Example of the Use of the Style for Writing Theses at CS, SFU

by

Brown Burger

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B.Sc. (Hons.), Even Better University, 1990

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APPROVAL

Name:	Brown Burger
Degree:	Doctor of Philosophy
Title of Thesis:	Example of the Use of the Style for Writing Theses at CS, SFU
Examining Committee:	Dr. Brian Funt Chair
	Dr. Torsten Möller, Professor, Senior Supervisor
	Dr. Ghassan Hamarneh, Associate Professor, Senior Supervisor
	Dr. Mirza Faisal Beg, Associate Professor, SFU Examiner
	Dr. Christopher R. Johnson, External Examiner, Distinguished Professor of Computer Science, University of Utah
Date Approved:	September 9th, 2013

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Abstract

Here you put the abstract of the thesis.

Acknowledgments

Here go all the people you want to thank.

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Chapter 1

Purpose

This document outlines the functionality of the style file (package) csthesis.sty, suitable for writing theses in LaTeX 2$_\varepsilon$ at SFU. The style file modifies and generalizes the sfuthesis.sty, designed by Margaret Sharon from ACS. The changes were done for two reasons: 1) to reflect the most recent regulations on SFU theses;[1] and 2) to improve the overall look of the theses. The changes will be illustrated and commented on in Chapter 2; the following section summarizes the main features of the present package.

1.1 Main features of csthesis.sty

- fully conforms to the most recent regulations on SFU theses;
- offers a visually pleasing design;
- supports all optional thesis sections (Dedication, Quotation, Preface, etc.) and simplifies their inclusion;
- supports the `twoside` option of LaTeX and coordinates it with two-sided printing—this is not allowed for the library copies, but you should definitely consider it for other copies;
- comes with a full documentation, describing all available commands and identifying which parts of the code can be modified and how to achieve specific effects (like adding/removing white space between signatures on Approval page);

[1] Please refer to http://www.lib.sfu.ca/theses to check for any changes to requirements.

- comes with two files, illustrating the use of the package in writing theses (you are reading one of them). The following section describes all the files in the distribution in more detail.

1.2 Distribution

The style file csthesis.sty is accompanied by several supporting files. These are:

- `READ.ME`: the file containing the copying and distribution limitations, the installation instructions, the address where to sent bug reports, and the listing of all the files included in the csthesis bundle;
- `csthesis.ins`: the installation file for csthesis.sty. The bundle comes unpacked and ready-to-use, so you don't need to generate csthesis.sty this way, but the file is included to allow for a more compact, packed version of the bundle.
- `csthesis.dtx`: the documented code for csthesis.sty. It lists all the user commands defined by the style file and explains the code. In particular, it points out the places where the code should be modified in case you run into troubles like not being able to fit the Approval section on one page.
- `thes-short.tex`: an example of a thesis written using csthesis.sty. The thesis is "short" in that it contains only the required parts of the front matter (Abstract, Acknowledgment, Contents) but no optional parts (Dedication, Quotation, List of Figures, List of Tables, List of "other things," Preface). In addition, the thesis does not contain the optional parts of the back matter—appendices and Index.
- `thes-full.tex`: an example of the "full" version of the same thesis, containing all the optional parts from the front matter, several appendices, and Index.
- the `files/` subdirectory: the auxiliary files for `thes-short.tex` and `thes-full.tex`.
- the `doc/` subdirectory: the "printouts" of the documentation for the package and for the two example theses.

You can use either of the two versions of the thesis as a guide in designing your own thesis file—but it's in your interest to take a look at both. The difference between the

two versions is accomplished by 1) the switches located right under the beginning of the `document` environment, 2) inclusion/exclusion of the files containing optional thesis parts (Preface, appendices, Index, etc.), and 3) the inclusion of commands for generating the List of "other things" in the preamble of `thes-full.tex`.

The two thesis files demonstrate the use of the commands provided by the csthesis.sty package. If a more thorough explanation of some command(s) is required, consult the `csthesis.dvi` guide.

1.3 How to use csthesis.sty

If you're starting writing from scratch, all you need to do is to put the following two lines in the beginning of your thesis document:

```
\documentclass[11pt]{report}%% or 10pt, or 12pt
\usepackage{csthesis}
```

This makes all the commands defined in csthesis.sty available to you; you can consult the two examples theses and the `csthesis.dvi` to see what commands you have at your disposal and how they should be used.

If you're upgrading from sfuthesis.sty to csthesis.sty, you also need to include the two lines mentioned above. In addition, though, you need to change some things in your thesis document because the two thesis formats are not fully compatible. In particular, you should:

- replace the `\afterpreface` command of sfuthesis.sty with `\lists` and `\beforetext`, inserted in appropriate places (see the example theses);
- in case you're having one or more appendices, issue `\appendix` command after the last chapter of your thesis before the first appendix. In addition, treat each appendix as a chapter, i.e., the main heading of the appendix should use the `\chapter` command.

These should be all changes you need to do—if there is more, let me know (I haven't used sfuthesis.sty, so I am to some extent guessing here based on the coding differences between the two packages).

Chapter 2

Changes from sfuthesis.sty

2.1 Page layout

All the changes in this section are not required by the regulations; they were made for better visual impact.

The four margins were set by sfuthesis.sty to the values recommended in the regulations; these were kept unchanged. The space between the header and the text was slightly reduced and made dependent on the chosen point size of the font (10, 11, or 12)[1]—it now corresponds to one empty line of text.

The space between the text and the footer is set to the result of adding half an empty line to the value of the space between the header and the text. This centers the text vertically on the page with respect to the other material. If, for any reasons, you decide to adjust the vertical placement of the text, only the value of `\headsep` needs to be modified.

The first footnote is pushed slightly lower under the horizontal bar which separates footnotes from the text (see below). In addition, small vertical space separates individual footnotes on the page.[2]

The vertical space before the `paragraph` and `subparagraph` sections was slightly reduced from the original values set by LaTeX. The new values work better for the line spacing used

[1] This text is set with 10pt size, which seems to be the best choice overall from the three possibilities.

[2] This is an example of a second footnote on the page. I will make it longer than the first one. As can be seen, the two footnotes are separated by small vertical space.

This is a new paragraph in the second footnote. There is no additional vertical space between paragraphs in a footnote.

in the text (see Appendix A).

2.2 Line spacing

The style file defines three line spacing lengths: `\textstretch`, `\tighttextstretch`, and `\doublestretch`. The first is used for the regular text. The second, which basically corresponds to the single spacingon a typewriter, is used for footnotes (see page 4) and inside tables (see Table 2.1) and figures (see Figure 2.1)—including captions. The last corresponds to the double spacing on a typewriter and is used for the thesis title, as required by the regulations.

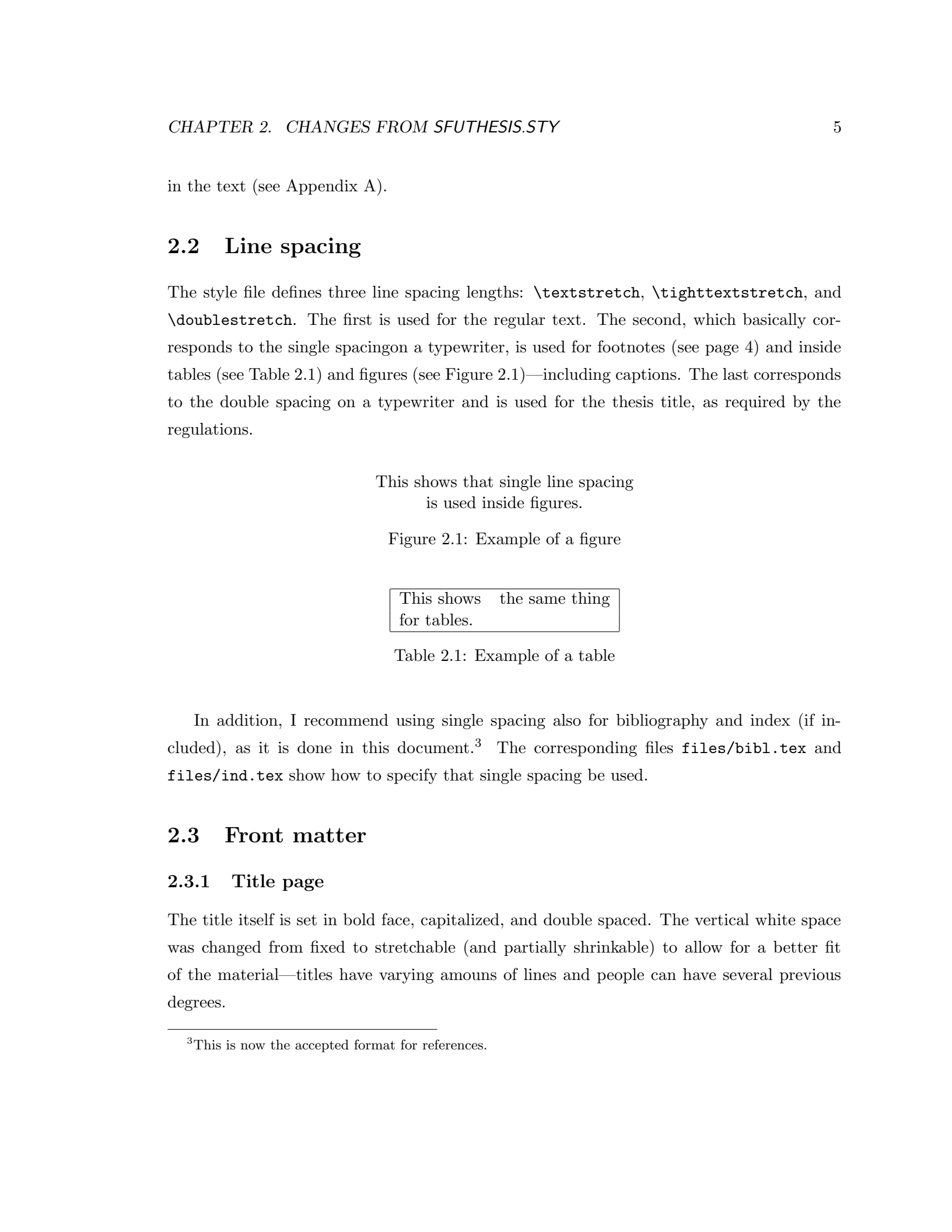

Figure 2.1: Example of a figure

This shows the same thing for tables.

Table 2.1: Example of a table

In addition, I recommend using single spacing also for bibliography and index (if included), as it is done in this document.[3] The corresponding files `files/bibl.tex` and `files/ind.tex` show how to specify that single spacing be used.

2.3 Front matter

2.3.1 Title page

The title itself is set in bold face, capitalized, and double spaced. The vertical white space was changed from fixed to stretchable (and partially shrinkable) to allow for a better fit of the material—titles have varying amouns of lines and people can have several previous degrees.

[3] This is now the accepted format for references.

2.3.2 Approval page

Essentially the same, only made easier to modify if the text doesn't fit on a single page or if you want to change the amount of white space between signatures.

2.3.3 Dedication and Quotation pages

The csthesis.sty package has a built-in support for optional Dedication and Quotation pages. Both dedication and quotation are typeset flushed right, dedication in *italics* and quotation *slanted* (both are illustrated in the full version of this document). The pages are not titled, but they are numbered, and a corresponding entry is added to the Contents table.

There are no constraints on the look of these pages imposed by the regulations, you can change the design as you see fit.

2.3.4 Contents

The table of Contents was reverted back to the original design (for report.sty) from LaTeX. There are no specific requirements in the regulations as to how the table should look like, but all the changes made to it in sfuthesis.sty—reducing white space between chapters, putting dotted lines on the chapter level, or redefining the behavior of the `\appendix` command—looked decidedly awful and so I got rid of them.

2.3.5 Preface

The regulations allow for a Preface or Foreword section, which could contain a short blurb about "why the author came to study the subject of the thesis." It's probably useless because nobody will want to write anything like that, but it's incorporated in the package for completeness. The optional inclusion of Preface necessitated the modification of the `\afterpreface` command of sfuthesis.sty, which was replaced by two commands: `\lists`, and `\beforetext`.

2.4 Back matter

2.4.1 Appendices

As mentioned in Section 2.3.4, sfuthesis.sty redefines the `\appendix` command of LaTeX. Again, there does not seem to be any reason to do that (the regulations are silent on the formatting of appendices); and the original design looks better. Thus, the present style reverts to LaTeX's original design, where appendices are treated as chapters and numbered alphabetically. (The change in numbering is accomplished by issuing the `appendix` command before the text of the first appendix.)

2.4.2 Bibliography

The csthesis.sty package does not influence the typesetting of Bibliography directly, but—as I said in Section 2.2—I recommend changing the line spacing from normal to single, as was done in `files/bibl.tex`. See the (fake) Bibliography of this document as an example of the result.

2.4.3 Index

The same comment applies to the optional Index section (see `files/ind.tex` for how to adjust the line spacing and the Index section of the full version of this document for the result).

Appendix A

Appendices:Sectioning

Appendices appear in the Contents table on the level of chapters and numbered alphabetically starting from A. You can include normal sectioning commands (notice the vertical spacing between different levels):

A.1 Section

A section is numbered and appears in the Contents.

A.1.1 Subsection

Same holds for a subsection.

Subsubsection

But not for other sectioning commands, unless you adjust the `secnumdepth` and `tocdepth` counters to higher values (by default both are set to `2`).

Paragraph A paragraph is inlined.

Subparagraph A subparagraph is inlined and indented.

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