LATEX SUPPORT FOR HEURISTICA

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Andrey V. Panov's *Heuristica* font family extends the *Utopia* font family, adding many accented glyphs, Cyrillic glyphs, ligatures, superior and oldstyle fixed-width figures in all styles, and Small Caps in Regular style only. The font package is widely distributed as a free font collection in OpenType, TrueType and Type1 formats, but not until now on CTAN with complete LATEX support files in encodings T1+TS1, LY1, T2A, T2B and T2C.

The newtx package has been modified, as of version 1.26, to offer a new option utopia (or, equivalently, heuristica) that uses math italic glyphs taken from Utopia and oldstyle figures from *Heuristica*. Its slanted Greek alphabets are constructed from the txfonts slanted Greek letters by reducing their italic angle from 15.5° to 13°, matching Utopia's italic angle. So, for Heuristica text and matching math, you can use[1]:

```
\usepackage[osf,scaled=.92]{heuristica}
\usepackage[varqu,varl]{inconsolata} % typewriter
\usepackage[type1,scaled=.95]{cabin} % sans serif like Gill Sans
\usepackage[utopia,vvarbb,bigdelims]{newtxmath}
```

The effect of the option osf is to force the default figure style in heuristica to be old-style 0123456789 while using lining figures 0123456789 in math mode. The only other option of interest is sups, which changes the footnote marker style to use the superior figures from *Heuristica* rather than the default mathematical superscripts. (The superiors package offers further options.)

Heuristica is so austere for a text font and *inconsolata* is so fancy for a typewriter font that you may find they blend together all too well. For more of a distinction replace the inconsolata line above with

```
\usepackage{zlmtt} % serifed typewriter font extending cmtt
```

As I find Utopia text rather cramped, I suggest applying a small amount of letterspacing (tracking) and increasing the interword spacing by means of the microtype package.

MACROS:

- \textlf and \texttlf render their arguments in tabular lining figures, no matter what the default figure style. Eg, \textlf{345} produces 345.

Date: August 3, 2014.

[1]There is most likely also a way to use MathDesign or fourier with at least partial compatibility.

- `\textosf` and `\texttosf` render their arguments in tabular oldstyle figures, no matter what the default figure style. Eg, `\textosf{345}` produces 345.

- `\textsu` renders its argument in superior figures, no matter what the default figure style. Eg, `\textsu{345}` produces ³⁴⁵.

- `\textin` renders its argument in inferior figures, no matter what the default figure style. Eg, `\textin{345}` produces ₃₄₅.

- `\textfrac` renders its two arguments as a fraction, using `\textsu` for the numerator and `\textin` for the denominator. Eg, `\textfrac{31}{64}` produces ³¹⁄₆₄.

VERY BRIEF, NONSENSICAL MATH EXAMPLE:
Let $B(X)$ be the set of blocks of Λ_X and let $b(X) := |B(X)|$ so that $\hat{\phi} = \sum_{Y \subset X} (-1)^{b(Y)} b(Y)$.