

## Rev(i<sup>er</sup>)sing the LSJ

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### Abstract

Liddell-Scott-Jones (LSJ) is a standard lexicographical work of the Ancient Greek language available online in a number of different incarnations. Its directionality is from Ancient Greek to English. What if one wants to search from English to Ancient Greek? The Perseus Project, a seminal and authoritative electronic source, provides a functionality whereby a reverse search is possible, based on a simple term-to-translation(s) logic, devoid of any further processing.

The above approach is a far cry from being satisfactory and is subject to a number of pitfalls which this paper aims to explore and provide a framework for their remediation on a linguistic and computational level. Some of the types of issues identified:

1. Missing term elements (“commander of a” for “τελάρχης”)
2. Missing Greek-derived equivalents (no “cephalgia” in “κεφαλαλγία” and no “pankration” in “παγκράτιον”)
3. Use of Greek as part of the translation (for example “παρὰνυμφεύω” rendered as “act as παρὰνυμφος”)
4. Use of anaphora (“σκοτωματικός” as “causing dizziness | suffering from it”)
5. Use of Latin instead of English, especially for taboo words (“crepitis ventris” for “ἔριθος”)
6. Use of old English (“shew” instead of “show”, “connexion” instead of “connection”)
7. Use of dash inbetween words (“to-morrow”)
8. Abbreviated forms of the headword in phrases resulting in inflectional ambiguity (“κλυτὰ δ. βένθεσι λίμνης”)
9. Incomplete example phrases with mid-phrase ellipsis (“τὸ ὕδωρ... αὐ. μὲν οὐκ ἔστι”)
10. Typos and linguistic errors (“ἐντρονία” instead of “εὐτρονία”)

A script was created to extract the term/translation equivalents from the xml file. Phase I consisted of a) analysis of the output in Ancient Greek to English format b) identification and categorization of the issues and c) a plan for their remediation. Phase II was an analysis and further revision of the reversed material. Phase III was preparation and publication of the output in wiki format as an interactive supplemental resource to LSJ proper.

## Επιμέλεια και αντιστροφή του LSJ

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### Περίληψη

Το Liddell-Scott-Jones (LSJ) είναι ένα λεξικογραφικό έργο-ορόσημο της αρχαίας ελληνικής γλώσσας το οποίο διατίθεται στο Διαδίκτυο σε πολυάριθμες διαφορετικές υλοποιήσεις. Η κατεύθυνσή του είναι από τα αρχαία ελληνικά στα αγγλικά. Αν όμως κάποιος θέλει να πραγματοποιήσει αναζήτηση από τα αγγλικά στα αρχαία ελληνικά τι επιλογές έχει; Το Perseus, μια σημαντική και έγκυρη ηλεκτρονική πηγή, παρέχει μια λειτουργικότητα με την οποία είναι δυνατή η αντιστροφή αναζήτηση, με βάση μια απλή λογική αντιστροφής παράθεσης των αποδοθέντων όρων, χωρίς όμως περαιτέρω επεξεργασία.

Η παραπάνω προσέγγιση πόρρω απέχει από το να είναι ικανοποιητική και υποπίπτει σε πολυάριθμες παγίδες τις οποίες έχει ως στόχο να διερευνήσει η παρούσα εργασία, καθώς επίσης να παράσχει ένα πλαίσιο για την αποκατάστασή τους σε γλωσσικό και υπολογιστικό επίπεδο. Μερικές από τις κατηγορίες ορολογικών ζητημάτων που εντοπίστηκαν:

1. Οροστοιχεία που λείπουν («commander of a» για το «τελάρχης»)
2. Μη παράθεση ελληνικών ισοδύναμων (δεν υπάρχουν οι αποδόσεις «acatalepsy, anodynia, cephalalgia, Eteocretans, hubris, otalgia, pankration, philhellene, rhapsodist, strigil» για τα «άκαταληψία, άνωδυνία, κεφαλαλγία, Έτεόκρητες, ύβρις, ώταλγία, παγκράτιον, φιλέλλην, ράψωδός, στλεγγίς» αντίστοιχα)
3. Χρήση της ελληνικής ως μέρος της απόδοσης του όρου («act as παράθυμφος» για το «παρानυμφεύω», «κώθων-maker» για το «κωθωνοποιός», «πρόεδρος-designate» για το «μελλοπρόεδρος», «γάρον mixed with wine» για το «οινόγαρον», «from Θήβαι» για το «Θήβηθε»)
4. Χρήση αναφοράς (το «σκοτωματικός» αποδίδεται «causing dizziness | suffering from it»)
5. Χρήση λατινικών όρων αντί για αγγλικών, ιδίως για λέξεις-ταμπού: «crepitus ventris» για το «ἔριθος» αντί για «flatulence» ή «fart»· «membrum virile» αντί για «penis» για τα «πέος, φαλλός, σαύρα, κέρκος, σχοινίον, κορύνη, άνδρείον, πόσθη, φλέψ, ψωλή, κωλή, πάσσαλος»· «rudenda muliebria» ή «rudendum muliebre» αντί για «vagina» για τα «κέλης, κήπος, κόκκος, κτείς, κύσθος, λειμών, Μηριόνης, πεδίον, ρόδον, σαβαρίχης, σάκανδρος, σάραβος, σῦκον, ταῦρος, τρήμα, ὕειον, ὕσσακος, χοῖρος».
6. Χρήση παλαιών Αγγλικών («shew» αντί για «show», «connexion» αντί για «connection»)
7. Χρήση παύλας μεταξύ λέξεων («to-morrow»)
8. Συντομευμένες μορφές του λήμματος σε φράσεις με αποτέλεσμα μορφολογική ασάφεια («κλυτά δ. βένθεσι λίμνης» στο λήμμα «δῶμα» όπου το «δ.» είναι συντομογραφία του «δῶματα»)
9. Παραδειγματικές φράσεις με ελλιπή στοιχεία αναφερόμενα μέσω αποσιωπητικών στο μέσον («τὸ ὕδωρ... αὐ. μὲν οὐκ ἔστι»)
10. Τυπογραφικά και γλωσσολογικά σφάλματα («incilement» αντί για «incitement»· «έντονια» αντί για «εὔτονια»)

Δημιουργήθηκε μια δέσμη ενεργειών για την εξαγωγή των ισοδύναμων όρων/αποδόσεων από το αρχείο xml. Η πρώτη φάση περιελάμβανε α) ανάλυση του λημματολογίου στην πρωτογενή μορφή από αρχαία ελληνικά προς αγγλικά β) ταυτοποίηση και κατηγοριοποίηση των ορολογικών ζητημάτων και γ) σχέδιο βελτιστοποίησης. Η δεύτερη φάση ενείχε μια ανάλυση και περαιτέρω αναθεώρηση του λημματολογίου στην αναστραμμένη μορφή του (από αγγλικά προς αρχαία ελληνικά). Η τρίτη φάση ήταν η προετοιμασία για τη δημοσίευση του λημματολογίου σε μορφή βίβλι ως διαδραστικός συμπληρωματικός πόρος για το LSJ.

## 0. Introduction

Liddell-Scott-Jones (LSJ) is a standard lexicographical work of the Ancient Greek language available online in several different incarnations. Its directionality is from Ancient Greek to English. However, there are not many satisfactory options when one wants to search from English to Ancient Greek. The Perseus Project, a seminal and authoritative electronic source, provides a functionality whereby a reverse search is possible, based on a simple term-to-translation(s) logic, devoid of any further processing.

The above approach is a far cry from being satisfactory and is subject to numerous pitfalls which this paper aims to explore and provide a framework for their remediation on a linguistic and computational level.

In order to create a list of entries for reversal, a script was created to extract the term/translation equivalents from the LSJ xml file in a two-column tab-delimited format. Phase I consisted of a) analysis of the output in Ancient Greek to English format b) identification and categorization of the issues and c) a plan for their remediation. Phase II was an analysis and further revision and enrichment of the reversed material with other resources. Phase III was preparation and publication of the output in wiki format as an interactive supplemental resource to LSJ proper on [lsj.gr](http://lsj.gr)<sup>1</sup>, a dedicated Ancient Greek and Latin wiki with multilingual coverage of Ancient Greek (English, Spanish, German, French, Dutch, Russian).

Due to the size limitations of this paper, the focus will be on the issues identified in the process of reversal and revision.

### 1.0 Types of issues identified

The automatic reversal of the list of entries highlighted the following issues:

1. Missing term elements
  - Missing verb in phrasal verbs or noun in compound terms
2. Use of Greek as part of the translation
3. Use of anaphora
4. Use of Latin instead of English
  - Use of Latin in taboo words and expressions
5. Missing Greek-derived equivalents
6. Missing Latin-derived terms
7. Abbreviated forms
  - Abbreviated forms of the headword in phrases resulting in inflectional ambiguity
  - Adverbs in abbreviated form
  - Incomplete example phrases with mid-phrase ellipsis
  - Incomplete example phrases without translation
8. Use of antonyms
9. Use of old English
  - Erroneous or old English use of dash

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<sup>1</sup> A paper by the same author (in Greek), published at the 9<sup>th</sup> conference "Hellenic Language and Terminology" (2013), outlining the wikification of the LSJ can be accessed at [http://www.eleto.gr/download/Conferences/9th%20Conference/Papers-and-speakers/9th\\_23-05-01\\_DoikasSpyros\\_Paper\\_V05.pdf](http://www.eleto.gr/download/Conferences/9th%20Conference/Papers-and-speakers/9th_23-05-01_DoikasSpyros_Paper_V05.pdf)

## 10. Missing translations

## 11. Typos and linguistic errors

- Latin binomials with both compounds in capitals
- Missing dash
- Use of Beta Code instead of polytonic Greek
- Linguistic errors

The issues will be discussed in the subsections that follow.

### 1.1 Missing term elements

As one can see in the image below in the Perseus reverse search<sup>2</sup>, there are term elements missing.

Greek Term	Source	Count 1	Count 2	Count 3	English Translation
τάγμα	LSJ, Middle Liddell	353	353	46	ordinance, command
ταξίαρχος	LSJ, Middle Liddell	330	102	57	commander of a corps
ταξίλοχος	LSJ, Middle Liddell	0	0	0	commanding a
ταξιαρχέω	LSJ, Middle Liddell	234	4	34	to be a taxiarch, command the contingent
ταγαῖος	LSJ	0	0	0	acting by command
ταγή	LSJ, Middle Liddell	15	0	5	line of battle, front
ταγός	LSJ, Middle Liddell, Autenrieth	29	14	11	commander, ruler, chief
ταγοῦχος	LSJ, Middle Liddell	1	1	1	having command, commander
τελάρχης	LSJ	1	1	1	commander of a
τετραφαλαγγάρης	LSJ	0	0	0	commander of a
τετραφαλαγγαρχία	LSJ	1	1	1	his command

Figure 1 Search results for the word “command” in Perseus

<sup>2</sup> <http://www.perseus.tufts.edu/hopper/definitionlookup?type=begin&q=command&target=greek>

For example, if we click on the LSJ link next to “τετραφαλαγγάρχης” we will see the Ancient Greek to English lemma of the LSJ which might give as a clue as for why this happens.

If one looks carefully at the English text that is presented as a translation of the term in the English to Ancient Greek search, a part of it is italicized in LSJ proper and another part is in Greek, hyperlinked and non-italicized (“commander of a τετραφαλαγγία”). Perseus, in order to produce the reverse search output, uses the part of the entry that is italicized; hence the term clipping.

τετρα<sup>^</sup>φα<sup>^</sup>λαγγ-άρχης , ου, ό,  
*A.commander of a τετραφαλαγγία, EM 729.5.*

**Figure 2 τετραφαλαγγάρχης in Perseus LSJ**

Even after the improvement of the extraction script to include the non-italicized part, we have a mixed language output for term translations which is not acceptable in a bilingual dictionary (“commander of a τετραφαλαγγία” instead of “commander of a corps of four phalanxes”). See further down “Use of Greek as part of the translation”.

### 1.1.1 Missing verb in phrasal verbs or noun in compound terms

Another subcase of missing term element is missing the verb in some of the translations due to the “economical” layout of the original (print) dictionary. For example, for the entry “ἀνεπηρέαστος” the translation is “free from injury or insult”. What is extracted by the script is “free from injury | insult”; therefore, instead of “free from injury | free from insult”.

ἀκτήμων	without property   poor   in
ἀμφικυλίνδω	roll about   round   on
ἀναντλέω	draw up   out
ἀνεπηρέαστος	free from injury   insult
ἀπομηρύομαι	draw up from   out of
ἀποτρέχω	run off   away
δαίσσω	rush   dart through   across
ἐγκαταμίγνυμαι	be mixed in   with
ἐγκοιμάομαι	sleep in   sleep upon   after
ἐγκοιτέω	sleep in   on
εἰσθέω	run into   in   runs up   run up
εἰσθρώσκω	leap into   in
ἐκπίνω	drink out   off
ἐννυχεύω	sleep in   on   to sleep in   sink
ἐντρίβω	rub in   crumble   into
ἐπειστρέχω	run in upon   after
ἐπίφθονος	liable to envy   jealousy
εὐνήθεν	from   out of bed
κρήνηθεν	from a well   spring
μακροδρόμος	running long   far
ναυπρύτανις	ruling ships   the sea

ὁμόπολις	from   of the same city   state
ὁμοτροχάω	run in company   together
παραρρέγχω	snore beside   near
παραρριγώω	freeze beside   near
παρυπνύω	sleep by   with
περιθρύπτω	rub   pound in pieces
ποντόθεν	from   out of the sea
προσκαθεύδω	sleep by   near
προστρέχω	run to   towards
συγκατακαλύπτω	wrap up with   in
συμβρέμω	roar along with   together
ὑπομειδιάω	smile a little   gently
ώτειλῆθεν	from   out of the wound

## 1.2 Use of Greek as part of the translation

As described above, an extremely high number of translations use Greek as part of the term. This is cumbersome as the user would have to look up the Greek part of the term too.

A typical example is “τερατογραφέω” which is translated as “write of τέρατα”. If we look it up in other dictionaries of the same era, like for example James Donogan’s, *A New Greek and English Lexicon* (1840)<sup>3</sup>, we see that not only there is no Greek in the translation but we also have multiple suggestions: “To describe, or relate wonderful, or preternatural occurrences; to describe prodigies, portentous appearances, or miracles ; to discourse, or write concerning, such subjects.”

It is also worth noting Franco Montanari’s, *The Brill Dictionary of Ancient Greek* (2015), which, not only uses contemporary English, but examples of use are also translated. And of course, it is not beset by LSJ’s idiosyncrasy of using Greek as part of the translation, i.e. in LSJ we get “like ἄβυρτάκη” for “ἄβυρτακώδης”, whereas in Brill we get “like spicy sauce”<sup>4</sup>.

This approach, taken to the extreme, results in the linguistically unappealing formation of hyphenated chimeric compounds (“half-κάδος”, “πρόεδρος-designate”, “κώθων-maker”, “μάννα-like”). The way to remedy this issue is to provide full translations for all such entries (about 3.000).

ἀγελαστέω	be ἀγέλαστος
ἀθλοθεσία	office of ἀθλοθέτης
Ἀμφιαράϊον	sanctuary of Ἀμφιάραος
ἀρχιφυλακέω	hold office of ἀρχιφύλαξ
διαπαγκρατιάζω	contend in the παγκράτιον
διλοχίτης	commander of a διλοχία
ἐπαγκυλίζομαι	be fitted with an ἀγκύλη
ἡμικάδιον	half-κάδος
Θήβηθε	from Θήβαι
καρκοειδής	like καρύκη

<sup>3</sup> <https://archive.org/details/newgreekenglishl00donnuoft>

<sup>4</sup> [https://brill.com/fileasset/downloads\\_products/34732\\_Preview.pdf](https://brill.com/fileasset/downloads_products/34732_Preview.pdf) (page 11)

κοτυλιαῖος	holding a κοτύλη
κωθωνοποιός	κώθων-maker
κωμαρχέω	be a κωμάρχης   administer as κωμάρχης
λικνίτης	of the λίκνον
μελλοπρόεδρος	πρόεδρος-designate
ναρθηκώδης	like a νάρθηξ
οινόγαρον	γάρον mixed with wine
πρατορεύω	act as πράτωρ
σῦκον Αἰγύπτιον	the fruit of the κερωνία (instead of “carob” or “locust bean”)
συνεφηβεύω	serve as ἔφηβοι together
σωριτικός	of the nature of the σωρίτης
ταῦρος	the male αἰδοῖον
τερατογραφέω	write of τέρατα
τηγανιστός	fried in a τήγανον
χλαινηφόρος	wearing a χλαῖνα

### 1.3 Use of anaphora

Anaphora is the use of a pronoun or other linguistic unit to refer back to another word or phrase. While it is convenient for linguistic economy in print dictionaries, terms using it are not reversible as a vital term element is obscured (its antecedent or postcedent) by the anaphor (the pronoun referring to the term element).

ἀγρυπνητικός	wakeful   producing wakefulness   spell for <b>this</b> purpose
αἱ ἐ. τῶν Ἄλπεων	the difficulties of passing <b>them</b> (from the entry “ἐρυμνότης”)
Ἀναγυροῦς	Adj. Ἀναγυρ-άσιο ς, ὁ, man of <b>this</b> deme
ἀποδιψάω	cease from thirst   be relieved of <b>it</b>
ἀφλέγμαντος	free from inflammation   not liable to <b>it</b>
Διδυμαῖος	<b>their</b> temple   <b>their</b> festival
Ἰσοκράτει ἀργύριον ἀναλίσκω	spend money in paying <b>him</b> (from the entry “ἀναλίσκω”)
σκοτωματικός	causing dizziness   suffering from <b>it</b>

### 1.4 Use of Latin instead of English

Many entries are translated with their Latin equivalent only.

ἀμπελοφύλαξ	custos vineae   MISSING vineyard-keeper
ἐξαίνυμαι	ἐξαίνυτο θυμόν = animam eripuit (instead of “took away breath, took away life, killed”)
καταφιμόω	conticisco
καυκαλῖς	Tordylium apulum   MISSING Mediterranean hartwort
κούστωρ	custos   MISSING guard, watch, preserver, keeper, overseer, protector, defender, attendant
λαβδοειδής	ὄστουν λαβδοειδές = os hyoïdes (strangely, a French term is used here instead of the Latin “os hyoideum”)   MISSING hyoid bone

εύαντόλωζ <sup>5</sup>	correpte
ἀναλίσκω <sup>6</sup>	λόγω ἄ. τὸν χρόνον τῆς ἡμέρας = diem eximere dicendo
πυλουργός	custos
σαγάπηνον	Ferula persica   MISSING sagapenum

#### 1.4.1 Use of Latin in taboo words and expressions

This is a phenomenon which is widespread in the Ancient Greek dictionaries of the 18<sup>th</sup> and 19<sup>th</sup> centuries. We see it also in Anatole Bailly's *Dictionnaire grec-français* (1895)<sup>7</sup>, Wilhelm Pape's *Griechisch-Deutsches Handwörterbuch* (1842)<sup>8</sup> as well as Dvoretzky's *Ancient Greek to Russian dictionary* (1958) [И. X. Дворецкий, Древнегреческо-русский]<sup>9</sup>.

εὐρύπρωκτος, χαυνόπρωκτος	wide-breeched   pathicus (instead of "catamite, sodomite, person who submits to anal sex, passive male partner in anal intercourse, passive homosexual, brownie queen, browning queen, passive partner")
πορδή	crepitus ventris (instead of "flatulence" or "fart")
πέος, φαλλός, σαύρα, κέρκος, σχοινίον, κορύνη, ἀνδρεῖον, πόσθη, φλέψ, ψωλή, κωλή, πάσσαλος	membrum virile (instead of "penis")
κέλης, κῆπος, κόκκος, κτεῖς, κύσθος, λειμών, Μηριόνης, πεδίον, ῥόδον, σαβαρίχης, σάκανδρος, σάραβος, σῦκον, ταῦρος, τρημα, ὕειον, ὕσσακος, χοῖρος	"pudenda muliebria" or "pudendum muliebre" (instead of "vagina")
ψωλή	membrum virile praeputio retracto (instead of "erect penis" or, to be precise, "uncircumsized penis in a state of arousal")
ἀποψωλέω	praeputium retrahere alicui   verpum facere
ἐντονία <sup>10</sup>	distentio penis

#### 1.5 Missing Greek-derived equivalents

There are numerous English words of Greek origin, such as medical terms or Greek cultural references, which are near-transcriptions of the Greek word. Many blatant and commonly used words are missing like "acatalepsy, anodynia, cephalalgia, hubris, Eteocretans, otalgia, pankration, philhellene, rhapsodist, strigil".

ἀκαταληψία	MISSING acatalepsy   inability to comprehend   inability attain conviction
ἀνθρωπολόγος	speaking of man, i.e. fond of personal conversation   MISSING anthropologist

<sup>5</sup> <https://www.translatum.gr/forum/index.php?topic=575947.0>

<sup>6</sup> <https://www.translatum.gr/forum/index.php?topic=578597.0>

<sup>7</sup> <https://archive.org/details/BaillyDictionnaireGrecFrancais>. A study on taboo expressions in Ancient Greek with French translations can be found here: <http://chaerephon.e-monsite.com/pages/miscellanea/pudenda.html>

<sup>8</sup> <https://archive.org/details/drwpapeshandwrt03bensgoog>

<sup>9</sup> All the above dictionaries are searchable on Isj.gr

<sup>10</sup> <https://www.translatum.gr/forum/index.php?topic=577708.0>



Ἀνθρωφρακλῆς	title of play by Pherecrates   MISSING Anthropheracles
ἄνωδυνία	freedom from pain   MISSING anodinia   MISSING anodynia
ἀπορητικός	dubitative   inclined to doubt   MISSING aporetic
Βοηδρομιών	third Attic month   MISSING Boedromion
γαστραφέτης	stomach-bow   MISSING gastraphetes
ἑταίρα	MISSING hetaira   MISSING hetaera
Ἐτεόκρητες	true Cretans   MISSING Eteocretans
ἐφεκτικός	MISSING ephectic
ζητητικός	MISSING zetetic
Κενταυρομαχία	battle of Centaurs   MISSING Centauromachy
κεφαλαλγία	head-ache   MISSING cephalalgia
ὄμφάκιον	juice of unripe grapes   oil made from unripe olives   MISSING omphacium
ὄψιμαθής	late in learning, late to learn   MISSING opsimath
ὄψιμαθία	late-gotten learning   MISSING opsimathy
παγκράτιον	all-in contest in boxing and wrestling   MISSING pankration
ῥαψωδός	reciter of Epic poems   MISSING rhapsodist
στλεγγίς	MISSING strigil
τριχίασις	MISSING trichiasis
ὔβρις	MISSING hubris
φαλλοφόρος	bearing a phallus   MISSING phallophorus   MISSING phallophoros
φαρμακοποιία	preparation of drugs   MISSING pharmacopoeia
φιλέλλην	fond of the Hellenes   MISSING philhellene
ὠταλγία	earache   MISSING otalgia

## 1.6 Missing Latin-derived terms

Often, terms of Latin origin which are perfectly acceptable and in current usage, are not used as translations.

ἀγκύλη	MISSING amentum
βρεφοκτόνος, παιδολέτωρ, τεκνοφόνος, ὠλεσίτεκνος	MISSING infanticide   child-murdering
παιδοκτονία, τεκνοκτονία	MISSING infanticide   child-murder
παιδοκτόνος	MISSING filicide

## 1.7 Abbreviated forms

Print dictionaries tend to use all sorts of abbreviated forms in order to save space. However, the result is not only less transparency but also lexical and inflectional ambiguity, especially with such highly inflectional languages as Ancient Greek.

### 1.7.1 Abbreviated forms of the headword in phrases resulting in inflectional ambiguity

ἀγκύλη	ἀ. χρυσόστροφοι (instead of “ἀγκύλαι χρυσόστροφοι”)
άλκυόνειος	of the ἀλκυών, ἀ. ἡμέραι (which could be “άλκυόνειοι ἡμέραι” or “άλκυονίδες ἡμέραι”)
βασιλεύς	β. τῶν ἱερῶν = rex sacrorum (instead of “βασιλεύς τῶν ἱερῶν”)

δῶμα	κλυτὰ δ. βένθεσι λίμνης (full phrase is “κλυτὰ δῶματα βένθεσι λίμνης”)
ἐχθές	οὐ γάρ τι νῦν γε κά. (“κά.” should be “κάχθές”)
Μαύσσωλλος	Μαυσωλεῖον = tomb of M. (instead of “tomb of Mausolus”)
μωρός	μ. ἀνάγκη = blind necessity (which should be “μωρά ἀνάγκη”)
μωρός	τὸ μ. (this could be “τὸ μῶρον” or to “τὸ μωρόν”)
ὑοειδής	ὄστοῦν ὑ. the hyoid bone (instead of “ὄστοῦν ὑοειδέξ” or “ὑοειδέξ ὄστοῦν”)

### 1.7.2 Adverbs in abbreviated form

Given that adverbs are listed in an abbreviated form and no appropriate mark-up in the actual code, there is no easy way to extract them as additional entries.

ἀγαπητός	-τῶς gladly, contentedly
γνωστός	-τῶς clearly
δυνατός	-τῶς strongly
ἐνδοιαστός	-τῶς doubtfully
νοητός	-τῶς carefully
προπετής	-τῶς headlong, out of control
συνετός	-τῶς intelligently
χαμαιπετής	-τῶς along the ground, like a goose's flight
χρηστός	-τῶς well, properly

### 1.7.3 Incomplete example phrases with mid-phrase ellipsis

There are multiple instances of example phrases which are incomplete and the user would have to look up the original source in order to retrieve the full phrase.

αὐθιγενής	τὸ ὕδωρ... αὐ. μὲν οὐκ ἔστι = not from a natural spring
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### 1.7.4 Incomplete example phrases without translation

Sometimes, the example phrases not only are incomplete, but also no translation is provided.

αἶπιος	τί ποτ' οὖν ἔστι τὸ αἶπιον τὸ... μηδένα εἰπεῖν
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## 1.8 Use of antonyms

Antonyms are listed in a way that they are indistinguishable from translations of the term.

ἀλήθεια	truth   <b>lie</b>   mere appearance
κουρότερος	young   <b>elder</b> [full source text: young, <b>opp.</b> elder]
ἀπανθρωπιζομαι	become a man, <b>beast</b> [full source text: “become a man, <b>opp.</b> a beast”.] (Missing “ἐκθηριοῦσθαι” as a possible antonym.)

## 1.9 Use of old English

Given that LSJ was first published in 1819, there are many remnants of old English spelling.

connexion	(instead of “connection”)
shew	(instead of “show”)
ἀναλίσκω	ἀνήλωσας λόγον = <b>hast</b> wasted words (instead of “has”)
Ὀλυμπιονίκης	conqueror in the Olympic games (instead of: “Olympic winner, Olympian winner, Olympian, victor in the Olympic games, winner in the Olympic games”)

### 1.9.1 Erroneous or old English use of dash

For example: camel-hay, Can-daules, door-keeper, pumice-stone, rupture-wort, to-morrow.

### 1.10 Missing translations

Some terms are devoid of translation; in some cases they only provide meta-information as in the one below:

μνηστηροφονία	name of the twenty-second book of the odyssey (missing “slaughter of the suitors”; Bailly does translate as “meurtre des prétendants”)
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### 1.11 Typos and linguistic errors

ἀγκύλη	χρυσόστροφοι (instead of “χρυσόστροφοί”)
ἄμβιξ	spouied cup (instead of “spouted cup”)
ἀπλεονέκτητος	free from anarice (instead of “avarice”)
διυφή	woven fabrie (instead of “fabric”)
ἐμφόρησις	replelion (instead of “repletion”)
ἑτέροζυξ	(instead of “ἑτερόζυξ”)
καταχορηγέω	lauish as χορηγός (instead of “lavish”)
παρόρμησις	incilement (instead of “incitement”)
πέος	membrum uirile (instead of “virile”)
ῥύστης	leliverer (instead of “beliverer”)
φιάλη	broad, fiat bowl or saucer for drinking or pouring libations (“fiat” instead of “flat”)

#### 1.11.1 Latin binomials with both compounds in capitals

In modern usage, the first letter of the first part of the name, the genus, is always capitalized in writing, while that of the second part is not, even when derived from a proper noun such as the name of a person or place<sup>11</sup>. Hence, in the entry “κυνόγλωσσος”, “Cynoglossum **C**olumnae” should be spelled “Cynoglossum **c**olumnae” instead.

#### 1.11.2 Missing dash

In the entry “πυριμαχέω” one can read “be fireresisting” (instead of “be fire-resisting”).

#### 1.11.3 Use of Beta Code instead of polytonic Greek

In the entry “λίνος” one can read “li/nos: τὸ δι/κτουον” which should be “λίνος τὸ δίκτουον”.

#### 1.11.4 Linguistic errors

<sup>11</sup> [https://en.wikipedia.org/wiki/Binomial\\_nomenclature](https://en.wikipedia.org/wiki/Binomial_nomenclature)

Usage of the non-existent headword “ἐντονία” instead of “εὐτονία”. Even the text referred to (Horapollon 1.46) has εὐτονία (“vigor”) and not “ἐντονία”<sup>12</sup>.

## 2. Conclusion

In this brief paper I tried to breach different kinds of issues encountered in the task of reversing the LSJ. It quickly became apparent that a reversal was not possible without a thorough revision which would also affect the dictionary in its standard form. A categorization of the issues is helpful in managing the revision of such an extensive work. The aim is to publish the end result on lsj.gr as a supplemental, interactive, wikified resource to LSJ proper. Similar work is being carried out on other language pairs involving Ancient Greek (French, German, Russian).

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<sup>12</sup> <https://www.translatum.gr/forum/index.php?topic=577708.0>