A computer scientist self-publishing in the humanities

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Abstract

An experiment in self-publishing a book in the humanities by an author only having experience using TeX in science is described.

1 Introduction

I have been working in computer science for a number of years, using TeX (since 1982) and LaTeX in the preparation of articles in my field, and therefore I thought of myself as a reasonably skilled LaTeX user. However, when I decided to try my hand on using LaTeX outside my own field, to self-publish a book in the humanities, I discovered I still had a lot to learn. This article describes my experience in typesetting and publishing an annotated edition of a large fraction of the work of the Polish-born British author Stefan Themerson (1910–1988).

Themerson, who was born in Płock in what then was Russia, was a remarkable writer. He studied physics and architecture for a while, but soon discovered that philosophy and the arts were more to his liking. This was helped by his encounter with Franciszka Weinles, an art student whom he married in 1931. The couple would start an intense life-long artistic collaboration that was so close that for most of their products it is hard to assign credit to either of them. While in Poland, they became involved in avant-garde film making. In addition, Stefan wrote a number of children's books. Around 1938 they moved to Paris, then the centre of the world in the arts. The start of World War II saw Stefan volunteering for the Polish Army in France, and Franciszka moving to London. The Polish Army was soon dissolved, and Stefan found himself stranded in France. He began to write in French, mainly poetry. In 1942, he succeeded in getting to England and was reunited with Franciszka. Undeterred, he started to write in English. The couple also started a publishing company, the Gaberbocchus Press, that published a number of avant-garde books. Stefan himself wrote a number of quite idiosyncratic books; in form they are novels, but in content they are philosophical discussions.

Themerson has a small but loyal group of admirers, especially in Poland, The Netherlands, and Britain. Possibly because of his background, it appears that especially people with a background in mathematics (or neighbouring fields: computer science, logic, linguistics) appreciate his style and topics. Nevertheless, I found that not enough of my friends and colleagues liked his work as well as I did and do. Arguing that this may be caused by the rather generous amount of background knowledge that Themerson assumes his readers have (on topics as dissimilar as the dogmas of the Roman Catholic Church, the history of Poland and Lithuania, and the mating habits of termites), I decided to compile an annotated edition of his eight best works, in which this assumed background knowledge would be provided through my annotations. I also decided that — as the market for this book was not going to be large — that I would design and typeset the book myself and make use of a print-on-demand supplier.

Having experience in using LaTeX for scientific papers, my obvious choice was to use LaTeX for this book as well. That turned out to be less straightforward than expected.

2 Design of the book

Typesetting a book yourself is a great joy, but it also requires you to make many detailed decisions. The minimum size of the pages in my case was determined by the requirement to imitate the highly idiosyncratic typography Themerson used in some of his books.

I followed the recommendations on text width and height, margins, and paper size in the (Dutch) typography bible by Huib van Krimpen (van Krimpen, 1986). I like the frugal, minimal style he recommends and thought it did not deviate too much from Themerson's own preference.

Dividing the text of my book into pages posed unexpected difficulties. Normally TeX does an excellent job, but as I had to follow closely the originals of the eight books I included, I could not follow Don Knuth's recommendation:

> Therefore if you are fussy about the appearance of pages, you can expect to do some rewriting of the manuscript until you achieve an appropriate balance [...] ((Knuth, 1984), p. 109).

The positioning of the illustrations in some of the books posed additional constraints. In the end, I had to use more explicit `\pagebreak`s than I liked.

For the font I used Lucida Bright, TeX support available through CTAN.

3 Foreign characters

Themerson uses a large number of quotations in his books. In my annotations, I identify the sources of these, and, if the quotation was originally in another language, I provide the original version. In addition, following Don Knuth's example in *The Art of Computer Programming*, I tried to give the name of each person mentioned in my annotations in the original

script as well. This required some limited use of Cyrillic, Greek, Hebrew, and Chinese characters. (I should have used some Arabic too, but the manual of ArabTEX was sufficiently abhorrent to scare me away from that. Maybe in the next edition of my book...)

For Chinese, I used the CJK package and, as for music (see below), I kept the Chinese text in a separate LATEX document, to be processed independently with the result included in my book as a picture.

The Internet proved to be very helpful to get this to work. Actually, far too much help is available on the topic of getting LATEX to output Chinese characters. The final, simple, authoritative *Guide to typesetting a few Chinese characters in your LATEX document* still has to be written.

In retrospect, I wish I had used XƎTEX with Unicode uniformly, rather than the mixture of encodings I have now.

4   Special symbols

Themerson introduced a number of symbols of his own invention whenever he felt the need. In his book *factor T*, he argued that it would be convenient if we could attach an indicator for time to nouns, similar to the way we can have verb forms indicating past, present, and future. He invented a set of small clock-like symbols to indicate the time of validity of the noun, leading to expressions like

My dog☉ barked.

to indicate that my dog barked a number of times in the past.

As these non-standard symbols are not in any font I could find, I used METAPOST to recreate them. This turned out to be relatively easy. The symbol, enlarged

was defined in the file `factor.mp` as:

```
prologues:=2;
beginfig(2);
r=10mm;
thick:=r/5;
thin:=r/8;
deel:=1/3;
cos30:=sqrt(3/4);
z0=(0,0);
z1=-z3=(r,0);
z2=-z4=(0,r);
z7=z0+(-cos30*r, 0.5*r);
z8=z0+(-cos30*r,-0.5*r);
z9=z0+(-0.5*r,-cos30*r);
pickup pencircle scaled thick;
```

```
draw z1..z2..z3..z4..cycle;
pickup pencircle scaled thin;
draw z0--z7;
draw z3..deel[z3,z0];
draw z8..deel[z8,z0];
draw z9..deel[z9,z0];
endfig;
end
```

Running METAPOST on this file creates an output file `factor.2` which can be used in LATEX by `\includegraphics` simply by renaming the file into `factor2.mps`. (This, by the way, is an example of hocus-pocus which I largely discovered by trial and error, and for which the documentation I have seen is quite insufficient.)

5   Music

Themerson included a few bars of music in his books, and having read about MusiXTEX (Taupin, Mitchell, and Egler, 2000), I decided to give it a try. The manual of this package is quite detailed, and not knowing much of the terminology of musical scores, it was not easy to understand what I had to do to get something like:

but after several experiments I succeeded. The code

```
\begin{music}
\parindent0mm
\instrumentnumber{1}%
\smallmusicsize
\setstaffs1{1}%
\generalsignature{-1}\relax
\generalmeter{\meterfrac34}%
\nobarnumbers
\startextract
\notes\ibu0h0\qb0␣f\qb0␣f\qb0␣g\tbu0\qb0␣g\en
\bar
\notes\ibl1i0\qb1␣h\qb1␣h\qb1␣i\tbl1\qb1␣g\en
\bar
\notes\ibl2i0\qb2␣h\tbbl2\qb2␣g\qb2␣k\tbl2\qb2␣g\en
\bar
\notes\ibl3i0\qb3␣h\tbbl3\qb3␣h\qb3␣j\tbl3\qb3␣h\en
\bar
\notes\ibu4h0\qb4␣f\qb4␣f\qb4␣h\tbu4\qb4␣h\en
\bar
\notes\ibl5i0\qb5␣i\qb5␣j\qb5␣l\tbl5\qb5␣j\en
\bar
\notes\ibl0i0\qb0␣i\qb0␣i\qb0␣l\tbl0\qb0␣i\en
\bar
\notes\ibl1i0\qb1␣j\tbl1\qb1␣j\ql␣j\en
\endextract
\end{music}
```

resulted in the (in my view) quite acceptable result above.

I also found out that by now running LATEX on my book at every iteration was somewhat time-consuming, so I decided to keep runs of MusiXTEX outside my main document. I ran LATEX on a small

document, containing just the lines above (plus the standard `\documentclass`, `\begin{document}`, etc. to make it work), saved the result as a separate PDF-file, cropped it using Gimp, and included this in my main document. This route also solved some problems I had with interference between the various macro packages I used. Again, to get this to work, I went through several iterations, uttered many unprintable words, and deplored the lack of a simple *How to...* guide.

6   Cross references

One area where LaTeX really shone in my project was in allowing cross-referencing. To distract as little as possible from the original text of Themerson's books, I decided early on to place my annotations at the end of each book included in my edition, and to refer the reader to these end notes by small marginal numbers. To realize this, I wrote a simple macro, including a counter to keep track of the note number, and outputting the text of my annotation to a temporary file, which I read in after the text of each book was completed. As the number of notes is quite large ($\approx$ 1250) and their distribution very uneven, I thought it useful to include a back-reference from each note to the page where it is being referred to. That was easy!

A slight difficulty arose in that the LaTeX standard `marginpar` did not always select the correct margin. The replacement of `marginpar` by the package `marginnote` solved that problem.

I did not find a solution to having an annotation (by me) associated with a footnote in Themerson's original text. For now, the hack I used is to have the reference number located in the text where the footnote is referred to.

The standard index facilities of LaTeX were sufficient to create an index to all 750 persons mentioned in my annotations.

7   Print-on-demand

As I did not expect my book to become a best-seller, I decided to become my own publisher and use on-demand printing. Having no wish to take care of distributing copies of my book myself (including handling credit cards, etc.), I selected Amazon.com's daughter CreateSpace as printer.

This has proved to be a good choice. Create-Space has a reasonably clear web site, explaining the requirements for having them print a book and distributing it through Amazon. All I had to do was to create one PDF-file with the full text of my book, and a separate PDF-file with the cover. Recommended sizes are given on the web site. My final book is 170×255 mm, and 804 pages. This is close to the maximum of 820 pages allowed by the production process.

Upon uploading the two files, I was sent a hard copy proof of my book which reached me 10 days after submitting my file. After giving approval to this proof through the web site, my book (Themerson and Mars, 2010) became available for sale at Amazon.com a day later! No initial investment is required, apart from the cost of ordering the proof copy. I am quite happy with my choice.

The CreateSpace route is eminently suitable for publishing books set using LaTeX. After taking some time off to recover from my Themerson book, I will certainly try my hand again on a book on a different topic.

References

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