and *1B*.

For *1A*, the full names of 32 novel organizations were provided and subjects were asked to create corresponding acronyms. No restrictions were posed with regard to their structure (number of syllables, segmental material). Subjects were required to phonemically transcribe the acronym in IPA and to indicate stress and syllable structure. For example, for the organization *Κεντρική Επιτροπή Γενικών Εξετάσεων* "Central Committee of General Examinations" subjects produced either the acronym [cé.ðe] or [ce.ðé]. This subtask produced 480 tokens in total, i.e. 32x15.

The task in *1B* was more controlled; subjects were presented with 38 novel organization titles alongside with their ready-made acronyms and were asked to provide syllabification and stress assignment [total 38x15 = 570 tokens]. Thus, for the acronym ΤΥΔΑΛ which stood for *Τεχνική Υπηρεσία Δήμου Άνω Λιοσίων* "Technical Service of Ano Liosia Municipality", subjects – almost uniformly - offered [ti.ðál]. For examples of acronyms in each task, see Appendix A.

2.2 Results

2.2.1 Task *1A*

Three basic questions were asked: (a) How long were the acronyms in terms of number of syllables? (b) Where was stress located? (c) What was the break down of stress position by the number of syllables? Figures 1-3 present the results to the respective questions.

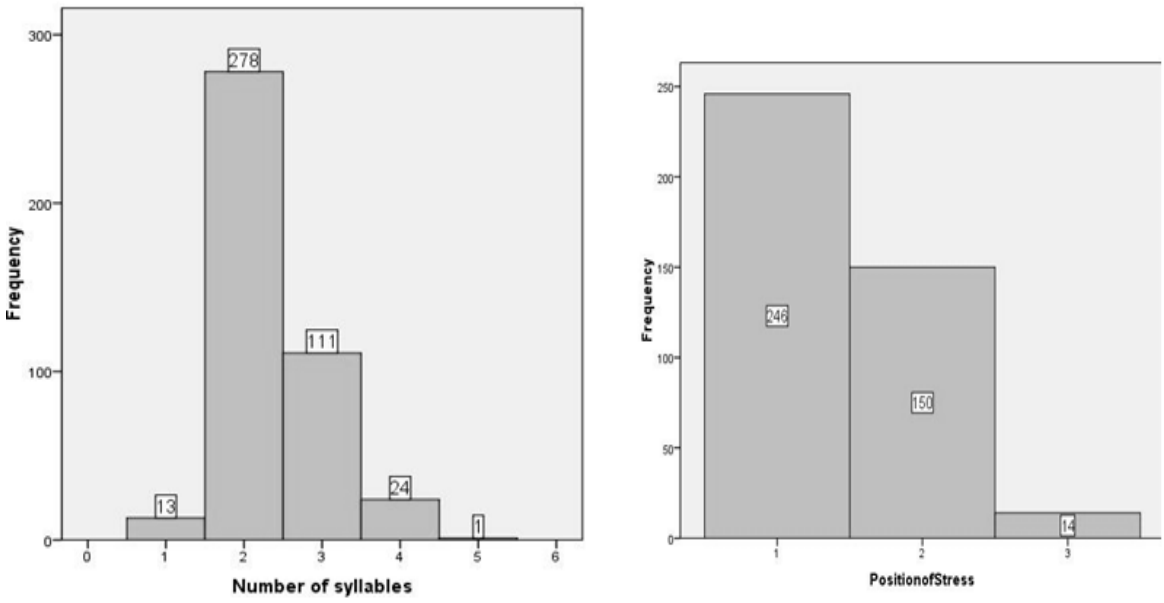


Figure 1 (L) Acronyms by number of syllables (Task *1A*)

Figure 2 (R) Position of stress in acronyms [1=ultima, 2=penult, 3=antepenult] (Task *1A*)

Fig.1. shows that the preferred length of acronyms is disyllabic, followed by trisyllabic constructions. Few quadri- and mono-syllabic acronyms arise too. Fig.2. reveals that most acronyms are stressed on the ultima, a significant number is stressed on the penult, whereas stress on the antepenult is a rarity. Fig.3. provides a detailed break-down of how frequently each stress pattern appears on acronyms ranging between 2-4 syllables. In disyllabic acronyms, final and penult stress occur with roughly the same frequency. In trisyllables however, ultimate stress is predominant, with some occurrences of penult and antepenult stress. Surprisingly, in quadrisyllables, only one type of stress emerges, namely, the final one.

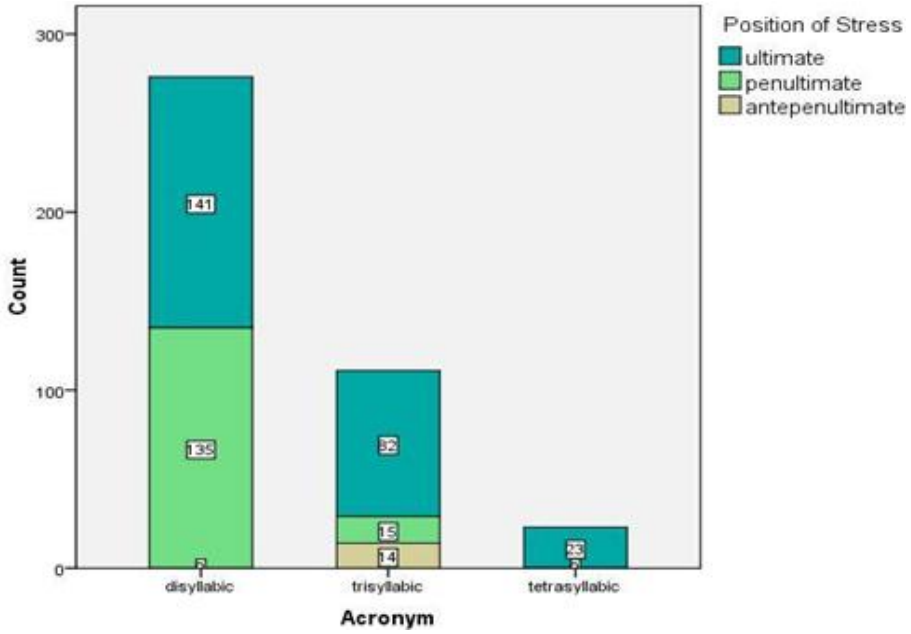
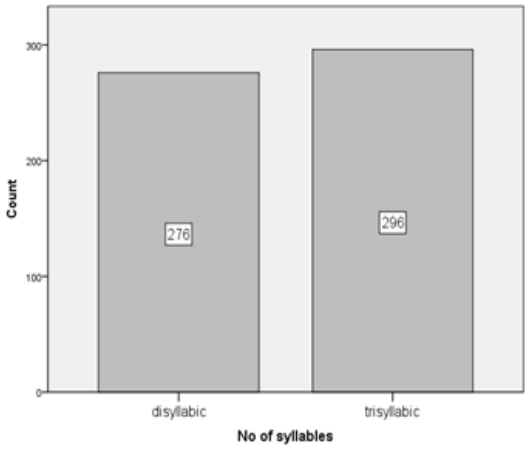


Figure 3 Break-down according to length of acronym and stress pattern (Task *1A*)

2.2.2 Task *1B*

The same questions were asked in Task *1B*.The answers follow in Figures 4-6.



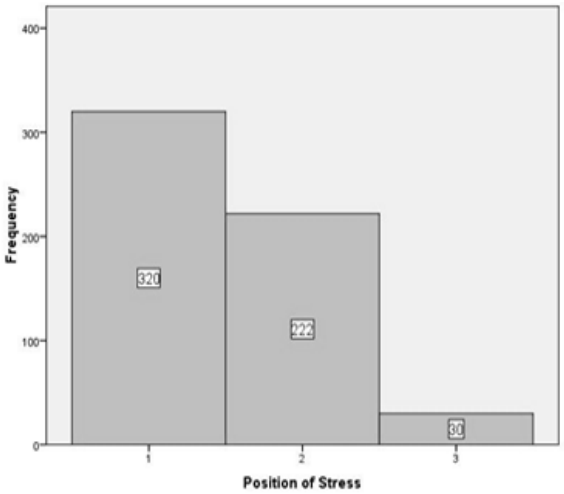


Figure 4 (L) Acronyms by number of syllables (Task *1B*)
Figure 5 (R) Position of stress in acronyms [1=ultima, 2=penult, 3=antepenult] (Task *1B*)

Since the length of the acronyms was pre-determined given the experiment's design, Fig.4. is not particularly informative, but is nonetheless included for clarity. Fig.5. replicates the results of Task *1A* for that question. The same roughly holds for Fig.6.

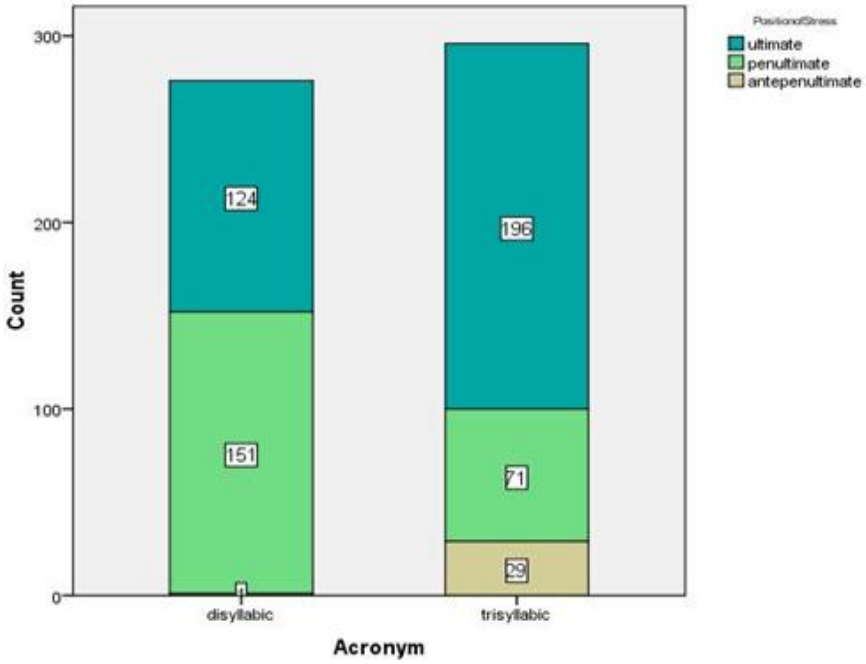


Figure 6 Break-down according to length of acronym and stress pattern (Task *1B*)

2.2.3 An asymmetry

The results of both sub-tasks of Experiment *1* are comparable: final stress tends to be preferred in acronyms larger than 2 syllables long, but in disyllables no preference appears. Importantly, antepenult stress, i.e. the alleged default according to Revithiadou (1999) is hardly ever attested. Also, task *1A* shows that the preferred size of acronyms is disyllabic (monosyllabic: 3%, disyllabic: 65%, trisyllabic: 26%, tetrasyllabic: 6%).

An interesting asymmetry crops up when one looks the internal structure of disyllables and trisyllables with respect to stress. Thus, although it is true that disyllables receive either final or penult stress in roughly equal proportion, there is for the most part preference for final stress if the acronym ends in a closed syllable and a slight tendency for penult stress if it ends in an open syllable (see Table 1). This is not true for trisyllables though, where no matter the internal structure of the acronym, final-stress is consistently preferred (Table 2). To facilitate comparison, consider the cells in bold in the figures below.

	ultima	penult
CV.CV	50	**63**
CV.CVC	**45**	9
V.CV	9	20
V.CVC	12	2
VC.CV	7	3
CV.V	3	11
CV.CCV	2	9
CCV.VC	1	5
CCV.CV	2	9

	ultima	penult	antepenult
CV.CV.CV	**22**	1	5
V.V.CV	13	2	0
CV.CV.V	12	8	7
V.CV.CVC	9	2	0
CV.CV.CVC	**8**	0	0
CV.CV.VC	6	1	0

Table 1 (L) Break-down according to stress pattern and syllable structure in disyllables
Table 2 (R) Break-down according to stress pattern and syllable structure in trisyllables

To explain this asymmetry we first considered the possibility that other factors could influence stress placement. For instance, Malikouti-Drachman & Drachman (2011) have claimed that the reason an acronym like [íka] for *Ίδρυμα Κοινωνικών Ασφαλίσεων* "Social Security Foundation" receives

penult stress is because of a preference to stress the morphosyntactic head, here *Ίδρυμα*. In addition to this possibility, we also entertained the idea that acronym-stressing is sonority-driven (cf. Kenstowicz 1994 on Mordwin, Kobon, Chukchee), in that stress looks for the most sonorous vowel in the word to dock on, following the standard sonority scale of *a>e,o>i,u*. The relevant measurements appear in Appendix B, but the upshot is that none of these factors proved important in our data.

In conclusion, results from the first experiment revealed a preference for stressing the ultima in acronyms, with an asymmetry between disyllabic and trisyllabic acronyms in that in disyllabic acronyms closed syllables tended to attract the stress, with the reverse pattern emerging for the trisyllabic ones. Factors such as morphosyntactic head and vowel sonority did not prove significant in stress placement, nor in explaining the asymmetry indicated (but see Appendix B for details). However, other factors, such as the morphology of the constructed acronyms, were not taken into consideration, and it is to that which we turn to in the second experiment.

3. 2nd Experiment (Exp.2)

Since morphosyntactic head or sonority considerations offered no further insight to the asymmetry outlined above, we conducted an additional experiment, this time testing whether lexical frequency and/or morphological factors could regulate acronym/nonce word formation. This line of thinking is inspired by recent work by e.g. Guy et al (2008), Zuraw (2007) and many others who have shown that "speakers have encoded frequency information within a variety of static phonotactic constituents as well as within the targets, results, and contexts of phonological and morpho-phonological processes. In other words… speakers have statistical knowledge of language sound structure at a variety of levels" (Frisch 2011: 2144).

3.1 Methodology

Although acronyms themselves lack morphological substance (Vazou & Xydopoulos 2007: 247), we deliberately created acronyms whose endings could be construed as extant suffixes, e.g. *-os, -i*. We did that so as to be able to evaluate the role of any morphological or lexical frequency conditioning. Our hypothesis has been that speakers' preferences regarding stress placement in acronyms might mirror what we find in attested words with respect to either: (I) morphology alone, (II) lexical frequency alone, or (III) both.

To test the hypothesis, we designed a more controlled experiment that only utilized disyllabic acronyms of the type CV.CV or CV.CVC. Specifically, we constructed 10 novel acronyms for each of the following categories (see Table 3) with specific endings and genders [10 speakers * 6 categories * 10 acronyms * 2 repetitions = 1200 items plus 200 trisyllabic filler acronyms]. These were read out loud by one of the authors, recorded and played back to the participants using PRAAT's adjusted MFC5 perception experiment. Participants would first hear the whole organisation's title which was also presented in a written form on the screen, and then hear the acronym twice, e.g. the choice over Πλατφόρμα Ολικής Μηχανοργάνωσης was between 'ΠΟΜΗ or ΠΟ'ΜΗ (forced-choice task, all participants would hear each acronym twice, once with the stress on the ultimate presented first, and once with the penultimate presented first, and the selection of which set came first or second was random).The participants were then asked to choose the preferred acronym[2].

Orthographic ending	IPA	Gender	as in the word…
a. -ου	-u	Feminine	[alepú] 'fox'
b. -η	-i	Feminine	[físi] 'nature'
c. -ι	-i	Neuter	[póði] 'foot'
d. -ος	-os	Masculine	[fílos] 'friend'
e. -ες	-es	Masculine	[pansés] 'pansy'
f. non-native coda	e.g. Vf#, Vk#	Gender irrelevant	

Table 3 Categories of novel acronyms

[2]We did not opt for the participants to produce the acronyms themselves and for us to record them, because we wanted to avoid 2 issues: 1. the interference of our transcription as to which syllable is stressed (which would also require tests of inter-transcriber agreement), and 2. the possibility of uncertainties in the productions of the speakers themselves.

We also ensured that both the head of the phrase of the acronym as well as of its complement were of the gender sought after. For instance, ΠΟΜΗ could be an acronym for: Πλατφόρμα$_{Fem}$ Ολικής Μηχανοργάνωσης$_{Fem}$, where both head and complement primed for Feminine gender, but not for Πλάνο$_{Neut}$ Ολικής Μηχανοργάνωσης$_{Fem}$, Πλατφόρμα$_{Fem}$ Ολικού Μηχανισμού$_{Masc}$ or Πλάνο$_{Neut}$ Ολικού Μηχανισμού$_{Masc}$, where at least the head or the complement are of different gender than the one sought after. Our aim was to prime for a specific stress pattern, through specific morphology.

To be able to evaluate possible effects of lexical frequency, we counted the lexical frequency of attested words with the above characteristics (ending, gender, σ-structure and number of syllables) in the corpus of: http://speech.ilsp.gr/iplr/downloads.htm (Protopapas et al. in press).

3.2 Results

Our initial analyses focused on the same questions, as in Tasks *A* and *B* of Experiment 1, to ensure that results were replicated in this experiment too. As the figures below reveal, the initial results indeed resemble those of Experiment 1.

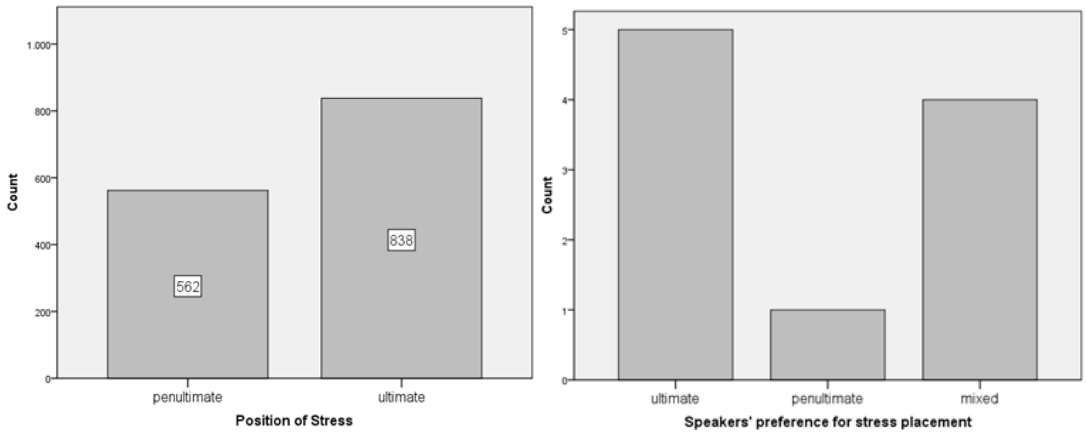


Figure 7 (L) Break-down of stress position in all items
Figure 8 (R) Break-down of stress-preference placement by speaker [N.B.:mixed refers to an equal preference for stressing both syllables]

Evidently, ultimate stress is preferred (Fig.7.), a preference that is clear for 5 of the speakers (Fig.8.; 50%). 4 others provided mixed responses (no clear tendency for stress placement was found in those speakers; rather they tended to stress equally on both syllables) and only one showed a systematic preference for penult stress.

We then proceeded to answer the following questions posed by our hypothesis that are taken up in the next subsections.

- Q1: Does morphology alone regulate the stress pattern in acronyms?
- Q2: Does lexical frequency alone regulate the stress pattern in acronyms?
- Q3: Is the combined effect of morphology and lexical frequency that regulates the stress patterns in acronyms?

3.2.1 Does morphology alone count?

To determine the role of morphology in acronym stressing, we effectively asked whether any of the suffixes *-ος, -η, -ι, -ες or -ου,* are associated with any specific stress pattern independently of frequency and phonology (e.g. syllable structure, word-size, etc.). This question could only be answered for the suffixes *-ού* (Fem.) and *-ές* (Masc), as these are always reported to receive final stress (cf. the grammar of Holton et al. 2004: 35, 40-41). In the remaining suffixes, stress is variable, so not much else can be said on a morphological basis only.

Still, it is the case that if the morphological pattern alone were to be mirrored in the acronym, then all of the *-ες* and *-ου* final acronyms should be stressed in the ultima, which is clearly not the case,

since stress in *-ου* acronyms is pretty random (ultima 51%, penult 49%), whereas *-ες* acronyms do show a preference for final stress, but this is by no means as strong as predicted (ultima 63%, penult 37%). For concreteness, the overall picture with respect to the position of stress for each of the endings tested is presented in Fig.9., where we can also see a clear preference for stressing the ultima in non-native codas.

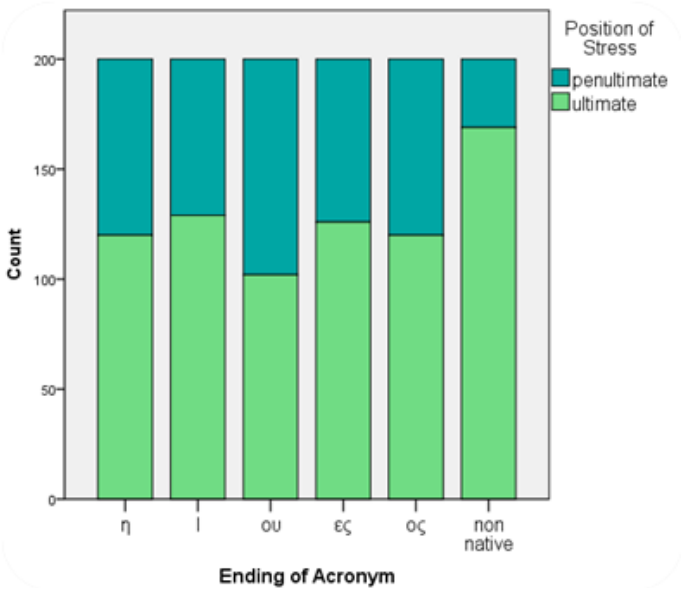


Figure 9 Break-down of stress position by ending

Overall, Fig.9. reinforces the impression of a final stress preference for disyllabic acronyms in Greek. Moreover, it shows that acronyms of CV.CVC syllabic structure have the same general distribution as those of CV.CV, with the exception of CV.CVC constructions that have a non-native coda. The latter clearly attract the stress on the ultima.

It can thus be concluded that morphology alone does not seem to predict position of stress. According to our morphology-based hypothesis, acronyms ending in *-ου* and *-ες* should be stressed on the ultima, a pattern that was not borne out.

3.2.2 Does lexical frequency alone count?

To decide on the influence of lexical frequency, we counted the frequency of all words ending in *-ος*, *-ες*, etc. irrespective of morphological information, thus along the target masculine nouns ending in-*ες*, we also included other *–ες* forms like *είδες* 'you saw-2SG-PAST', *λαβές* 'handle-FEM-PL' etc. The results attained were limited in some respects due to the structure of the corpus; in particular, the corpus really only provides comparison between syllables stressed in the final position and syllables in all other positions, that is, while the corpus indicates whether the stressed syllable is found in the *initial*, *medial* or *final* position, one does not know the length of each word where the syllable has appeared. Therefore, the only legitimate comparison we can presently perform is that of the frequency of occurrence of a stressed syllable in the final position vs. the frequency in all other positions, omitting finer comparisons between the penult and antepenult. In addition, since the corpus offers phonetic and not orthographic transcriptions for this analysis, a distinction between the homophonous *-ι* and *-η* could not be made. With these caveats in mind, consider the relevant results.

Frequency of syllable being stressed in final position vs. not being stressed (in whole corpus in millions)			**Expectation for ultimate**	**Results**		**Met?**
	Stressed	*Not stressed*		*Ultima*	*Penult*	
/i/	118.457.881	161.871.572	Not stressed	64,5%	35,5%	Not met

/i/	118.457.881	161.871.572	Not stressed	60%	40%	Not met
/os/	58.555.149	75.682.644	Not stressed	60%	40%	Not met
/u/	69.169.946	141.436.418	Not stressed	51%	49%	Not met
/es/	65.051.777	67.689.173	No preference	63%	37%	Not met

Table 4 (Non-)matching of frequency of endings in corpus with those in acronyms

The sub-columns under the heading 'Frequency...' indicate the frequency of final and non-final stress in the corpus. This creates an *Expectation* on what the pattern should be in acronyms if these follow the corpus tendencies. The column *Results* depicts what actually happens in the acronyms tested. The final column *Met?* designates whether the *Expectation* has been met or not in acronyms.

As said, the frequency of *-i* final words in the corpus merges together all types of orthographic *i*'s (5 in Greek in total) including *-ι* and *-η*. The preference for stress here is non-final, as is for words ending in *-ος*, and *-ου* while for *-ες* no preference emerges from the corpus. Consequently, none of the expectations on the basis of overall frequency in the corpus are met, since a tendency for final stress is still observed. This suggests that lexical frequency alone is also not sufficient to generate the attested patterns.

3.2.3 Do morphology and lexical frequency combined count?

This leaves us with one more possibility: the combined effect of lexical frequency and morphological information. This time what we counted was the frequency of all CVCV(C) disyllabic words in the corpus that matched the morphological criteria, thus for the *-os* ending, we considered only the *-ος* masculine nouns and not the masculine adjectives (e.g. όμορφος 'beautiful') or the feminine nouns (e.g. μέθοδος 'method') with the same ending. We then made three measurements for each of the endings utilized:

- Out of all the disyllabic CVCV(C) nouns in nominative that appear in the corpus, we counted how many were stressed in the ultima and how many in the penultima (frequencies are shown in percentages, Table 5)
- Out of all the disyllabic CVCV(C) nouns in nominative that appear in the corpus, we added the frequency (in this instance frequency refers to "frequency of occurrence of this word form (letter sequence) in the selected corpus, per million words (tokens)", Protopapas et al. 2008) of the 20 most frequent tokens in the ultima and of the 20 most frequent tokens in the penultima and compared which of the two syllables is most frequently stressed (Table 6)
- Same as before, but for the 20 least frequent tokens (Table 7)

Frequency in corpus			**Expectation**	**Results**		**Met?**
	Ultima	*Penult*		*Ultima*	*Penult*	
-ι	43%	57%	Mixed	64,5%	35,5%	Not met
-η	39%	61%	Penultimate mostly	60%	40%	Not met
-ος	27%	73%	Penultimate	60%	40%	Not met
-ου	100%	0%	Ultimate (grammar descriptions)	51%	49%	Not met
-ες	100%	0%	Ultimate (grammar descriptions)	63%	37%	Met(?)

Table 5 Stress patterns of words with specific morphological endings in the corpus and their (non-)matching in acronyms

As is evident from Table 5 the expectations with regard to the stress patterns that should arise in acronyms based on the frequencies of the words in the corpus with the corresponding morphological endings are not borne out. The same holds when the expectations are based on the 20 most frequent words (Table 6). Note that the *-ού* and *-ές* categories should be uniformly finally stressed according to grammar descriptions. However, they were excluded, because insufficient number of them arose in the corpus.

Frequency of 20 most frequent words			**Expectation**	**Results**		**Met?**
	Ultima	*Penult*		*Ultima*	*Penult*	
-ι	314,205	296,984	Mixed	64,5%	35,5%	Not met

-η	741,817	2892,163	Penultimate	60%	40%	Not met
-ος	116,148	833,775	Penultimate	60%	40%	Not met
-ου	-	-	Ultimate (grammar descriptions)	51%	49%	-
-ες	-	-	Ultimate (grammar descriptions)	63%	37%	-

Table 6 Stress patterns of 20 most frequent words with specific morphological endings in the corpus and their (non-)matching in acronyms

Interestingly however, the situation is reversed, once one looks at the stress patterns that are expected to emerge in acronyms based on the least frequent words. Here, the expectations largely match the actual results.

Frequency of 20 least frequent words			**Expectation**	**Results**		**Met?**
	Ultima	*Penult*		*Ultima*	*Penult*	
-ι	3,823	2,604	Slightly Ultimate	64,5%	35,5%	Met(?)
-η	12,111	5,107	Ultimate	60%	40%	Met(?)
-ος	3,281	1,152	Slightly Ultimate	60%	40%	Met
-ου	-	-	Ultimate (grammar descriptions)	51%	49%	-
-ες	-	-	Ultimate (grammar descriptions)	63%	37%	-

Table 7 Stress patterns of 20 least frequent words with specific morphological endings in the corpus and their (non-)matching in acronyms

Thus far we have not commented on the fact that participants' responses revealed a mixed pattern for the ending *-ου*, contrary to our expectations on the basis of the morphology, and contrary to its quite similar ending *-ες*. Once again, but on a more speculative note, we believe that key to this lack of preference is the combinatorial effect of morphology and overall lexical frequency. It is notable that on the basis of traditional grammars, *-ου* words should be stressed on the ultima (cf. §3.2.1), but on the basis of overall lexical frequencies we expect non-final stress – and indeed by a large margin (cf. Table 4, where non-finally stressed -u ending tokens are twice as many as the final-stressed ones). Starkly competing expectations are thus generated, which speakers seem to balance out by showing no particular stress preference in acronyms. To put it differently, this emerging mixed pattern has masked potential effects from morphology or from overall frequency. This line of thinking can extend to *-ες*, where on the basis of morphology we expect final stress and on the basis of overall lexical frequency we expect no preference. Our results reveal a 63% preference for the ultima, i.e. approximately in the middle between the two tendencies[3]. Of course, the reasoning above cannot apply to the *-ι*, *-η* and *-ος* endings, simply because morphology imposes no clear stress preference for them, hence morphology and lexical frequency cannot directly conflict with one another.

3.3 Summary

The overall picture of Exp.2. is comparable to that of Exp.1., in that there is a strong tendency for final stress. Notably, in acronyms with non-native codas (which of course are not subject to morphological or lexical frequency effects), stress is virtually always final. Of all the measurements we made, it was the combination of morphological and lexical frequency effects that matched to an extent the empirical facts of acronyms. Unlike what one would possibly expect, it was actually the stress patterns of the *least* frequent words that matched the stress patterns of the acronyms.

This effect is not as surprising, as it appears at a first glance. A similar result is reported in Crowhurst et al. (2003: 159) who find that the frequency distribution of stem-final stress in Russian is skewed, being more frequent for low-frequency lexical items than high-frequency ones. Given the fact that frequent words often present irregular patterns (cf. past forms in *go-went* or *βλέπω-είδα*), one could

[3]How stress patterns are affected when morphology and overall lexical frequency preferences compete has not been the topic of the present investigation and thus will require further testing. From the present results however, it seems that speakers' preferences lie in the middle of the two extremes, but not with complete precision, since in that case *-ες* should have a 75% preference for ultimate stress, and not 63%, unlike -ου which was split exactly in half.

perhaps argue that regularity should after all be sought after in infrequent words. The last section briefly outlines the implications the stressing of acronyms has for default stress.

4. Discussion

One thing that is clear from the experiments above is that the default stress pattern for acronyms is not the antepenult or even the penult, i.e. patterns that have been claimed to arise as defaults in the core language (Revithiadou 1999, Malikouti-Drachman 2001, Kappa 2002, Protopapas et al. 2006). Instead, a final, possibly iambic, stress pattern is assigned this role (see also Tzakosta 2004, who shows that trochees are attested with less frequency than anticipated in Greek child speech). We have also shown that this pattern is quite systematic in acronyms ending in non-native codas, where neither lexical frequency nor morphological information effects are in order, whereas in acronyms ending in sequences reminiscent of suffixes of the language, stress distribution is largely regulated by the combined effect of these two factors. Speakers may thus divert from the default under the pressure of the factors above.

What does all this mean for Greek default stress in general? The answer seems to depend on how one chooses to interpret the results; if one adopts the reasoning of researchers like Krämer (2009: 9 in ms) who states that "…since nonce words cannot have lexically stored stress marks we can claim that an analysis of the observed nonce word stress patterns amounts to an analysis of Italian default stress", then the nonce acronyms of Greek that are free of morphological or lexical frequency effects may be used as an argument in favour of final stress as a default in Greek. On the other hand, proponents of the (ante-)penult default stress in Greek, as suggested by noun-inflection or compounding, may claim that what we see in acronyms is specific to them, in the sense that they have their own sub-phonology and as a result cannot extend to the general language. The problem however is that one could equally claim the reverse, i.e. that the real default arises in acronyms – when stripped of any other factors that may influence their stressing – and what we see in the morphologically-rich constructions of nominal inflection and compounding actually constitutes a sub-phonology[4].

While it is not clear at present how this debate can be resolved, it certainly points to the need for additional research on Greek stress. Till then, the only thing that can be said with certainty – given the comparable results of Nikolou, Papadopoulou and Revithiadou (2011) – is that the final syllable is a favourite location for acronym stress.

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[4] Exp.2. has shown that, when morphological information is added to the acronyms, stressing preferences change with somewhat less instances of final-stress, suggesting that even an acronym-specific sub-phonology cannot be completely disconnected from the overall grammar. This raises a number of questions; initially we believe that the limits and contents of this sub-phonology must be clearly stated. That is, if morphology does have access to this sub-component of the grammar (as seems to be the case on the basis of our experiment), and can influence the distribution of stress patterns within it, then how much and what type of information can it extract from the grammar, and particularly, is it possible for us to derive information about the grammar from this component? This is not a topic that our investigation set out to answer, but we believe is of crucial importance for the continuation of this discussion.

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APPENDIX A

1. Exp.1. Tasks 𝒜 and ℬ – Examples of produced acronyms in IPA

Task A

Participants were given the organisations' full title and were asked to provide an IPA transcription with syllabification and stress. For example:

a. Νέο Αναλυτικό Τιμολόγιο Έργων Οδοποιίας ("New Analytical Pricings for Street Constructions") would provide answers like 'nat.erg.o, 'na.te.o, na.'te.o etc.
b. Ομοσπονδιακή Επιτροπή Τραπεζικών Υπαλλήλων ("Federal Committee of Bank Clerks") would provide answers like o.e.'ti, o.'e.ti, o.me.'ti etc.

Task B

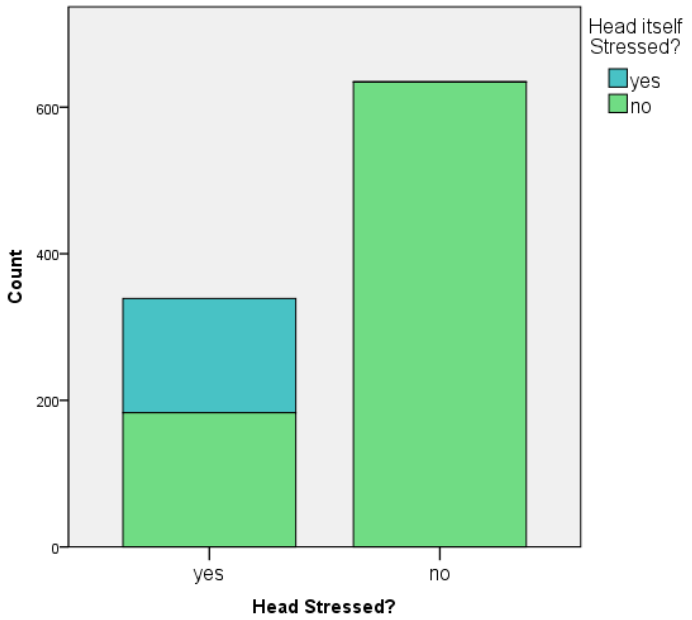
Participants were given the organisations' full title and acronym and were asked to provide syllabification and stress. For example:

a. Γενική Εταιρία Κατασκευών ("General Construction Company")→ΓΕΚΑ would provide answers like 'ɣe.ka or ɣe.'ka
b. Νομαρχιακή Εκτελεστική Επιτροπή ("Prefectural Executive Committee")→ NOMEKE would provide answers like no.'me.ce, no.me.'ce.

APPENDIX B

1. Exp.1. Tasks 𝒜 and ℬ – Influence of position of morphosyntactic head on stress patterns

In tasks 𝒜 and ℬ, 64% of the constructed acronyms did not receive stress on the syllable containing the morphosyntactic head, which means that only 36% of the acronyms were stressed on the head. Out of those instances, in less than half (156 out of 339 tokens) was the actual syntactic head stressed (that is, the head started with a vowel). Comparable results were found in Experiment 2.



2. Exp.1. Tasks 𝒜 and ℬ – Influence of vowel hierarchy on stress patterns

Vowel hierarchy did not emerge as a major contributing factor to stress position; out of all the tokens where violation was possible (since not all acronyms have a segmental make-up that allows for violation, e.g. acronyms containing the same vowel in all syllables, or vowels of equal sonority) half of the items respected the hierarchy and half did not (305 violating vs. 308 non-violating tokens).The effect of vowel hierarchy revealed a half-half split, which suggests that, even though its effect might not be statistically significant, it might act as a contributing factor to stress position, a fact to be investigated in the future.