

Chapter 1

Typesetting *Metamorphosis*.

1.1 Planning the design

Metamorphosis is a novella divided into three chapters. Each chapter consist of relatively long paragraphs without scene breaks, pictures, or other interruptions. The chapters have no names, but are simply numbered from I to III. I want the chapters/sections to end up wherever they happen to be in the text, and the headings should not stand out too much.

I want the page number to be at the bottom near the margin. I see no reason for a header so I'll just skip that.

I'm not planning any foreword or prologue pages, and there's little need for a table of contents, so in the end there will be: a title page (recto), a copyright page (verso), and the story itself (starting on a recto page).

1.2 The macro file

First I define which font to use, the size, and leading. If you are using the default f-ebgaramond.opm, make sure you have the Octavio Pardo version of EBGaramond. This is the version you'll find in the L^AT_EX font catalogue, and on Google fonts.

```
11 \fontfam[ebgaramond]
12 \typosize[11/14]
```

metamorphosis-macros

`\parskip` is set to 0pt instead of the default 0pt plus 1pt. We want, as far as possible, to typeset on a grid. I.e., lines must be exactly `\baselineskip` apart, and all pages must be vertically aligned with regard to lines.

```
21 \parskip=0pt
```

metamorphosis-macros

Setting `\parindent` to something so the indentation is vaguely square-like.

```
28 \parindent=\baselineskip
```

metamorphosis-macros

Widows and orphans can be tricky puzzles to solve. Bringhurst and Tschichold both recommend adding and removing lines of the page as a method, and thanks to code copied from *Tips and tricks #81* there's an easy way to do that. Therefore I allow widows and orphans with `\widowpenalty` and `\clubpenalty`, with and plan to fix these as the very last step before everything is done. More about this later.

```
40 \widowpenalty=0
41 \clubpenalty=0
```

metamorphosis-macros

As this is the first project, I'm keeping things simple by setting values for `\hsize`, `\vsize`, and `\margins` to get something that looks at least similar to what I imagined.

```
49 \hsize=10cm
50 \vsize=\topskip \advance\vsize by 32\baselineskip % 33 lines
51
52 \margins/2 a5 (2,,1.5,)cm
```

metamorphosis-macros

The title page and copyright page should not have page numbers, so I modify `\footline` to have a conditional, which I have set to true as default. Since “outer margin” is different for recto and verso pages, the footline reverses the order of commands for even numbered pages. The `\footlinedist` must take into account that I might add a line to the page as previously described regarding widows and orphans.

```

63 \newif\iffootline
64 \footlinetrue
65
66 \footline={
67   \iffootline
68     \ifodd\pageno
69       \rmfixed \hss \folio \quad
70     \else
71       \rmfixed \quad \folio \hss
72     \fi
73   \fi
74 }
75
76 \footlinedist=2\baselineskip

```

`\skiptorecto` is a simple page break which skips an extra page if needed to land on a recto page.

metamorphosis-macros

```

83 \def\skiptorecto{%
84   \vfil\break
85   \ifodd\pageno\else\vfil\break\fi
86 }

```

I was unsure if I should call the three parts “chapters”, or “sections”, so I used the macro `\act` in the text source, and then to synonym it to something later. I also decided that I wanted to use the macro like this “`\act II`”, which actually sets the name of the chapter to “II” instead of relying on the automatic indexing. Since there are only three chapters/acts, this was deemed acceptable because it reduced the amount of code to change. To be honest, the simplest solution would have been to define `\act` outside the OpTeX sectioning system, but I wanted to get to know the default commands better.

metamorphosis-macros

```

101 \let\act=\secc

```

Eventually I decided that `\act` could be a `\secc`, and copied the relevant code from sections.opm as a starting point:

```

\_def \_seccfont {\_scalemain\_typoscale[\_magstep1/\_magstep1]\_boldify}

...

\_def\_printsecc#1{\_par
  \_abovetitle{\_penalty-200}{\_medskip\_smallskip}
  {\_seccfont \_noindent \_raggedright \_printrefnum[@\_quad]#1\_nbparg}%
  \_nobreak \_belowtitle{\_medskip}%
  \_firstnoindent
}

```

I make it text size, regular weight, centered, and make vertical skips multiples of `\baselineskip` to stay on the grid.

metamorphosis-macros

```

122 \_def \_seccfont {\_scalemain\_typoscale[\_magstep0/\_magstep0]\rm}
123
124 \_def\_printsecc#1{\_par
125   \_abovetitle{\_penalty-200}{\vskip2\baselineskip}
126   {\_seccfont \_centerline{#1}}%
127   \_nobreak \_belowtitle{\vskip2\baselineskip}%
128   \_firstnoindent
129 }

```

Now for the orphans and widows. The following code is copied from *Tips and tricks #81*, see the following link for explanation: (<https://petr.olsak.net/optex/optex-tricks.html#widows>).

metamorphosis-macros

```

137 \newdimen\vsizedefault
138 \def\extravsizes#1{%
139   \foreach #1\do ##1:##2{%
140     \tmpnum=##1
141     \sxddef{vs:\the\tmpnum}{##2}
142     \advance\tmpnum by \ifodd\tmpnum -\fi 1
143     \sxddef{vs:\the\tmpnum}{##2}

```

```

144 }
145 \global\vsizedefault=\vsize \corrsize % for page 1
146 \global\pgbottomskip=0pt plus1fil minus\baselineskip
147 }
148 \addto\_begoutput{\global\vsize=\vsizedefault}
149 \addto\_endoutput{\corrsize}
150
151 \def\corrsize{
152   \global\vsize=\vsizedefault
153   \ifcsname vs:\the\pageno\endcsname
154     \global\advance \vsize by \csname vs:\the\pageno\endcsname \baselineskip
155   \fi
156 }

```

Tl;dr: pages 40 and 41 both get -1 line, likewise with 48 and 49.

metamorphosis-macros

```

162 \extravsizes{ 40:- 48:- }

```

The following can be a good way to visualize baselines, you need the file mriezka.tex which can be found through the OpTeX website.

metamorphosis-macros

```

171 % Grid
172
173 %\input mriezka
174 %\grid \hsize,\baselineskip(\hoffset,\dimexpr(\voffset+\topskip-\baselineskip) ,\hsize ,1.1\vsize)

```