



Ivan Valbusa

The
fontsize
package

v0.8.4 – 2021/05/21

The serif typeface is Cochineal, created by Michael Sharpe on the basis of Sebastian Kosch's Crimson. The typewriter font is Inconsolata, designed by Raph Levien and the sans serif text is typeset in Linux Biolinum, created by Philipp H. Pol.

Legalese

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Feedback

If you have any questions, feedback or requests please email me at `ivan dot valbusa at gmail dot com`. If you need specific features not already implemented, remember to attach the example files.

User's guide to fontsize

A small package to change the font size

v0.8.4 – 2021/05/21

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Abstract

The fontsize package allows you to set arbitrary sizes for the main font of the document and to adjust the line spacing accordingly. It also provides new font sizing commands and lets you generate your own .clo file for better tuning.

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Credits

The code is an excerpt of the scrextend and scrfontsizes packages (Neukam et al. 2020), with few minor changes to make it completely independent of the KOMA-script bundle and with a couple of new features. The package is updated to version 3390 2019-11-18 17:09:35Z of the scrkernel-fonts.dtx file.

Caveat

Although effective with any value of the font size (as long as the font is scalable), the package is meant for small font size changes. For truly optimal results you should (re)define your own .clo file. In fact note that the file generated with \generateclofile, as well as the macros redefined via \changefontsize, are a subset of the standard .clo files.

1 Usage

The package can be loaded, as usual, with:

```
\usepackage[<options>]{fontsize}
```

1.1 Options

fontsize = $\langle\text{fontsize}\rangle$ default: 10pt

Sets the normal size to $\langle\text{fontsize}\rangle$ and the normal line spacing to $1.2\langle\text{fontsize}\rangle$. The other sizes (`\tiny`, `\scriptsize`, ecc.) and line spacings are set proportionally. You can use any unit recognized by T_EX and you can omit the unit as well (in which case it defaults to pt).

Note that `fontsize` does not redefine some commands of the standard `.clo` files such as those related to the page layout and few others. For example the 12pt class option redefine `\Huge` (via `\let\Huge=\huge`) which is not redefined by `fontsize=12pt`. For these reasons, if possible, you should always set a font size class option that comes close to the one loaded by the package. For example with `fontsize=12.2pt` you should load the 12pt class option.

parindent = $\langle\text{dimen}\rangle$ default: $1.5\langle\text{fontsize}\rangle$

Sets the value of `\parindent`. You can use any unit recognized by T_EX but for consistency it is preferable to use a font-dependent unit such as em.

Note that the "em" is simply an arbitrary unit that comes with a particular font. The value of `\parindent` given in ems depends on both the font used and on how or where it is set: whether before or after `\begin{document}`. For this reason, don't expect 1 em to always be equivalent to the currently specified $\langle\text{fontsize}\rangle$. If you don't like this behavior, use absolute units such as pt, cm or mm.

cloname = $\langle\text{name}\rangle$ default: `fontsize`

If declared *before* `fontsize`, it loads the file named $\langle\text{name}\rangle\langle\text{fontsize}\rangle.clo$ to setup the font sizes. This file can be generated through the `\generateclofile` command (see below).

1.2 Commands

\changefontsize[$\langle\text{baselineskip}\rangle$]{ $\langle\text{fontsize}\rangle$ } iff $\langle\text{baselineskip}\rangle \geq \langle\text{fontsize}\rangle$

Sets the normal size to $\langle\text{fontsize}\rangle$ and the normal line spacing to $\langle\text{baselineskip}\rangle$. The other sizes (`\tiny`, `\scriptsize`, ecc.) and line spacings are set proportionally. If the first optional argument is omitted, the command has the same effect of the `fontsize` option. You can use any unit recognized by T_EX and you can omit the unit as well (in which case it defaults to pt).

```
\changefontsize[13.5pt]{11.5pt}
```

\generateclofile{ $\langle\text{name}\rangle$ }[$\langle\text{baselineskip}\rangle$]{ $\langle\text{fontsize}\rangle$ } iff $\langle\text{baselineskip}\rangle \geq \langle\text{fontsize}\rangle$

Generates a file named $\langle\text{name}\rangle\langle\text{fontsize}\rangle.clo$ in which the normal size is $\langle\text{fontsize}\rangle$ and the normal line spacing is $\langle\text{baselineskip}\rangle$. The other sizes (`\tiny`, `\scriptsize`, `\small`, ecc.) and line spacings are set proportionally. You can use any unit recognized by T_EX and you can omit the unit as well (in which case it defaults to pt). If `cloname= $\langle\text{name}\rangle$` and `fontsize= $\langle\text{fontsize}\rangle$` , the generated file will be automatically used to setup the main sizes.

In fact the .clo file is only needed if you intend to modify it. In this case remember to comment the command, otherwise the edited file will be overwritten.

```
\usepackage[cloname=fs,fontsize=11.5]{fontsize} % loads fs11.5.clo
\generateclofile{fs}[13.5]{11.5} % creates fs11.5.clo
```

`\printsamples{⟨baselineskip⟩}{⟨fontsize⟩}[⟨sizes⟩]` iff $\langle\text{baselineskip}\rangle \geq \langle\text{fontsize}\rangle$

A command thought to test the fontsize settings. It prints a text sample for every size given in the third optional argument. If this argument is omitted, it prints a sample for each available size. See the examples on page 8.

```
\printsamples{13pt}{11pt}[normalsizer,normalsizerr,normalsizerrr]
\printsamples{13.5pt}{12pt}
```

`\sampletext{⟨text⟩}`

Defines the $\langle\text{text}\rangle$ to be used by `\printsamples`.

1.3 New font sizing commands

The package provides three additional font sizing commands for each standard size (plus the new `\HUGE` command). See table 1 for details.

| | | | |
|--------------------------------|--------|----------------------------|--------|
| <code>\tiny</code> | Lipsum | <code>\LARGE</code> | Lipsum |
| <code>\tinyr</code> | Lipsum | <code>\LARGER</code> | Lipsum |
| <code>\tinyrr</code> | Lipsum | <code>\LARGERr</code> | Lipsum |
| <code>\tinyrrr</code> | Lipsum | <code>\LARGERrr</code> | Lipsum |
| <code>\scriptsize</code> | Lipsum | <code>\LARGERrrr</code> | Lipsum |
| <code>\scriptsize r</code> | Lipsum | <code>\huge</code> | Lipsum |
| <code>\scriptsize rr</code> | Lipsum | <code>\huger</code> | Lipsum |
| <code>\scriptsize rrr</code> | Lipsum | <code>\huger r</code> | Lipsum |
| <code>\footnotesize</code> | Lipsum | <code>\huger r r</code> | Lipsum |
| <code>\footnotesize r</code> | Lipsum | <code>\huger r r r</code> | Lipsum |
| <code>\footnotesize rr</code> | Lipsum | <code>\Huge</code> | Lipsum |
| <code>\footnotesize rrr</code> | Lipsum | <code>\Huger</code> | Lipsum |
| <code>\small</code> | Lipsum | <code>\Huger r</code> | Lipsum |
| <code>\small r</code> | Lipsum | <code>\Huger r r</code> | Lipsum |
| <code>\small rr</code> | Lipsum | <code>\Huger r r r</code> | Lipsum |
| <code>\small rrr</code> | Lipsum | <code>\HUGE</code> | Lipsum |
| <code>\normalsize</code> | Lipsum | <code>\HUGEr</code> | Lipsum |
| <code>\normalsize r</code> | Lipsum | <code>\HUGEr r</code> | Lipsum |
| <code>\normalsize rr</code> | Lipsum | <code>\HUGEr r r</code> | Lipsum |
| <code>\normalsize rrr</code> | Lipsum | <code>\HUGEr r r r</code> | Lipsum |
| <code>\large</code> | Lipsum | <code>\HUGErr</code> | Lipsum |
| <code>\larger</code> | Lipsum | <code>\HUGErr r</code> | Lipsum |
| <code>\largerr</code> | Lipsum | <code>\HUGErr r r</code> | Lipsum |
| <code>\largerrr</code> | Lipsum | <code>\HUGErr r r r</code> | Lipsum |
| <code>\Large</code> | Lipsum | | Lipsum |
| <code>\Larger</code> | Lipsum | | Lipsum |
| <code>\Largerr</code> | Lipsum | | Lipsum |
| <code>\Largerrr</code> | Lipsum | | Lipsum |



If you want these commands to work as expected, the font must be smoothly scalable. This is the case of many Type 1 and Open Type fonts such as Cochineal used in this document (Sharpe 2020), but if the font has optical sizes, unusual things can happen: some larger sizes may appear smaller. For example, with the Latin Modern typeface (Jackowski and Nowacki 2009) a similar situation can be encountered when normal size is set to 12 pt:

| | | | |
|-----------------------|----------|-------------|--|
| <code>\largerr</code> | 15.84 pt | Hello world | |
| <code>\larger</code> | 15.12 pt | Hello world | |
| <code>\large</code> | 14.40 pt | Hello world | |

In fact the font used for the `\larger` ‘Hello world’ is bigger than that used for the `\large` one. This optical effect is due to the minor thickness of the stems, which makes the words appear shorter and clearer, but not less high (as you can see in the figure on the right which shows the letter H appropriately scaled to see the differences better).

Table 1: The value of all available sizes (rounded to the second decimal place) relative to `\normalsize` ranging from 8 pt to 12 pt with increments of 0.5 pt. The first row of each size shows the font size; the second row (colored in gray) shows the default line spacing

| | | | | | | | | | |
|--------------------------------|------|------|------|-------|-------|-------|-------|-------|-------|
| <code>\tiny</code> | 4.00 | 4.25 | 4.50 | 4.75 | 5.00 | 5.25 | 5.50 | 5.75 | 6.00 |
| | 4.80 | 5.06 | 5.40 | 5.65 | 6.00 | 6.30 | 6.55 | 6.90 | 7.14 |
| <code>\tinyr</code> | 4.33 | 4.60 | 4.88 | 5.15 | 5.42 | 5.69 | 5.96 | 6.23 | 6.50 |
| | 5.20 | 5.48 | 5.85 | 6.12 | 6.50 | 6.83 | 7.09 | 7.48 | 7.74 |
| <code>\tinyrr</code> | 4.67 | 4.96 | 5.25 | 5.54 | 5.83 | 6.12 | 6.42 | 6.71 | 7.00 |
| | 5.60 | 5.90 | 6.30 | 6.59 | 7.00 | 7.35 | 7.64 | 8.05 | 8.33 |
| <code>\tinyrrr</code> | 5.00 | 5.31 | 5.62 | 5.94 | 6.25 | 6.56 | 6.88 | 7.19 | 7.50 |
| | 6.00 | 6.32 | 6.75 | 7.07 | 7.50 | 7.87 | 8.18 | 8.62 | 8.93 |
| <code>\scriptsize</code> | 5.33 | 5.67 | 6.00 | 6.33 | 6.67 | 7.00 | 7.33 | 7.67 | 8.00 |
| | 6.40 | 6.74 | 7.20 | 7.54 | 8.00 | 8.40 | 8.73 | 9.20 | 9.52 |
| <code>\scriptsize r</code> | 5.67 | 6.02 | 6.38 | 6.73 | 7.08 | 7.44 | 7.79 | 8.15 | 8.50 |
| | 6.80 | 7.16 | 7.65 | 8.01 | 8.50 | 8.93 | 9.27 | 9.78 | 10.12 |
| <code>\scriptsize rr</code> | 6.00 | 6.38 | 6.75 | 7.12 | 7.50 | 7.88 | 8.25 | 8.62 | 9.00 |
| | 7.20 | 7.59 | 8.10 | 8.48 | 9.00 | 9.45 | 9.82 | 10.35 | 10.71 |
| <code>\scriptsize rrr</code> | 6.33 | 6.73 | 7.13 | 7.52 | 7.92 | 8.31 | 8.71 | 9.10 | 9.50 |
| | 7.60 | 8.01 | 8.55 | 8.95 | 9.50 | 9.98 | 10.36 | 10.93 | 11.31 |
| <code>\footnotesize</code> | 6.67 | 7.08 | 7.50 | 7.92 | 8.33 | 8.75 | 9.17 | 9.58 | 10.00 |
| | 8.00 | 8.43 | 9.00 | 9.42 | 10.00 | 10.50 | 10.91 | 11.50 | 11.90 |
| <code>\footnotesize r</code> | 6.83 | 7.25 | 7.68 | 8.10 | 8.53 | 8.96 | 9.38 | 9.81 | 10.24 |
| | 8.19 | 8.63 | 9.21 | 9.64 | 10.24 | 10.75 | 11.17 | 11.77 | 12.18 |
| <code>\footnotesize rr</code> | 6.98 | 7.42 | 7.86 | 8.29 | 8.73 | 9.17 | 9.60 | 10.04 | 10.48 |
| | 8.38 | 8.83 | 9.43 | 9.87 | 10.48 | 11.00 | 11.43 | 12.05 | 12.47 |
| <code>\footnotesize rrr</code> | 7.14 | 7.59 | 8.03 | 8.48 | 8.93 | 9.37 | 9.82 | 10.27 | 10.71 |
| | 8.57 | 9.03 | 9.64 | 10.09 | 10.71 | 11.25 | 11.69 | 12.32 | 12.75 |
| <code>\small</code> | 7.30 | 7.76 | 8.21 | 8.67 | 9.13 | 9.58 | 10.04 | 10.49 | 10.95 |
| | 8.76 | 9.23 | 9.86 | 10.32 | 10.95 | 11.50 | 11.94 | 12.59 | 13.03 |

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| | | | | | | | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| \smallr | 7.47 | 7.94 | 8.41 | 8.88 | 9.34 | 9.81 | 10.28 | 10.75 | 11.21 |
| | 8.97 | 9.45 | 10.09 | 10.56 | 11.21 | 11.77 | 12.23 | 12.89 | 13.34 |
| \smallrr | 7.65 | 8.13 | 8.61 | 9.08 | 9.56 | 10.04 | 10.52 | 11.00 | 11.48 |
| | 9.18 | 9.67 | 10.33 | 10.81 | 11.48 | 12.05 | 12.52 | 13.20 | 13.66 |
| \smallrrr | 7.82 | 8.31 | 8.80 | 9.29 | 9.78 | 10.27 | 10.76 | 11.25 | 11.74 |
| | 9.39 | 9.89 | 10.56 | 11.06 | 11.74 | 12.32 | 12.80 | 13.50 | 13.97 |
| \normalsize | 8.00 | 8.50 | 9.00 | 9.50 | 10.00 | 10.50 | 11.00 | 11.50 | 12.00 |
| | 9.60 | 10.20 | 10.80 | 11.40 | 12.00 | 12.60 | 13.20 | 13.80 | 14.40 |
| \normalsize r | 8.40 | 8.93 | 9.45 | 9.98 | 10.50 | 11.03 | 11.55 | 12.08 | 12.60 |
| | 10.08 | 10.62 | 11.34 | 11.87 | 12.60 | 13.23 | 13.74 | 14.49 | 14.99 |
| \normalsize rr | 8.80 | 9.35 | 9.90 | 10.45 | 11.00 | 11.55 | 12.10 | 12.65 | 13.20 |
| | 10.56 | 11.13 | 11.88 | 12.44 | 13.20 | 13.86 | 14.40 | 15.18 | 15.71 |
| \normalsize rrr | 9.20 | 9.77 | 10.35 | 10.92 | 11.50 | 12.07 | 12.65 | 13.22 | 13.80 |
| | 11.04 | 11.63 | 12.42 | 13.00 | 13.80 | 14.49 | 15.05 | 15.87 | 16.42 |
| \large | 9.60 | 10.20 | 10.80 | 11.40 | 12.00 | 12.60 | 13.20 | 13.80 | 14.40 |
| | 11.52 | 12.14 | 12.96 | 13.57 | 14.40 | 15.12 | 15.71 | 16.56 | 17.14 |
| \larger | 10.08 | 10.71 | 11.34 | 11.97 | 12.60 | 13.23 | 13.86 | 14.49 | 15.12 |
| | 12.10 | 12.74 | 13.61 | 14.24 | 15.12 | 15.88 | 16.49 | 17.39 | 17.99 |
| \largerr | 10.56 | 11.22 | 11.88 | 12.54 | 13.20 | 13.86 | 14.52 | 15.18 | 15.84 |
| | 12.67 | 13.35 | 14.26 | 14.92 | 15.84 | 16.63 | 17.28 | 18.22 | 18.85 |
| \largerrr | 11.04 | 11.73 | 12.42 | 13.11 | 13.80 | 14.49 | 15.18 | 15.87 | 16.56 |
| | 13.25 | 13.96 | 14.90 | 15.60 | 16.56 | 17.39 | 18.06 | 19.04 | 19.71 |
| \Large | 11.52 | 12.24 | 12.96 | 13.68 | 14.40 | 15.12 | 15.84 | 16.56 | 17.28 |
| | 13.82 | 14.57 | 15.55 | 16.28 | 17.28 | 18.14 | 18.85 | 19.87 | 20.56 |
| \Larger | 12.10 | 12.85 | 13.61 | 14.36 | 15.12 | 15.88 | 16.63 | 17.39 | 18.14 |
| | 14.52 | 15.29 | 16.33 | 17.09 | 18.14 | 19.05 | 19.79 | 20.87 | 21.59 |
| \Largerr | 12.67 | 13.46 | 14.26 | 15.05 | 15.84 | 16.63 | 17.42 | 18.22 | 19.01 |
| | 15.21 | 16.02 | 17.11 | 17.91 | 19.01 | 19.96 | 20.73 | 21.86 | 22.62 |
| \Largerrr | 13.25 | 14.08 | 14.90 | 15.73 | 16.56 | 17.39 | 18.22 | 19.04 | 19.87 |
| | 15.90 | 16.75 | 17.88 | 18.72 | 19.87 | 20.87 | 21.68 | 22.85 | 23.65 |
| \LARGE | 13.82 | 14.69 | 15.55 | 16.42 | 17.28 | 18.14 | 19.01 | 19.87 | 20.74 |
| | 16.59 | 17.48 | 18.66 | 19.54 | 20.74 | 21.77 | 22.62 | 23.85 | 24.68 |
| \LARGE r | 14.52 | 15.42 | 16.33 | 17.24 | 18.14 | 19.05 | 19.96 | 20.87 | 21.77 |
| | 17.42 | 18.35 | 19.60 | 20.51 | 21.77 | 22.86 | 23.75 | 25.04 | 25.91 |
| \LARGE rr | 15.21 | 16.16 | 17.11 | 18.06 | 19.01 | 19.96 | 20.91 | 21.86 | 22.81 |
| | 18.25 | 19.23 | 20.53 | 21.49 | 22.81 | 23.95 | 24.88 | 26.23 | 27.15 |
| \LARGE rrr | 15.90 | 16.89 | 17.89 | 18.88 | 19.88 | 20.87 | 21.86 | 22.86 | 23.85 |
| | 19.08 | 20.10 | 21.46 | 22.47 | 23.85 | 25.04 | 26.02 | 27.43 | 28.38 |
| \huge | 16.59 | 17.63 | 18.67 | 19.70 | 20.74 | 21.78 | 22.81 | 23.85 | 24.89 |
| | 19.91 | 20.98 | 22.40 | 23.45 | 24.89 | 26.13 | 27.15 | 28.62 | 29.62 |
| \huger | 17.42 | 18.51 | 19.60 | 20.69 | 21.78 | 22.86 | 23.95 | 25.04 | 26.13 |
| | 20.90 | 22.03 | 23.52 | 24.62 | 26.13 | 27.44 | 28.50 | 30.05 | 31.09 |

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| | | | | | | | | | |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| \hugerr | 18.25 | 19.39 | 20.53 | 21.67 | 22.81 | 23.95 | 25.09 | 26.23 | 27.37 |
| | 21.90 | 23.07 | 24.63 | 25.79 | 27.37 | 28.74 | 29.86 | 31.48 | 32.57 |
| \hugerrr | 19.08 | 20.27 | 21.46 | 22.65 | 23.85 | 25.04 | 26.23 | 27.42 | 28.61 |
| | 22.89 | 24.12 | 25.75 | 26.96 | 28.61 | 30.04 | 31.21 | 32.91 | 34.05 |
| <hr/> | | | | | | | | | |
| \Huge | 19.90 | 21.15 | 22.39 | 23.64 | 24.88 | 26.12 | 27.37 | 28.61 | 29.86 |
| | 23.88 | 25.17 | 26.87 | 28.13 | 29.86 | 31.35 | 32.57 | 34.33 | 35.53 |
| \Huger | 20.89 | 22.19 | 23.50 | 24.80 | 26.11 | 27.42 | 28.72 | 30.03 | 31.33 |
| | 25.07 | 26.41 | 28.20 | 29.52 | 31.33 | 32.90 | 34.18 | 36.03 | 37.29 |
| \Hugerr | 21.87 | 23.24 | 24.61 | 25.97 | 27.34 | 28.71 | 30.07 | 31.44 | 32.81 |
| | 26.25 | 27.65 | 29.53 | 30.91 | 32.81 | 34.45 | 35.79 | 37.73 | 39.04 |
| \Hugerrr | 22.86 | 24.28 | 25.71 | 27.14 | 28.57 | 30.00 | 31.43 | 32.86 | 34.28 |
| | 27.43 | 28.90 | 30.86 | 32.30 | 34.28 | 36.00 | 37.40 | 39.43 | 40.80 |
| <hr/> | | | | | | | | | |
| \HUGE | 24.05 | 25.55 | 27.05 | 28.56 | 30.06 | 31.56 | 33.07 | 34.57 | 36.07 |
| | 28.86 | 30.41 | 32.46 | 33.98 | 36.07 | 37.88 | 39.35 | 41.48 | 42.93 |
| \HUGEr | 25.24 | 26.82 | 28.39 | 29.97 | 31.55 | 33.13 | 34.70 | 36.28 | 37.86 |
| | 30.29 | 31.91 | 34.07 | 35.67 | 37.86 | 39.75 | 41.30 | 43.54 | 45.05 |
| \HUGErr | 26.43 | 28.08 | 29.74 | 31.39 | 33.04 | 34.69 | 36.34 | 38.00 | 39.65 |
| | 31.72 | 33.42 | 35.68 | 37.35 | 39.65 | 41.63 | 43.25 | 45.60 | 47.18 |
| \HUGErrr | 27.62 | 29.35 | 31.08 | 32.80 | 34.53 | 36.26 | 37.98 | 39.71 | 41.44 |
| | 33.15 | 34.93 | 37.29 | 39.04 | 41.44 | 43.51 | 45.20 | 47.65 | 49.31 |

1.4 Some text samples

The following samples are obtained with the \printsamples command (see section 1.2):

```
\printsamples{12.6pt}{10.6pt}[normalsize,normalsize,normalsizeerr,
normalsizeerr,large,larger,largerr,largerr]
```

Text samples for \normalsize 10.6pt on 12.6pt

\normalsize: 10.6pt on 12.6pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\normalsize: 11.1pt on 13.1pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\normalsizeerr: 11.7pt on 13.8pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of

practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\normalsizerrr: 12.2pt on 14.4pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\large: 12.7pt on 15pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\larger: 13.4pt on 15.8pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\largerr: 14pt on 16.5pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\largerr: 14pt on 16.5pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

2 Known issues

The `parindent` option does not work with classes and packages which sets `\parindent` inside the `\AtBeginDocument` hook (and other hooks). Among these is the `tufte` class (Godby 2015). In such cases you can set the default indentation, for example, with `\setlength{parindent}{\dimen}` declared *after* `\begin{document}`.

3 The Code

The parts added to the basic code of `scrxextend` and `scrfontsizes` are highlighted in blue.

All the options of the package are defined via `xkeyval` (Adriaens 2014), while the `xfp` package (The L^AT_EX Project 2021) provides the `\fpeval` command to use instead of `\dimexpr` for some size calculations. Only two new package options, called `cloname` and `parindent` are defined.

```
1 \ifpackageloaded{xkeyval}{\RequirePackage{xkeyval}}
2 \ifpackageloaded{xfp}{\RequirePackage{xfp}}
3 \DeclareOptionX{cloname}[fontsize]{\def\@fontsizefilebase{#1}}
4 \DeclareOptionX{parindent}[1.5\@tempdimb]{\def\@fontsizeparindent{#1}}
```

Excerpt from `scrxextend.sty` Here the `scrxextend` code begins. All the KOMA related codes have been removed and only a few names have been changed. The value of `\@fontsizefilebase` is set to `fontsize` instead of `scrsz`.

```
5 \DeclareOptionX{fontsize}[10]{%
6   \expandafter\@defaultunits\expandafter\@tempdima#1 pt\relax\@nnil
7   \edef\@tempa{#1}%
8   \setlength{\@tempdimb}{\@tempdima}%
9   \edef\@tempb{\strip@pt\@tempdimb}%
10  \addtolength{\@tempdimb}{-10\p@}%
11  \edef\@ptsize{\strip@pt\@tempdimb}%
12  \edef\@tempa{%
13    \noexpand\makeatletter
14    \noexpand\inputIfFileExists{\@fontsizefilebase\@tempa.clo}{%
15      \noexpand\PackageInfo{fontsize}{%
16        File ‘\@fontsizefilebase\@tempa.clo’ used to setup font sizes}%
17      }{%
18        \noexpand\inputIfFileExists{\@fontsizefilebase\@tempb pt.clo}{%
19          \noexpand\PackageInfo{fontsize}{%
20            File ‘\@fontsizefilebase\@tempb pt.clo’ used instead of%
21            \noexpand\MessageBreak
22            file ‘\@fontsizefilebase\@tempa.clo’ to setup font sizes}%
23          }{%
24            \noexpand\changefontsize{#1}%
25          }%
26        }%
27      \noexpand\catcode‘\noexpand\@=\the\catcode‘\@
28    }%
29    \expandafter\AtEndOfPackage\expandafter{\@tempa}%
```

30 }

Now we can execute and process the new options defined above. As `cloname` is responsible for defining `\@fontsizefilebase` it must precede `fontsize` which uses this command. The `\ctm@setlength` and `\changefontsize` commands are simply new names, respectively, for `\scr@setlength` and `\changefontsizes` used in `scrxextend.sty`.

```
31 \ExecuteOptionsX{cloname,fontsize,parindent}
32 \ProcessOptionsX*\relax

33 \newcommand*\ctm@setlength[4]{%
34   \ifdim #2<\ifdim #2=\z@ \z@ \else \p@\fi
35   \ifdim #3<\ifdim #3=\z@ \z@ \else \p@\fi
36   \ifdim #4<\ifdim #4=\z@ \z@ \else \p@\fi
37   \setlength{#1}{\p@ \@plus\p@ \@minus\p@}%
38   \else
39   \setlength{#1}{\p@ \@plus\p@ \@minus#4}%
40   \fi
41   \else
42   \ifdim #4<\ifdim #4=\z@ \z@ \else \p@\fi
43   \setlength{#1}{\p@ \@plus#3 \@minus\p@}%
44   \else
45   \setlength{#1}{\p@ \@plus#3 \@minus#4}%
46   \fi
47   \fi
48   \else
49   \ifdim #3<\ifdim #3=\z@ \z@ \else \p@\fi
50   \ifdim #4<\ifdim #4=\z@ \z@ \else \p@\fi
51   \setlength{#1}{#2 \@plus\p@ \@minus\p@}%
52   \else
53   \setlength{#1}{#2 \@plus\p@ \@minus#4}%
54   \fi
55   \else
56   \ifdim #4<\ifdim #4=\z@ \z@ \else \p@\fi
57   \setlength{#1}{#2 \@plus#3 \@minus\p@}%
58   \else
59   \setlength{#1}{#2 \@plus#3 \@minus#4}%
60   \fi
61   \fi
62   \fi
63 }
64 \providecommand*\changefontsize[2][1.2\@tempdima]{%
65   \@defaultunits\@tempdima#2pt\relax\@nnil
66   \setlength{\@tempdimc}{\@tempdima}%
67   \addtolength{\@tempdimc}{-10\p@}%
68   \edef\@ptsize{\strip@pt\@tempdimc}%
69   \@defaultunits\@tempdimb#1pt\relax\@nnil
```

The value of `\@tempdimc` set in `scrxextend.sty`

```
\setlength{\@tempdimc}{\dimexpr (100\@tempdimb / \@tempdima * \p@)}
```

returns an error when the the line spacing is greater than 163.84 pt or the value passed to the fontsize option is greater than 136.53 pt. This is due to the intermediate calculation: $100\text{@tempdimb} = 16\,384\text{ pt}$, which is the maximum dimension that may be stored in plain \TeX and \LaTeX . The problem, which is probably more theoretical than practical, can be solved simply by replacing the above code with this (thanks to Claudio Beccari):

```

70 \setlength{\@tempdimc}{\fpeval{100*\@tempdimb/\@tempdima}pt}%

71 \edef\@tempb{\the\@tempdimc}%
72 \setlength{\@tempdimc}{\@tempdima}%
73 \def\@tempa##1##2##3##4##5\@nnil{\def##1{##2.##3##4}}%
74 \expandafter\@tempa\expandafter\@tempb\@tempb\@nnil%
75 \ctm@setlength{\abovedisplayskip}%
76 {.8333\@tempdimb}{.1667\@tempdimb}{.5\@tempdimb}%
77 \ctm@setlength{\abovedisplayskip}{\z@}{.25\@tempdimb}{\z@}%
78 \ctm@setlength{\belowdisplayskip}%
79 {.5\@tempdimb}{.25\@tempdimb}{.25\@tempdimb}%
80 \setlength{\belowdisplayskip}{\abovedisplayskip}%
81 \edef\normalsize{%
82   \noexpand\setfontsize\noexpand\normalsize
83   {\the\@tempdima}{\the\@tempdimb}%
84   \abovedisplayskip \the\abovedisplayskip
85   \abovedisplayshortskip \the\abovedisplayshortskip
86   \belowdisplayskip \the\belowdisplayskip
87   \belowdisplayshortskip \the\belowdisplayshortskip
88   \let\noexpand\@listi\noexpand\@listI
89 }%
90 \setlength{\@tempdima}{0.9125\@tempdimc}%
91 \setlength{\@tempdimb}{\@tempb\@tempdima}%
92 \ctm@setlength{\abovedisplayskip}%
93 {.8333\@tempdimb}{.1667\@tempdimb}{.5\@tempdimb}%
94 \ctm@setlength{\abovedisplayshortskip}{\z@}{.25\@tempdimb}{\z@}%
95 \ctm@setlength{\belowdisplayshortskip}%
96 {.5\@tempdimb}{.25\@tempdimb}{.25\@tempdimb}%
97 \setlength{\belowdisplayskip}{\abovedisplayskip}%
98 \edef\small{%
99   \noexpand\setfontsize\noexpand\small
100   {\the\@tempdima}{\the\@tempdimb}%
101   \abovedisplayskip \the\abovedisplayskip
102   \abovedisplayshortskip \the\abovedisplayshortskip
103   \belowdisplayskip \the\belowdisplayskip
104   \belowdisplayshortskip \the\belowdisplayshortskip
105   \let\noexpand\@listi\noexpand\@listi@small
106 }%
107 \setlength{\@tempdima}{.83334\@tempdimc}%
108 \setlength{\@tempdimb}{\@tempb\@tempdima}%
109 \ctm@setlength{\abovedisplayskip}%
110 {.8333\@tempdimb}{.1667\@tempdimb}{.5\@tempdimb}%
111 \ctm@setlength{\abovedisplayshortskip}{\z@}{.25\@tempdimb}{\z@}%
112 \ctm@setlength{\belowdisplayshortskip}%
113 {.5\@tempdimb}{.25\@tempdimb}{.25\@tempdimb}%

```

```

114 \setlength{\belowdisplayskip}{\abovedisplayskip}%
115 \edef\footnotesize{%
116   \noexpand\@setfontsize\noexpand\footnotesize
117   {\the\@tempdima}{\the\@tempdimb}%
118   \abovedisplayskip \the\abovedisplayskip
119   \abovedisplayskip \the\abovedisplayskip
120   \belowdisplayskip \the\belowdisplayskip
121   \belowdisplayskip \the\belowdisplayskip
122   \let\noexpand\@listi\noexpand\@listi@footnotesize
123 }%
124 \setlength{\@tempdima}{.66667\@tempdimc}%
125 \setlength{\@tempdimb}{\@tempb\@tempdima}%
126 \edef\scriptsize{%
127   \noexpand\@setfontsize\noexpand\scriptsize
128   {\the\@tempdima}{\the\@tempdimb}%
129 }%
130 \setlength{\@tempdima}{.5\@tempdimc}%
131 \setlength{\@tempdimb}{\@tempb\@tempdima}%
132 \edef\tiny{%
133   \noexpand\@setfontsize\noexpand\tiny
134   {\the\@tempdima}{\the\@tempdimb}%
135 }%
136 \setlength{\@tempdima}{1.2\@tempdimc}%
137 \setlength{\@tempdimb}{\@tempb\@tempdima}%
138 \edef\large{%
139   \noexpand\@setfontsize\noexpand\large
140   {\the\@tempdima}{\the\@tempdimb}%
141 }%
142 \setlength{\@tempdima}{1.44\@tempdimc}%
143 \setlength{\@tempdimb}{\@tempb\@tempdima}%
144 \edef\Large{%
145   \noexpand\@setfontsize\noexpand\Large
146   {\the\@tempdima}{\the\@tempdimb}%
147 }%
148 \setlength{\@tempdima}{1.728\@tempdimc}%
149 \setlength{\@tempdimb}{\@tempb\@tempdima}%
150 \edef\LARGE{%
151   \noexpand\@setfontsize\noexpand\LARGE
152   {\the\@tempdima}{\the\@tempdimb}%
153 }%
154 \setlength{\@tempdima}{2.074\@tempdimc}%
155 \setlength{\@tempdimb}{\@tempb\@tempdima}%
156 \edef\huge{%
157   \noexpand\@setfontsize\noexpand\huge
158   {\the\@tempdima}{\the\@tempdimb}%
159 }%
160 \setlength{\@tempdima}{2.488\@tempdimc}%
161 \setlength{\@tempdimb}{\@tempb\@tempdima}%
162 \edef\Huge{%
163   \noexpand\@setfontsize\noexpand\Huge
164   {\the\@tempdima}{\the\@tempdimb}%

```

165 }%

We will now define some new font sizing commands. There are three variants for each standard command: $\langle cmd \rangle r > \langle cmd \rangle rr > \langle cmd \rangle rrr$. Every level is scaled proportionally in order to preserve the default value of the corresponding standard command.

```
166 \def\fontsize@pre{%
167   \ctm@setlength{\abovedisplayskip}%
168   {.8333\@tempdimb}{.1667\@tempdimb}{.5\@tempdimb}%
169   \ctm@setlength{\abovedisplayshortskip}{\z@}{.25\@tempdimb}{\z@}%
170   \ctm@setlength{\belowdisplayshortskip}%
171   {.5\@tempdimb}{.25\@tempdimb}{.25\@tempdimb}%
172   \setlength{\belowdisplayskip}{\abovedisplayskip}%
173 }
174 \def\fontsize@app{%
175   \abovedisplayskip \the\abovedisplayskip%
176   \abovedisplayshortskip \the\abovedisplayshortskip%
177   \belowdisplayskip \the\belowdisplayskip%
178   \belowdisplayshortskip \the\belowdisplayshortskip%
179 }
```

Definition of \smallr , \smallrr , \smallrrr .

Scale factor: 0,021875.

```
180 \setlength{\@tempdima}{0.934375\@tempdimc}%
181 \setlength{\@tempdimb}{\@tempb\@tempdima}%
182 \fontsize@pre
183 \edef\smallr{%
184   \noexpand\setfontsize\noexpand\smallr
185   {\the\@tempdima}{\the\@tempdimb}%
186   \fontsize@app
187   \let\noexpand\@listi\noexpand\@listi@small
188 }%
189 \setlength{\@tempdima}{0.95625\@tempdimc}%
190 \setlength{\@tempdimb}{\@tempb\@tempdima}%
191 \fontsize@pre
192 \edef\smallrr{%
193   \noexpand\setfontsize\noexpand\smallrr
194   {\the\@tempdima}{\the\@tempdimb}%
195   \fontsize@app
196   \let\noexpand\@listi\noexpand\@listi@small
197 }%
198 \setlength{\@tempdima}{0.978125\@tempdimc}%
199 \setlength{\@tempdimb}{\@tempb\@tempdima}%
200 \fontsize@pre
201 \edef\smallrrr{%
202   \noexpand\setfontsize\noexpand\smallrrr
203   {\the\@tempdima}{\the\@tempdimb}%
204   \fontsize@app
205   \let\noexpand\@listi\noexpand\@listi@small
206 }%
```

Definition of \footnotesizer, \footnotesizerr, \footnotesizerrr.
Scale factor: 0.01979.

```

207 \setlength{\@tempdima}{0.85313\@tempdimc}%
208 \setlength{\@tempdimb}{\@tempb\@tempdima}%
209 \fontsize@pre
210 \edef\footnotesizer{%
211   \noexpand\@setfontsize\noexpand\footnotesizer
212   {\the\@tempdima}{\the\@tempdimb}%
213   \fontsize@app
214   \let\noexpand\@listi\noexpand\@listi@footnotesize
215 }%
216 \setlength{\@tempdima}{0.87292\@tempdimc}%
217 \setlength{\@tempdimb}{\@tempb\@tempdima}%
218 \fontsize@pre
219 \edef\footnotesizerr{%
220   \noexpand\@setfontsize\noexpand\footnotesizerr
221   {\the\@tempdima}{\the\@tempdimb}%
222   \fontsize@app
223   \let\noexpand\@listi\noexpand\@listi@footnotesize
224 }%
225 \setlength{\@tempdima}{0.89271\@tempdimc}%
226 \setlength{\@tempdimb}{\@tempb\@tempdima}%
227 \fontsize@pre
228 \edef\footnotesizerrr{%
229   \noexpand\@setfontsize\noexpand\footnotesizerrr
230   {\the\@tempdima}{\the\@tempdimb}%
231   \fontsize@app
232   \let\noexpand\@listi\noexpand\@listi@footnotesize
233 }%

```

Definition of \scriptsize, \scriptsizeerr, \scriptsizeerrr.
Scale factor: 0,0416675.

```

234 \setlength{\@tempdima}{0.7083375\@tempdimc}%
235 \setlength{\@tempdimb}{\@tempb\@tempdima}%
236 \edef\scriptsize{%
237   \noexpand\@setfontsize\noexpand\scriptsize
238   {\the\@tempdima}{\the\@tempdimb}%
239 }%
240 \setlength{\@tempdima}{0.750005\@tempdimc}%
241 \setlength{\@tempdimb}{\@tempb\@tempdima}%
242 \edef\scriptsizeerr{%
243   \noexpand\@setfontsize\noexpand\scriptsizeerr
244   {\the\@tempdima}{\the\@tempdimb}%
245 }%
246 \setlength{\@tempdima}{0.7916725\@tempdimc}%
247 \setlength{\@tempdimb}{\@tempb\@tempdima}%
248 \edef\scriptsizeerrr{%
249   \noexpand\@setfontsize\noexpand\scriptsizeerrr
250   {\the\@tempdima}{\the\@tempdimb}%
251 }%

```

Definition of \tinyr, \tinyrr, \tinyrrr.

Scale factor: 0.0416675.

```
252 \setlength{\@tempdima}{0.5416675\@tempdimc}%
253 \setlength{\@tempdimb}{\@tempb\@tempdima}%
254 \edef\tinyr{%
255   \noexpand\@setfontsize\noexpand\tinyr
256   {\the\@tempdima}{\the\@tempdimb}%
257 }%
258 \setlength{\@tempdima}{0.583335\@tempdimc}%
259 \setlength{\@tempdimb}{\@tempb\@tempdima}%
260 \edef\tinyrr{%
261   \noexpand\@setfontsize\noexpand\tinyrr
262   {\the\@tempdima}{\the\@tempdimb}%
263 }%
264 \setlength{\@tempdima}{0.6250025\@tempdimc}%
265 \setlength{\@tempdimb}{\@tempb\@tempdima}%
266 \edef\tinyrrr{%
267   \noexpand\@setfontsize\noexpand\tinyrrr
268   {\the\@tempdima}{\the\@tempdimb}%
269 }%
```

Definition of \normalsizer, \normalsizerr, \normalsizerrr.

Scale factor: 0.05.

```
270 \setlength{\@tempdima}{1.05\@tempdimc}%
271 \setlength{\@tempdimb}{\@tempb\@tempdima}%
272 \fontsize@pre
273 \edef\normalsizer{%
274   \noexpand\@setfontsize\noexpand\normalsizer
275   {\the\@tempdima}{\the\@tempdimb}%
276   \fontsize@app
277   \let\noexpand\@listi\noexpand\@listI
278 }%
279 \setlength{\@tempdima}{1.1\@tempdimc}%
280 \setlength{\@tempdimb}{\@tempb\@tempdima}%
281 \fontsize@pre
282 \edef\normalsizerr{%
283   \noexpand\@setfontsize\noexpand\normalsizerr
284   {\the\@tempdima}{\the\@tempdimb}%
285   \fontsize@app
286   \let\noexpand\@listi\noexpand\@listI
287 }%
288 \setlength{\@tempdima}{1.15\@tempdimc}%
289 \setlength{\@tempdimb}{\@tempb\@tempdima}%
290 \fontsize@pre
291 \edef\normalsizerrr{%
292   \noexpand\@setfontsize\noexpand\normalsizerrr
293   {\the\@tempdima}{\the\@tempdimb}%
294   \fontsize@app
295   \let\noexpand\@listi\noexpand\@listI
296 }%
```


Definition of \larger, \largerr, \largerrr.

Scale factor: 0,06.

```
297 \setlength{\@tempdima}{1.26\@tempdimc}%
298 \setlength{\@tempdimb}{\@tempb\@tempdima}%
299 \edef\larger{%
300   \noexpand\@setfontsize\noexpand\larger
301   {\the\@tempdima}{\the\@tempdimb}%
302 }%
303 \setlength{\@tempdima}{1.32\@tempdimc}%
304 \setlength{\@tempdimb}{\@tempb\@tempdima}%
305 \edef\largerr{%
306   \noexpand\@setfontsize\noexpand\largerr
307   {\the\@tempdima}{\the\@tempdimb}%
308 }%
309 \setlength{\@tempdima}{1.38\@tempdimc}%
310 \setlength{\@tempdimb}{\@tempb\@tempdima}%
311 \edef\largerrr{%
312   \noexpand\@setfontsize\noexpand\largerrr
313   {\the\@tempdima}{\the\@tempdimb}%
314 }%
```

Definition of \Larger, \Largerr, \Largerrr.

Scale factor: 0,072.

```
315 \setlength{\@tempdima}{1.512\@tempdimc}%
316 \setlength{\@tempdimb}{\@tempb\@tempdima}%
317 \edef\Larger{%
318   \noexpand\@setfontsize\noexpand\Larger
319   {\the\@tempdima}{\the\@tempdimb}%
320 }%
321 \setlength{\@tempdima}{1.584\@tempdimc}%
322 \setlength{\@tempdimb}{\@tempb\@tempdima}%
323 \edef\Largerr{%
324   \noexpand\@setfontsize\noexpand\Largerr
325   {\the\@tempdima}{\the\@tempdimb}%
326 }%
327 \setlength{\@tempdima}{1.656\@tempdimc}%
328 \setlength{\@tempdimb}{\@tempb\@tempdima}%
329 \edef\Largerrr{%
330   \noexpand\@setfontsize\noexpand\Largerrr
331   {\the\@tempdima}{\the\@tempdimb}%
332 }%
```

Definition of \LARGE r, \LARGE r r, \LARGE r r r.

Scale factor: 0,0865.

```
333 \setlength{\@tempdima}{1.8145\@tempdimc}%
334 \setlength{\@tempdimb}{\@tempb\@tempdima}%
335 \edef\LARGE r{%
336   \noexpand\@setfontsize\noexpand\LARGE r
337   {\the\@tempdima}{\the\@tempdimb}%

```

```

338 }%
339 \setlength{\@tempdima}{1.901\@tempdimc}%
340 \setlength{\@tempdimb}{\@tempb\@tempdima}%
341 \edef\LARGEerr{%
342   \noexpand\@setfontsize\noexpand\LARGEerr
343   {\the\@tempdima}{\the\@tempdimb}%
344 }%
345 \setlength{\@tempdima}{1.9875\@tempdimc}%
346 \setlength{\@tempdimb}{\@tempb\@tempdima}%
347 \edef\LARGEerrr{%
348   \noexpand\@setfontsize\noexpand\LARGEerrr
349   {\the\@tempdima}{\the\@tempdimb}%
350 }%

```

Definition of \huger, \hugerr, \hugerrr.

Scale factor: 0,1035.

```

351 \setlength{\@tempdima}{2.1775\@tempdimc}%
352 \setlength{\@tempdimb}{\@tempb\@tempdima}%
353 \edef\huger{%
354   \noexpand\@setfontsize\noexpand\huger
355   {\the\@tempdima}{\the\@tempdimb}%
356 }%
357 \setlength{\@tempdima}{2.281\@tempdimc}%
358 \setlength{\@tempdimb}{\@tempb\@tempdima}%
359 \edef\hugerr{%
360   \noexpand\@setfontsize\noexpand\hugerr
361   {\the\@tempdima}{\the\@tempdimb}%
362 }%
363 \setlength{\@tempdima}{2.3845\@tempdimc}%
364 \setlength{\@tempdimb}{\@tempb\@tempdima}%
365 \edef\hugerrr{%
366   \noexpand\@setfontsize\noexpand\hugerrr
367   {\the\@tempdima}{\the\@tempdimb}%
368 }%

```

Definition of \Huger, \Hugerr, \Hugerrr.

Scale factor: 0.123.

```

369 \setlength{\@tempdima}{2.611\@tempdimc}%
370 \setlength{\@tempdimb}{\@tempb\@tempdima}%
371 \edef\Huger{%
372   \noexpand\@setfontsize\noexpand\Huger
373   {\the\@tempdima}{\the\@tempdimb}%
374 }%
375 \setlength{\@tempdima}{2.734\@tempdimc}%
376 \setlength{\@tempdimb}{\@tempb\@tempdima}%
377 \edef\Hugerr{%
378   \noexpand\@setfontsize\noexpand\Hugerr
379   {\the\@tempdima}{\the\@tempdimb}%
380 }%
381 \setlength{\@tempdima}{2.857\@tempdimc}%

```

```

382 \setlength{\@tempdimb}{\@tempb\@tempdima}%
383 \edef\Hugerrr{%
384   \noexpand\@setfontsize\noexpand\Hugerrr
385   {\the\@tempdima}{\the\@tempdimb}%
386 }%

```

Definition of \HUGE, \HUGER, \HUGERR, \HUGERRR.
Scale factor: 0,149.

```

387 \setlength{\@tempdima}{3.006\@tempdimc}%
388 \setlength{\@tempdimb}{\@tempb\@tempdima}%
389 \edef\HUGE{%
390   \noexpand\@setfontsize\noexpand\HUGE
391   {\the\@tempdima}{\the\@tempdimb}%
392 }%
393 \setlength{\@tempdima}{3.155\@tempdimc}%
394 \setlength{\@tempdimb}{\@tempb\@tempdima}%
395 \edef\HUGEr{%
396   \noexpand\@setfontsize\noexpand\HUGEr
397   {\the\@tempdima}{\the\@tempdimb}%
398 }%
399 \setlength{\@tempdima}{3.304\@tempdimc}%
400 \setlength{\@tempdimb}{\@tempb\@tempdima}%
401 \edef\HUGErr{%
402   \noexpand\@setfontsize\noexpand\HUGErr
403   {\the\@tempdima}{\the\@tempdimb}%
404 }%
405 \setlength{\@tempdima}{3.453\@tempdimc}%
406 \setlength{\@tempdimb}{\@tempb\@tempdima}%
407 \edef\HUGErrr{%
408   \noexpand\@setfontsize\noexpand\HUGErrr
409   {\the\@tempdima}{\the\@tempdimb}%
410 }%

```

```

411 \normalsize%

```

The KOMA files do not define \parindent and other lengths that are strictly linked to the font rather than to the dimensions of the page and the text. So we first define \parindent which defaults to $1.5\langle\textit{fontsize}\rangle$:

```

412 \setlength\parindent{\@fontsizeparindent}%

```

For the following lengths, all values are calculated proportionally to the main font. I took the bk11.clo file as a reference point. Note that the differences in the lengths affected by fontsize inside the bk*.clo files only concern \headheight, \headsep, \topskip and \footskip.

```

413 \setlength\smallskipamount{
414   \fpeval{1.090909091\@tempdimb/4}pt \@plus 1\p@ \@minus 1\p@}%
415 \setlength\medskipamount{
416   \fpeval{1.090909091\@tempdimb/2}pt \@plus 2\p@ \@minus 2\p@}%
417 \setlength\bigskipamount{

```

Table 2: The values of some specific lengths set by the package, in relation to some significant settings of the normal size. The values are expressed in pt and rounded to the second decimal place.

| Normal size | | 10.00 | 10.10 | 10.20 | 10.30 | 10.40 | 10.50 | 10.60 | 10.70 | 10.80 | 10.90 | 11.00 |
|------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| \parindent | | 15.00 | 15.15 | 15.30 | 15.45 | 15.60 | 15.75 | 15.90 | 16.05 | 16.20 | 16.35 | 16.50 |
| \smallskipamount | (^{plus} _{minus} 1 pt) | 2.73 | 2.75 | 2.78 | 2.81 | 2.84 | 2.86 | 2.89 | 2.92 | 2.95 | 2.97 | 3.00 |
| \medskipamount | (^{plus} _{minus} 2 pt) | 5.45 | 5.51 | 5.56 | 5.62 | 5.67 | 5.73 | 5.78 | 5.84 | 5.89 | 5.95 | 6.00 |
| \bigskipamount | (^{plus} _{minus} 4 pt) | 10.91 | 11.02 | 11.13 | 11.24 | 11.35 | 11.45 | 11.56 | 11.67 | 11.78 | 11.89 | 12.00 |

418 \fpeval{1.090909091\@tempdimb}pt \@plus 4\p@ \@minus 4\p@}%

```

419 \setlength{\@tempdimb}{\f@baselineskip}%
420 \ctm@setlength{\parsep}%
421 {.3333\@tempdimb}{.1667\@tempdimb}{.0833\@tempdimb}%
422 \ctm@setlength{\topsep}%
423 {.6667\@tempdimb}{.1667\@tempdimb}{.3333\@tempdimb}%
424 \@tempswafalse
425 \begingroup
426 \def\@list@extra{\aftergroup\@tempswatrue}%
427 \csname @listi\endcsname
428 \endgroup
429 \edef\@listi{\leftmargin\leftmargini
430   \topsep \the\topsep
431   \parsep \the\parsep
432   \itemsep \parsep
433   \if@tempswa\noexpand\@list@extra\fi
434 }%
435 \let\@listI\@listi
436 \ctm@setlength{\parsep}%
437 {.1667\@tempdimb}{.0833\@tempdimb}{.0833\@tempdimb}%
438 \ctm@setlength{\topsep}%
439 {.3333\@tempdimb}{.1667\@tempdimb}{.1667\@tempdimb}%
440 \@tempswafalse
441 \begingroup
442 \def\@list@extra{\aftergroup\@tempswatrue}%
443 \csname @listi\endcsname
444 \endgroup
445 \edef\@listi@small{\leftmargin\leftmargini
446   \topsep \the\topsep
447   \parsep \the\parsep
448   \itemsep \parsep
449   \if@tempswa\noexpand\@list@extra\fi
450 }%
451 \ctm@setlength{\parsep}%
452 {.125\@tempdimb}{.0625\@tempdimb}{.0625\@tempdimb}%
453 \ctm@setlength{\topsep}%
454 {.25\@tempdimb}{.125\@tempdimb}{.125\@tempdimb}%
455 \@tempswafalse
456 \begingroup

```

```

457 \def\@list@extra{\aftergroup\@tempswatrue}%
458 \csname @listi\endcsname
459 \endgroup
460 \edef\@listi@footnotesize{\leftmargin\leftmargini
461   \topsep \the\topsep
462   \parsep \the\parsep
463   \itemsep \parsep
464   \if@tempswa\noexpand\@list@extra\fi
465 }%
466 \ctm@setlength{\parsep}%
467 {.1667\@tempdimb}{.0833\@tempdimb}{.0833\@tempdimb}%
468 \ctm@setlength{\topsep}%
469 {.3333\@tempdimb}{.1667\@tempdimb}{.0833\@tempdimb}%
470 \@tempswafalse
471 \begingroup
472 \def\@list@extra{\aftergroup\@tempswatrue}%
473 \csname @listii\endcsname
474 \endgroup
475 \edef\@listii{\leftmargin\leftmarginii
476   \labelwidth=\dimexpr \leftmargin-\labelsep
477   \topsep \the\topsep
478   \parsep \the\parsep
479   \itemsep \parsep
480   \if@tempswa\noexpand\@list@extra\fi
481 }%
482 \ctm@setlength{\topsep}%
483 {.1667\@tempdimb}{.0833\@tempdimb}{.0833\@tempdimb}%
484 \setlength{\partopsep}{\z@ \@plus\z@ \@minus\p@}%
485 \@tempswafalse
486 \begingroup
487 \def\@list@extra{\aftergroup\@tempswatrue}%
488 \csname @listiii\endcsname
489 \endgroup
490 \edef\@listiii{\leftmargin\leftmarginiii
491   \labelwidth=\dimexpr \leftmargin-\labelsep
492   \topsep \the\topsep
493   \parsep \z@
494   \partopsep \the\partopsep
495   \itemsep \topsep
496   \if@tempswa\noexpand\@list@extra\fi
497 }%
498 \@tempswafalse
499 \begingroup
500 \def\@list@extra{\aftergroup\@tempswatrue}%
501 \csname @listiv\endcsname
502 \endgroup
503 \edef\@listiv{\leftmargin\leftmarginiv
504   \labelwidth=\dimexpr \leftmargin-\labelsep\relax
505   \if@tempswa\noexpand\@list@extra\fi
506 }%
507 \@tempswafalse

```

```

508 \begingroup
509 \def\@list@extra{\aftergroup\@tempswatrue}%
510 \csname @listv\endcsname
511 \endgroup
512 \edef\@listv{\leftmargin\leftmarginv
513   \labelwidth=\dimexpr \leftmargin-\labelsep\relax
514   \if@tempswa\noexpand\@list@extra\fi
515 }%
516 \@tempswafalse
517 \begingroup
518 \def\@list@extra{\aftergroup\@tempswatrue}%
519 \csname @listvi\endcsname
520 \endgroup
521 \edef\@listvi{\leftmargin\leftmarginvi
522   \labelwidth=\dimexpr \leftmargin-\labelsep\relax
523   \if@tempswa\noexpand\@list@extra\fi
524 }%
525 \@listi
526 \setlength{\@tempdimb}{\f@baselineskip}%
527 \setlength{\footnotesep}{.555\@tempdimb}%
528 \ctm@setlength{\skip\footins}%
529 {.75\@tempdimb}{.3333\@tempdimb}{.1667\@tempdimb}%
530 \ctm@setlength{\floatsep}%
531 {\@tempdimb}{.1667\@tempdimb}{.1667\@tempdimb}%
532 \ctm@setlength{\textfloatsep}%
533 {1.6667\@tempdimb}{.1667\@tempdimb}{.3333\@tempdimb}%
534 \setlength{\intextsep}{\floatsep}%
535 \setlength{\dblfloatsep}{\floatsep}%
536 \setlength{\dbltextfloatsep}{\textfloatsep}%
537 \setlength{\@fptop}{\z@ \@plus 1fil}%
538 \setlength{\@fpsep}{.6667\@tempdimb \@plus 2fil}%
539 \setlength{\@fpbot}{\@fptop}%
540 \setlength{\@dblfpsep}{\@fptop}%
541 \setlength{\@dblfpbot}{\@fpsep}%
542 \setlength{\@dblfpbot}{\@fptop}%
543 \ctm@setlength{\partopsep}{.2\@tempdimb}{.1\@tempdimb}{.1\@tempdimb}%
544 }

```

Excerpt from scrfontsizes.sty Here is a portion of the scrfontsizes package. It simply provides the `\generateclofile` command, without the KOMA related definitions. There are no reserved names for the `.clo` files. The name of the command is a new name for the KOMA `\generatefontfile`. In fact what the command generates is a `.clo` file.

```

545 \newcommand*{\generateclofile}[1]{%
546   \kernel@ifnextchar [{\@generatefontfile{#1}}{\@@generatefontfile{#1}}}%
547 }
548 \newcommand*{\@generatefontfile}{%
549   \def\@generatefontfile#1[#2]#3{%
550     \begingroup

```

At least starting from version 3.31 of scrfontsizes, the code of the `\@generatefontfile`

and \@@generatefontfile commands sets the \parskip value to 0pt. We also use [#2] in place of [{#2}] for the optional argument of \changefontsize used immediately below.

```

551 \setlength{\parskip}{0pt}%
552 \changefontsize[#2]{#3}%
553 \generate@fontfile{#1}{#3}%
554 \endgroup
555 }
556 \newcommand\@@generatefontfile[2]{%
557 \begingroup
558 \setlength{\parskip}{0pt}%
559 \changefontsize{#2}%
560 \generate@fontfile{#1}{#2}%
561 \endgroup
562 }
563 \newcommand*\@@generatefontfile}[2][{}]{
564 \newcommand*\@fontfile{}
565 \let\@fontfile\@mainaux
566 \newcommand*\generate@fontfile}[2]{%
567 \def\@ind{\space\space}%
568 \immediate\openout\@fontfile #1#2.clo
569 \immediate\write\@fontfile{\@percentchar^^J%
570 \@percentchar\space This is file '#1#2.clo', generated with^^J%

```

In the next three lines we only replace 'scrfontsizes' with 'fontsize' and 'Markus Kohm' with 'Ivan Valbusa', in order to get the correct information in the .log file.

```

571 \@percentchar\space fontsize
572 \csname ver@fontsize.\@pkgextension\endcsname,^^J%
573 \@percentchar\space Copyright (c) Ivan Valbusa.^^J%
574 \@percentchar^^J%
575 \string\ProvidesFile{#1#2.clo}[%
576 \the\year/\ifnum\month<10 0\fi\the\month/\ifnum\day<10 0\fi\the\day%
577 \space generated font size class option (#2)]}%
578 \immediate\write\@fontfile{%
579 \string\def\string\normalsize{\@percentchar^^J%
580 \@ind\string\@setfontsize\string\normalsize{\f@size}{\f@baselineskip}%
581 \@percentchar^^J%
582 \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
583 \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%
584 \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
585 \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
586 \@ind\string\let\string\@listi\string\@listI^^J%
587 }\@percentchar%
588 }%
589 \begingroup\small\@listi
590 \immediate\write\@fontfile{%
591 \string\def\string\small{\@percentchar^^J%
592 \@ind\string\@setfontsize\string\small{\f@size}{\f@baselineskip}%
593 \@percentchar^^J%
594 \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
595 \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%

```

```

596 \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
597 \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
598 \@ind\string\def\string\@listi{\@percentchar^^J%
599   \@ind\@ind\string\leftmargin\string\leftmargini^^J%
600   \@ind\@ind\string\topsep \the\topsep^^J%
601   \@ind\@ind\string\parsep \the\parsep^^J%
602   \@ind\@ind\string\itemsep \string\parsep^^J%
603   \@ind}\@percentchar^^J%
604 } \@percentchar%
605 }%
606 \endgroup
607 \begingroup\footnotesize\@listi
608 \immediate\write\@fontfile{%
609   \string\def\string\footnotesize{\@percentchar^^J%
610     \@ind\string\@setfontsize\string\footnotesize{\f@size}{\f@baselineskip}%
611     \@percentchar^^J%
612     \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
613     \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%
614     \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
615     \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
616     \@ind\string\def\string\@listi{\@percentchar^^J%
617       \@ind\@ind\string\leftmargin\string\leftmargini^^J%
618       \@ind\@ind\string\topsep \the\topsep^^J%
619       \@ind\@ind\string\parsep \the\parsep^^J%
620       \@ind\@ind\string\itemsep \string\parsep^^J%
621       \@ind}\@percentchar^^J%
622     } \@percentchar%
623   }%
624 \endgroup
625 \begingroup\scriptsize
626 \immediate\write\@fontfile{%
627   \string\def\string\scriptsize{%
628     \string\@setfontsize\string\scriptsize{\f@size}{\f@baselineskip}%
629   } \@percentchar%
630 }%
631 \endgroup
632 \begingroup\tiny
633 \immediate\write\@fontfile{%
634   \string\def\string\tiny{%
635     \string\@setfontsize\string\tiny{\f@size}{\f@baselineskip}%
636   } \@percentchar%
637 }%
638 \endgroup
639 \begingroup\large
640 \immediate\write\@fontfile{%
641   \string\def\string\large{%
642     \string\@setfontsize\string\large{\f@size}{\f@baselineskip}%
643   } \@percentchar%
644 }%
645 \endgroup
646 \begingroup\Large

```



```

647 \immediate\write\@fontfile{%
648   \string\def\string\Large{%
649     \string\@setfontsize\string\Large{\f@size}{\f@baselineskip}%
650   }\@percentchar%
651 }%
652 \endgroup
653 \begingroup\LARGE
654 \immediate\write\@fontfile{%
655   \string\def\string\LARGE{%
656     \string\@setfontsize\string\LARGE{\f@size}{\f@baselineskip}%
657   }\@percentchar%
658 }%
659 \endgroup
660 \begingroup\huge
661 \immediate\write\@fontfile{%
662   \string\def\string\huge{%
663     \string\@setfontsize\string\huge{\f@size}{\f@baselineskip}%
664   }\@percentchar%
665 }%
666 \endgroup
667 \begingroup\Huge
668 \immediate\write\@fontfile{%
669   \string\def\string\Huge{%
670     \string\@setfontsize\string\Huge{\f@size}{\f@baselineskip}%
671   }\@percentchar%
672 }%
673 \endgroup

```

The new sizing commands previously defined are recalled here and written in the .clo file if the `\generateclfile` command is used.

```

674 \begingroup\tinyr
675 \immediate\write\@fontfile{%
676   \string\def\string\tinyr{%
677     \string\@setfontsize\string\tinyr{\f@size}{\f@baselineskip}%
678   }\@percentchar%
679 }%
680 \endgroup
681 \begingroup\tinyrr
682 \immediate\write\@fontfile{%
683   \string\def\string\tinyrr{%
684     \string\@setfontsize\string\tinyrr{\f@size}{\f@baselineskip}%
685   }\@percentchar%
686 }%
687 \endgroup
688 \begingroup\tinyrrr
689 \immediate\write\@fontfile{%
690   \string\def\string\tinyrrr{%
691     \string\@setfontsize\string\tinyrrr{\f@size}{\f@baselineskip}%
692   }\@percentchar%
693 }%
694 \endgroup

```

```

695 \begingroup\scriptsize
696 \immediate\write\@fontfile{%
697   \string\def\string\scriptsize{%
698     \string\@setfontsize\string\scriptsize{\f@size}{\f@baselineskip}%
699   }\@percentchar%
700 }%
701 \endgroup
702 \begingroup\scriptsizeerr
703 \immediate\write\@fontfile{%
704   \string\def\string\scriptsizeerr{%
705     \string\@setfontsize\string\scriptsizeerr{\f@size}{\f@baselineskip}%
706   }\@percentchar%
707 }%
708 \endgroup
709 \begingroup\scriptsizeerrr
710 \immediate\write\@fontfile{%
711   \string\def\string\scriptsizeerrr{%
712     \string\@setfontsize\string\scriptsizeerrr{\f@size}{\f@baselineskip}%
713   }\@percentchar%
714 }%
715 \endgroup
716 \def\fs@appnormal{
717   \@percentchar^^J%
718   \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
719   \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%
720   \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
721   \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
722   \@ind\string\let\string\@listi\string\@listI^^J%
723 }
724 \def\fs@appsmall{%
725   \@percentchar^^J%
726   \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
727   \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%
728   \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
729   \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
730   \@ind\string\def\string\@listi{\@percentchar^^J%
731     \@ind\@ind\string\leftmargin\string\leftmarginI^^J%
732     \@ind\@ind\string\topsep \the\topsep^^J%
733     \@ind\@ind\string\parsep \the\parsep^^J%
734     \@ind\@ind\string\itemsep \string\parsep^^J%
735     \@ind}\@percentchar^^J%
736 }
737 \begingroup\smallr\@listi
738 \immediate\write\@fontfile{%
739   \string\def\string\smallr{\@percentchar^^J%
740     \@ind\string\@setfontsize\string\smallr{\f@size}{\f@baselineskip}%
741     \fs@appsmall%
742   }\@percentchar%
743 }%
744 \endgroup
745 \begingroup\smallrr\@listi

```

```

746 \immediate\write\@fontfile{%
747   \string\def\string\smallrr{\@percentchar^^J%
748     \@ind\string\@setfontsize\string\smallrr{\f@size}{\f@baselineskip}%
749     \fs@appsmall%
750   }\@percentchar%
751 }%
752 \endgroup
753 \begingroup\smallrrr\@listi
754 \immediate\write\@fontfile{%
755   \string\def\string\smallrrr{\@percentchar^^J%
756     \@ind\string\@setfontsize\string\smallrrr{\f@size}{\f@baselineskip}%
757     \fs@appsmall%
758   }\@percentchar%
759 }%
760 \endgroup
761 \begingroup\footnotesizer\@listi
762 \immediate\write\@fontfile{%
763   \string\def\string\footnotesizer{\@percentchar^^J%
764     \@ind\string\@setfontsize\string\footnotesizer{\f@size}{\f@baselineskip}%
765     \fs@appsmall%
766   }\@percentchar%
767 }%
768 \endgroup
769 \begingroup\footnotesizerr\@listi
770 \immediate\write\@fontfile{%
771   \string\def\string\footnotesizerr{\@percentchar^^J%
772     \@ind\string\@setfontsize\string\footnotesizerr{\f@size}{\f@baselineskip}%
773     \fs@appsmall%
774   }\@percentchar%
775 }%
776 \endgroup
777 \begingroup\footnotesizerrr\@listi
778 \immediate\write\@fontfile{%
779   \string\def\string\footnotesizerrr{\@percentchar^^J%
780     \@ind\string\@setfontsize\string\footnotesizerrr{\f@size}{\f@baselineskip}%
781     \fs@appsmall%
782   }\@percentchar%
783 }%
784 \endgroup
785 \begingroup\normalsizer
786 \immediate\write\@fontfile{%
787   \string\def\string\normalsizer{\@percentchar^^J%
788     \@ind\string\@setfontsize\string\normalsizer{\f@size}{\f@baselineskip}%
789     \fs@appnormal%
790   }\@percentchar%
791 }%
792 \endgroup
793 \begingroup\normalsizerr
794 \immediate\write\@fontfile{%
795   \string\def\string\normalsizerr{\@percentchar^^J%
796     \@ind\string\@setfontsize\string\normalsizerr{\f@size}{\f@baselineskip}%

```

```

797 \fs@appnormal%
798 } \@percentchar%
799 }%
800 \endgroup
801 \begingroup\normalsizerrr
802 \immediate\write\@fontfile{%
803 \string\def\string\normalsizerrr{\@percentchar^^J%
804 \ @ind\string\@setfontsize\string\normalsizerrr{\f@size}{\f@baselineskip}%
805 \fs@appnormal%
806 } \@percentchar%
807 }%
808 \endgroup
809 \begingroup\larger
810 \immediate\write\@fontfile{%
811 \string\def\string\larger{%
812 \string\@setfontsize\string\larger{\f@size}{\f@baselineskip}%
813 } \@percentchar%
814 }%
815 \endgroup
816 \begingroup\largerr
817 \immediate\write\@fontfile{%
818 \string\def\string\largerr{%
819 \string\@setfontsize\string\largerr{\f@size}{\f@baselineskip}%
820 } \@percentchar%
821 }%
822 \endgroup
823 \begingroup\largerrr
824 \immediate\write\@fontfile{%
825 \string\def\string\largerrr{%
826 \string\@setfontsize\string\largerrr{\f@size}{\f@baselineskip}%
827 } \@percentchar%
828 }%
829 \endgroup
830 \begingroup\Large
831 \immediate\write\@fontfile{%
832 \string\def\string\Large{%
833 \string\@setfontsize\string\Large{\f@size}{\f@baselineskip}%
834 } \@percentchar%
835 }%
836 \endgroup
837 \begingroup\Larger
838 \immediate\write\@fontfile{%
839 \string\def\string\Larger{%
840 \string\@setfontsize\string\Larger{\f@size}{\f@baselineskip}%
841 } \@percentchar%
842 }%
843 \endgroup
844 \begingroup\Largerr
845 \immediate\write\@fontfile{%
846 \string\def\string\Largerr{%
847 \string\@setfontsize\string\Largerr{\f@size}{\f@baselineskip}%

```

```

848   }\@percentchar%
849 }%
850 \endgroup
851 \begingroup\Largerrr
852 \immediate\write\@fontfile{%
853   \string\def\string\Largerrr{%
854     \string\@setfontsize\string\Largerrr{\f@size}{\f@baselineskip}%
855   }\@percentchar%
856 }%
857 \endgroup
858 \begingroup\LARGEr
859 \immediate\write\@fontfile{%
860   \string\def\string\LARGEr{%
861     \string\@setfontsize\string\LARGEr{\f@size}{\f@baselineskip}%
862   }\@percentchar%
863 }%
864 \endgroup
865 \begingroup\LARGEerr
866 \immediate\write\@fontfile{%
867   \string\def\string\LARGEerr{%
868     \string\@setfontsize\string\LARGEerr{\f@size}{\f@baselineskip}%
869   }\@percentchar%
870 }%
871 \endgroup
872 \begingroup\LARGEerrr
873 \immediate\write\@fontfile{%
874   \string\def\string\LARGEerrr{%
875     \string\@setfontsize\string\LARGEerrr{\f@size}{\f@baselineskip}%
876   }\@percentchar%
877 }%
878 \endgroup
879 \begingroup\huger
880 \immediate\write\@fontfile{%
881   \string\def\string\huger{%
882     \string\@setfontsize\string\huger{\f@size}{\f@baselineskip}%
883   }\@percentchar%
884 }%
885 \endgroup
886 \begingroup\hugerr
887 \immediate\write\@fontfile{%
888   \string\def\string\hugerr{%
889     \string\@setfontsize\string\hugerr{\f@size}{\f@baselineskip}%
890   }\@percentchar%
891 }%
892 \endgroup
893 \begingroup\hugerrr
894 \immediate\write\@fontfile{%
895   \string\def\string\hugerrr{%
896     \string\@setfontsize\string\hugerrr{\f@size}{\f@baselineskip}%
897   }\@percentchar%
898 }%

```

```

899 \endgroup
900 \begingroup\Huger
901 \immediate\write\@fontfile{%
902   \string\def\string\Huger{%
903     \string\@setfontsize\string\Huger{\f@size}{\f@baselineskip}%
904   }\@percentchar%
905 }%
906 \endgroup
907 \begingroup\Hugerr
908 \immediate\write\@fontfile{%
909   \string\def\string\Hugerr{%
910     \string\@setfontsize\string\Hugerr{\f@size}{\f@baselineskip}%
911   }\@percentchar%
912 }%
913 \endgroup
914 \begingroup\Hugerrr
915 \immediate\write\@fontfile{%
916   \string\def\string\Hugerrr{%
917     \string\@setfontsize\string\Hugerrr{\f@size}{\f@baselineskip}%
918   }\@percentchar%
919 }%
920 \endgroup
921 \begingroup\HUGE
922 \immediate\write\@fontfile{%
923   \string\def\string\HUGE{%
924     \string\@setfontsize\string\HUGE{\f@size}{\f@baselineskip}%
925   }\@percentchar%
926 }%
927 \endgroup
928 \begingroup\HUGEr
929 \immediate\write\@fontfile{%
930   \string\def\string\HUGEr{%
931     \string\@setfontsize\string\HUGEr{\f@size}{\f@baselineskip}%
932   }\@percentchar%
933 }%
934 \endgroup
935 \begingroup\HUGErr
936 \immediate\write\@fontfile{%
937   \string\def\string\HUGErr{%
938     \string\@setfontsize\string\HUGErr{\f@size}{\f@baselineskip}%
939   }\@percentchar%
940 }%
941 \endgroup
942 \begingroup\HUGErrr
943 \immediate\write\@fontfile{%
944   \string\def\string\HUGErrr{%
945     \string\@setfontsize\string\HUGErrr{\f@size}{\f@baselineskip}%
946   }\@percentchar%
947 }%
948 \endgroup

```

```
949 \immediate\write\@fontfile{\string\normalsize}%
```

The new lengths previously defined are recalled here and written in the .clo file if the \generateclofile command is used.

```
950 \begingroup
```

```
951 \immediate\write\@fontfile{%
```

```
952   \string\setlength{\string\parindent}{\the\parindent}^^J%
```

```
953   \string\setlength{\string\headheight}{\the\headheight}^^J%
```

```
954   \string\setlength{\string\smallskipamount}{\the\smallskipamount}^^J%
```

```
955   \string\setlength{\string\medskipamount}{\the\medskipamount}^^J%
```

```
956   \string\setlength{\string\bigskipamount}{\the\bigskipamount}^^J%
```

```
957 }%
```

```
958 \endgroup
```

```
959 \immediate\write\@fontfile{%
```

```
960   \string\setlength{\string\footnotesep}{\the\footnotesep}\@percentchar
```

```
961 }%
```

```
962 \immediate\write\@fontfile{%
```

```
963   \string\setlength{\string\skip\string\footins}{\the\skip\footins}\@percentchar
```

```
964 }%
```

```
965 \immediate\write\@fontfile{%
```

```
966   \string\setlength{\string\floatsep}{\the\floatsep}\@percentchar
```

```
967 }%
```

```
968 \immediate\write\@fontfile{%
```

```
969   \string\setlength{\string\textfloatsep}{\the\textfloatsep}\@percentchar
```

```
970 }%
```

```
971 \immediate\write\@fontfile{%
```

```
972   \string\setlength{\string\intextsep}{\the\intextsep}\@percentchar
```

```
973 }%
```

```
974 \immediate\write\@fontfile{%
```

```
975   \string\setlength{\string\dblfloatsep}{\the\dblfloatsep}\@percentchar
```

```
976 }%
```

```
977 \immediate\write\@fontfile{%
```

```
978   \string\setlength{\string\dbltextfloatsep}{\the\dbltextfloatsep}\@percentchar
```

```
979 }%
```

```
980 \immediate\write\@fontfile{%
```

```
981   \string\setlength{\string\@fptop}{\the\@fptop}\@percentchar
```

```
982 }%
```

```
983 \immediate\write\@fontfile{%
```

```
984   \string\setlength{\string\@fpsep}{\the\@fpsep}\@percentchar
```

```
985 }%
```

```
986 \immediate\write\@fontfile{%
```

```
987   \string\setlength{\string\@fpbot}{\the\@fpbot}\@percentchar
```

```
988 }%
```

```
989 \immediate\write\@fontfile{%
```

```
990   \string\setlength{\string\@dblfpbot}{\the\@dblfpbot}\@percentchar
```

```
991 }%
```

```
992 \immediate\write\@fontfile{%
```

```
993   \string\setlength{\string\@dblpsep}{\the\@dblpsep}\@percentchar
```

```
994 }%
```

```
995 \immediate\write\@fontfile{%
```

```

996 \string\setlength{\string\@dblfpbot}{\the\@dblfpbot}\@percentchar
997 }%
998 \immediate\write\@fontfile{%
999 \string\setlength{\string\partopsep}{\the\partopsep}\@percentchar
1000 }%
1001 \begingroup
1002 \@listi
1003 \immediate\write\@fontfile{%
1004 \string\def\string\@listi{\@percentchar^^J%
1005 \@ind\string\leftmargin\string\leftmarginii^^J%
1006 \@ind\string\topsep \the\topsep^^J%
1007 \@ind\string\parsep \the\parsep^^J%
1008 \@ind\string\itemsep \string\parsep^^J%
1009 }\@percentchar
1010 }%
1011 \endgroup
1012 \immediate\write\@fontfile{%
1013 \string\let\string\@listI\string\@listi
1014 }%
1015 \begingroup
1016 \@listii
1017 \immediate\write\@fontfile{%
1018 \string\def\string\@listii{\@percentchar^^J%
1019 \@ind\string\leftmargin\string\leftmarginii^^J%
1020 \@ind\string\labelwidth\string\leftmarginii^^J%
1021 \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1022 \@ind\string\topsep \the\topsep^^J%
1023 \@ind\string\parsep \the\parsep^^J%
1024 \@ind\string\itemsep \string\parsep^^J%
1025 }\@percentchar
1026 }%
1027 \endgroup
1028 \begingroup
1029 \@listiii
1030 \immediate\write\@fontfile{%
1031 \string\def\string\@listiii{\@percentchar^^J%
1032 \@ind\string\leftmargin\string\leftmarginiii^^J%
1033 \@ind\string\labelwidth\string\leftmarginiii^^J%
1034 \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1035 \@ind\string\topsep \the\topsep^^J%
1036 \@ind\string\parsep \the\parsep^^J%
1037 \@ind\string\partopsep \the\partopsep^^J%
1038 \@ind\string\itemsep \string\topsep^^J%
1039 }\@percentchar
1040 }%
1041 \endgroup
1042 \begingroup
1043 \@listiv
1044 \immediate\write\@fontfile{%
1045 \string\def\string\@listiv{\@percentchar^^J%
1046 \@ind\string\leftmargin\string\leftmarginiv^^J%

```



```

1047 \@ind\string\labelwidth\string\leftmarginiv^^J%
1048 \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1049 }\@percentchar
1050}%
1051\endgroup
1052\beginingroup
1053\@listv
1054\immediate\write\@fontfile{%
1055 \string\def\string\@listv{\@percentchar^^J%
1056 \@ind\string\leftmargin\string\leftmarginiv^^J%
1057 \@ind\string\labelwidth\string\leftmarginiv^^J%
1058 \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1059 }\@percentchar
1060}%
1061\endgroup
1062\beginingroup
1063\@listvi
1064\immediate\write\@fontfile{%
1065 \string\def\string\@listvi{\@percentchar^^J%
1066 \@ind\string\leftmargin\string\leftmarginvi^^J%
1067 \@ind\string\labelwidth\string\leftmarginvi^^J%
1068 \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1069 }\@percentchar
1070}%
1071\endgroup
1072\immediate\write\@fontfile{%
1073 \string\@listi^^J%
1074 \string\endinput^^J%
1075 \@percentchar^^J%
1076 \@percentchar\space End of file '#1#2.clo'.
1077}
1078\immediate\closeout\@fontfile
1079}
1080\@onlypreamble\generateclofile

```

We will now define some internal commands to test the package functions. Since version 0.6 I have been using the L^AT_EX3 solution provided by Enrico Gregorio in place of the old macros based on etoolbox (Lehman and Wright 2019).

```

1081 \newcommand{\sampletext}[1]{\def\fs@sampletext{#1}}
1082 \def\fs@sampletext{%
1083   As any dedicated reader can clearly see, the Ideal of practical reason
1084   is a representation of, as far as I know, the things in themselves; as
1085   I have shown elsewhere, the phenomena should only be used as a canon for
1086   our understanding. The paralogisms of practical reason are what first give
1087   rise to the architectonic of practical reason. As will easily be shown in
1088   the next section, reason would thereby be made to contradict, in view of
1089   these considerations, the Ideal of practical reason, yet the manifold
1090   depends on the phenomena.}
1091
1092 \ExplSyntaxOn
1093

```

```

1094 \NewDocumentCommand{\printsamples}
1095 {
1096   m
1097   m
1098   O{tiny,tinyr,tinyrr,tinyrrr,
1099     scriptsize,scriptsize,scriptsize,scriptsize,
1100     footnotesize,footnotesize,footnotesize,footnotesize,
1101     small,smallr,smallrr,smallrrr,
1102     normalsize,normalsize,normalsize,normalsize,
1103     large,larger,larger,larger,
1104     Large,Larger,Larger,Larger,
1105     LARGE,LARGE,LARGE,LARGE,
1106     huge,huge,huge,huge,
1107     Huge,Huge,Huge,Huge,
1108     HUGE,HUGE,HUGE,HUGE,
1109   }
1110 }
1111 {
1112   \fontsize_printsamples:nnn { #1 } { #2 } { #3 }
1113 }
1114
1115 % helper function to print the rounded sizes
1116 \cs_new:Nn \__fontsize_round_f:n
1117 {
1118   \fp_eval:n { round(\use:c{f@#1},1) } pt
1119 }
1120
1121 % the main function
1122 \cs_new_protected:Nn \fontsize_printsamples:nnn
1123 {
1124   % group to bound the font changes
1125   \group_begin:
1126   % set the size
1127   \changeontsize[#1]{#2}\selectfont
1128   % header
1129   \subsubsection*{Text~samples~for~\symbol{92}normalsize~#2~on~#1}
1130   % map through the desired sizes
1131   \clist_map_inline:nn { #3 }
1132   {
1133     \use:c{##1} % set the font size
1134     \noindent\texttt{\symbol{92}##1}:~ % print the font size command
1135     \__fontsize_round_f:n {size}~on~ % print the size in points
1136     \__fontsize_round_f:n {baselineskip}.~ % print the baseline skip in points
1137     \fs@sampletext % sample text
1138     \par\addvspace{\medskipamount} % finish up
1139   }
1140   % close the group
1141   \group_end:
1142 }
1143 \ExplSyntaxOff

```

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Change History

| | | | |
|------|--|--------|--|
| v0.1 | General: First public release 1 | v0.7 | General: New font sizing commands \HUGE, \HUGEr, \HUGErr, \HUGErrr. Changed default name for the .clo file to fontsize. Updated documentation. 1 |
| v0.2 | General: Updated documentation and code comments. 1 | v0.8 | General: Corrected a bug occurring when the line spacing is grater than 163.84 pt. 1 |
| v0.3 | General: Added definitions of some lengths omitted from KOMA-script files: \smallskiamount, \medskiamount, \bigskiamount. Redefined \parindent and \headheight. 1 | v0.8.1 | General: New \sampletext command. Some lengths are now defined via xfp package. Removed \headheight definition. Updated documentation. 1 |
| v0.4 | General: Maintenance release. Updated documentation. 1 | v0.8.2 | General: New \parindent option. Updated documentation. 1 |
| v0.5 | General: New font sizing commands from \normalsize up. New command \printsamples. Updated documentation. 1 | v0.8.3 | General: Corrected a bug in the \parindent option. Updated documentation. 1 |
| v0.6 | General: New font sizing commands from \small down. Updated documentation. 1 | v0.8.4 | General: Maintenance release. 1 |

Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

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