

An extension package for Hellenic philology

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Abstract

This paper describes very briefly an extension package that has been designed so as to make it easy to typeset critical editions of Hellenic philology. Not only contains hundreds of commands for inserting special symbols, but it contains new environments for typesetting verses with various ways of verse numbering, and to typeset metric patterns for the correct rhythmic rendering of the ancient Greek poetry.

Many useful features are still missing in order to typeset all parts of a critical edition, but what is available is already sufficient for many tasks.

1. Introduction

In Greece typesetting in Greek is obviously normal; outside Greece Greek typesetting is mostly used by hellenist scholars who would like to use Greek typesetting for writing articles, conference contributions, books, and the like, where the main object is the deep analysis of the Greek language and literature, mostly the ancient one. These scholars need a lot of symbols for marking up the text; for underlining what they believe should be interpolated in a certain way, or, on the opposite, for underlining what they believe to be material arbitrarily introduced by medieval copyists; for inserting letters that are missing from the “normal” 24 letter alphabet, especially when they transcribe the lettering and wording deciphered on archeological specimens, such as, for example, the numerous “ostraka” that are being uncovered everyday. They need to represent the rhythmic patterns of the ancient poetry; they need to superimpose series of accents, even on consonants, or to put “illegal” accents on some vowels, such as, for example, a circumflex on a short vowel.

All these tasks required a complete analysis of most of the signs, so as to see if it would be possible to put them together by picking them up from the

existing alphabets of the CM (Computer modern), EC (extended computer modern), TS Text symbol companion), CB (CB Greek fonts) sets, including the math symbols. Many of these needed both the upright and the inclined version; many diacritical marks had to be placed indifferently over Greek as well as Latin glyphs; many were missing and had to be created from scratch.

In order to cope with the above requirements, set forth by a PhD graduate student in Greek philology and classical Greek Literature, Mr Paolo Ciacchi, studying in the University of Trieste, I had to put together or to polish new fonts, in particular the Lipsiakos one [1], to write down something close to 300 macros, mostly available to the end user for typesetting purposes, to design a completely new font for poetry metrics; eventually this font collected also many glyphs that are consistent with the philological requirements but have nothing to do with metrics.

2. Symbols

The extension package `teubner.sty` takes care of making available a whole lot of macros for inserting unusual symbols in the philologically edited text. The package in documented T_EX form (extension `.dtx`) is available from CTAN in folder `tex-archive/macros/latex/contib/supported/teubner`; this folder contains file `teubner-doc.pdf` which should be printed and read before doing anything else; follow the exact order: first printing, second reading. The necessity of printing first arises from the fact that for the moment there are no CB fonts available in PostScript form, at least not the latest version with the new glyphs, the new typefaces and the poetic metrics font. It is well known that raster fonts are poorly rendered by PDF viewers, but these viewers have no problems in printing them especially if they were embedded at 600 dpi. Therefore first print and then read, please.

3. Kernings

With the Lipsiakos font all ligatures and kernings are carefully taken care of, but the accent-letter mechanism intrinsic to the CB fonts (as well as with most if not all the other Greek fonts that may be used with L^AT_EX) breaks up the kerning information embedded in the font metrics: compare $\acute{\alpha}\acute{\nu}$ and $\acute{\alpha}\acute{\nu}$. The former is what you get by resorting to the embedded ligatures, while the latter is what you should get with proper kerning.

In a general modern text typeset with monotoniko spelling you hardly notice this glitch; and if you type while using the Greek keyboard and the modern

monotoniko encoding described in file `iso-8859-7.def` there is no glitch, because put characters are directly mapped directly to the internal \TeX character codes, so that no accent-vowel ligature takes place.

But hellenists around the world hardly have a Greek keyboard and in any case they have to type polutoniko spelling; this means they have to resort to the Latin-Greek keyboard mapping initially established with the appearance of Silvio Levi's Greek fonts back in the late eighties.

Moreover philologists are generally quite fussy about the quality of what they are getting into type, whether it is themselves who key in the text to be typeset or it is a professional typographer. For this reason I defined several dozen macros so as to make a direct reference to the internal \TeX character code, without resorting to ligatures; instead of keying in `a'u` you key in `a\ua`. The whole list of these macros appears in `teubner-doc.pdf`. In any case they are quite easy to remember; these control sequence names are made up of at most four characters in this order:

1. one of the vowels `a`, `e`, `h`, `i`, `o`, `u`, `w` (compulsory), followed by at least one of the following optional letters in the specified order:
2. `d`, `r`, `s`, diaeresis or rough or smooth spirits;
3. `a`, `g`, `c`, acute or grave or circumflex accents;
4. `i`, iota subscript;

so that in the previous example `\ua` stands for upsilon with acute, and `\asgi` produces $\acute{\upsilon}^{\tilde{}}_{\text{̇}}$.

This accent-ligature problem could be solved if the prefix notation was abandoned in favor of the postfix notation for accents; some other inconveniences would show up, therefore for now it is necessary to cope with what is available.

4. Verses

Several new verse environments have been designed for philological purposes; they differ in the way verses are numbered and in part in the verse layout; I'll show a few examples that contain also specimens of other commands.

40 κέλομαι πολύστονον
 18 ἐρύκεν ὕβ'ριν· οὐ γὰρ ἂν θέλοι-
 μ' ἄμβροτον ἐραννόν Ἄο[ῦς
 20 ἰδεῖν φάος, ἐπεὶ τιν' ἠϊθέ[ων
 21 σὺ δαμάσειας ἀέκον-
 45 τα· πρόσθε χειρῶν βίαν
 23 δε[ί]ξομεν· τὰ δ' ἐπιόντα δα[ίμων]ν κρινεῖ.“
 1 τόσ' εἶπεν ἀρέταιχιμος ἦρωσ·
 2 τ]άφον δὲ ναύβαται
 3 φ]ωτός ὑπεράφανον
 50 4 θ]άρσος· Ἄλιον τε γαμβρῶι χόλωσεν ἦτορ,
 5 ὕφαινε τε ποταινίαν
 6 μῆτιν, εἶπεν τε· „μαγαλοσθενές
 7 Ζεῦ πάτερ, ἄκουσον· εἴ πέρ με νύμ[φα
 8 Φοίνισσα λευκώλενος σοὶ τέκεν,
 55 9 νῦν πρόπεμπ' ἀπ' οὐρανοῦ θοάν
 10 πυριέθειραν ἀστραπάν
 11 σᾶμ' ἀργ'ἰνωτον· εἴ
 δὲ καὶ σὲ Τροϊζηγία σεισίχθονι
 φύτευσεν Αἴθρα Ποσει-
 60 δᾶν τόνδε χρύσειον
 15 χειρός ἀγ'λαόν
 ἔνεγκε κόσμον ἐκ βαθείας ἀλός,
 17 διλκῶν θράσει σῶμα πατρός ἐς δόμους.
 18 εἴσειαι δ' αἴκ' ἐμᾶς κλύνη
 65 Κρόπιος εὐχᾶς
 20) ἀναξιβρέντας ὁ πάντω[ν με]θ[έω]ν.“

Figure 1: Yet another example!

6. Conclusion

In order to keep this contribution short enough, I will not go further in presenting other commands and environments. The interested philologist may find full documentation in `teubner-doc.pdf` [2], together with the necessary pieces of software.

The work is still in progress; what is still missing from the package is the possibility of formatting text and footnotes according to the style normally used in critical editions. I am working on this, but the problem appears to be very difficult to solve if one refrains from modifying the L^AT_EX output routine, so if I ever find a solution, it will not be in a short time.

Bibliography

- [1] Beccari C., “Two new Greek font faces: the Lipsiakos and the Roman”, Εὔτυπον, this issue.
- [2] Beccari C., `teubner.dtx`, `teubner.ins`, `teubner-doc.pdf`, `teubner.txt`, `gmtr.mf`, `cbmetre.mf`, in any CTAN archive in folder `/tex-archive/macros/latex/contrib/supported/teubner`.