# SYSPUB USER'S GUIDE

COMPUTING CENTRE

UNIVERSITY OF WATERLOO

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This User's Guide defines SYSPUB Version 8.5 (78JAN08). It was produced using the SYSPUB commands, with some of the SCRIPT control words described in the "Introduction to SCRIPT". It is assumed that you will have access to the "Introduction to SCRIPT" as you are reading the SYSPUB User's Guide. The current version of SCRIPT is:

UOW SCRIPT - VERSION(3.2) 78JAN13

# OVERVIEW

Many publications in an academic environment have a number of things in common:

* preliminary pages: a title page or area, an abstract, an acknowledgements section or page, a Table of Contents, a List of Tables, and a List of Figures.

* a main body: chapters and appendices divided into sections, subsections, and subsubsections, with tables, figures, block quotations, footnotes, lists of points, and some additional components such as an index and a bibliography.

However, different types of documents have different "layout" requirements. In some cases, the various levels of divisions in the main body must be numbered (such as chapter "I", section "1.1", and subsection "1.1.1"); in others, such numbering is not required. In some cases, new chapters must begin on new pages; in others, it isn't desired.

The physical layout of a document is just as important as the concepts and facts it attempts to convey. Ensuring that the layout of a document follows a set of standards necessitates that an identical sequence of layout or "formatting" operations be performed for each similar item in the document. This is time-consuming, repetitive, error-prone work. If the document is being prepared on a typewriter, it is also work which must be re-done with each successive draft.

SYSPUB is a set of commands designed specifically for use in preparing and formatting papers, theses, and other types of research and instructional publications common to the university environment. For years, people have used the computer to perform some of this work; SYSPUB offers a number of additional advantages.

SYSPUB provides 35 different commands for the various components of your document. There are also 9 different output formats, called "layouts". When you use SYSPUB, you begin by selecting the layout most appropriate to your document, but the commands you use thereafter are the same for all layouts. The following is a sample input file which formats a document in the form of a paper:

```
.im syspub layout=paper
.prelim 'Abstract'
.para
text of abstract
.chapter 'Title of First Chapter'
.para
text of first paragraph
.para
text of second paragraph
.section 'Title of Section'
.para
text of paragraph
.subsection 'Title of Subsection'
.para
  .
  .
  .
```

SYSPUB commands correspond to the component parts of your document. For example, to start a new section, you specify

```
.section 'title of section'
```

and SYSPUB produces a section heading which conforms to the layout style you are using. The same is true for the other SYSPUB commands: SYSPUB eliminates the need to learn a widely-accepted set of layout standards.

SYSPUB eliminates the re-numbering problems caused by revisions. It does the numbering for all of the above items, as appropriate to the layout you are using. If you delete a section, or add a chapter, or change the order of subsections, they are automatically re-numbered the next time you format your document. The creative desire to add or delete information no longer causes additional "re-work".

With the simpler layouts, you don't need to use all of the SYSPUB commands. For example, most small reports and papers do not have an index or a table of contents. However, with larger documents, such as users' guides and manuals, these are usually desired.

SYSPUB also has a number of specific-purpose layouts, including layouts for theses which adhere to the style indicated in the University's Thesis Regulations and Guide brochure, publications in the style defined in the Publication Manual of the American Psychological Association, and a layout for papers in the two-column format of IEEE photo-offset publications.

When you use SYSPUB, you are actually using a "superset" of the University of Waterloo version of the SCRIPT text formatter, and all of the capabilities of SCRIPT are availa-

ble to you. SYSPUB doesn't do anything which you couldn't do yourself using SCRIPT; it just eliminates the need to learn everything about SCRIPT, and simplifies a lot of tedious work. The number of SCRIPT commands which you might need in addition to the SYSPUB commands is very small (in most cases, the SCRIPT commands which leave a blank line, centre a line, and underscore a word will be sufficient).

# Chapter 1

# INTRODUCTION

## 1.1 SELECTING A LAYOUT

The SYSPUB commands are stored in a special library which you must imbed at the beginning of your SCRIPT input file by placing the SCRIPT "imbed" control word

```
.im syspub layout=xxx
```

before the first occurrence of any SYSPUB command (usually as the very first line in your file. In place of the characters "xxx", you must specify one of the layouts shown in Table 1.

TABLE 1

Layouts

| | |
|---|---|
| report | provides the basic SYSPUB commands |
| paper | for academic publications, term papers, etc |
| IEEE | for two-column IEEE photo-offset papers |
| guide | for large papers, small manuals, user's guides, etc |
| manual | for large manuals, books, etc |
| refman | for reference manuals (not yet fully-implemented) |
| thesis | for theses |
| APA3 | for theses in the APA style |
| APA4 | |

The main features of each of the layouts are outlined in Table 2. This SYSPUB User's Guide was produced using

```
.im syspub layout=manual
```

TABLE 2

Main Features of the Layouts

| | REPORT | PAPER | GUIDE | MANUAL | REFMAN | THESIS |
|---|---|---|---|---|---|---|
| title area or page | Y | Y | Y | Y | Y | Y |
| preliminary sections | | Y | Y | Y | Y | Y |
| preliminary sections start new pages | | | | Y | Y | Y |
| table of contents, etc | | | Y | Y | Y | Y |
| divisions of main body numbered | | Y | Y | Y | Y | Y |
| major divisions start new pages | | | | Y | Y | Y |
| appendices | | Y | Y | Y | Y | Y |
| bibliography | | Y | Y | Y | Y | Y |
| index | | | Y | Y | Y | Y |

## 1.2 THE OUTPUT DEVICE AND THE FORMATTING ENVIRONMENT

SYSPUB assumes that the formatted document is to be produced on 8.5x11 pages with a 1.5-inch margin on the left and 1-inch margins on the top, bottom, and right. If the output device is a high-speed line printer, no special printer setup is necessary (aside from white paper and an upper- and lower-case print train). If the output device is a typewriter terminal, the left margin of the typewriter should be set one-half inch in from the left side of the paper.

If you want the text of the publication to be double-spaced, specify the SCRIPT ".ds" control word before you imbed SYSPUB.

There are several parameters[1] which you may specify on the ".im SYSPUB" control word to control the formatting environment. For each of the parameters shown in Figure 1, the default value is the one at the top of the vertical list.

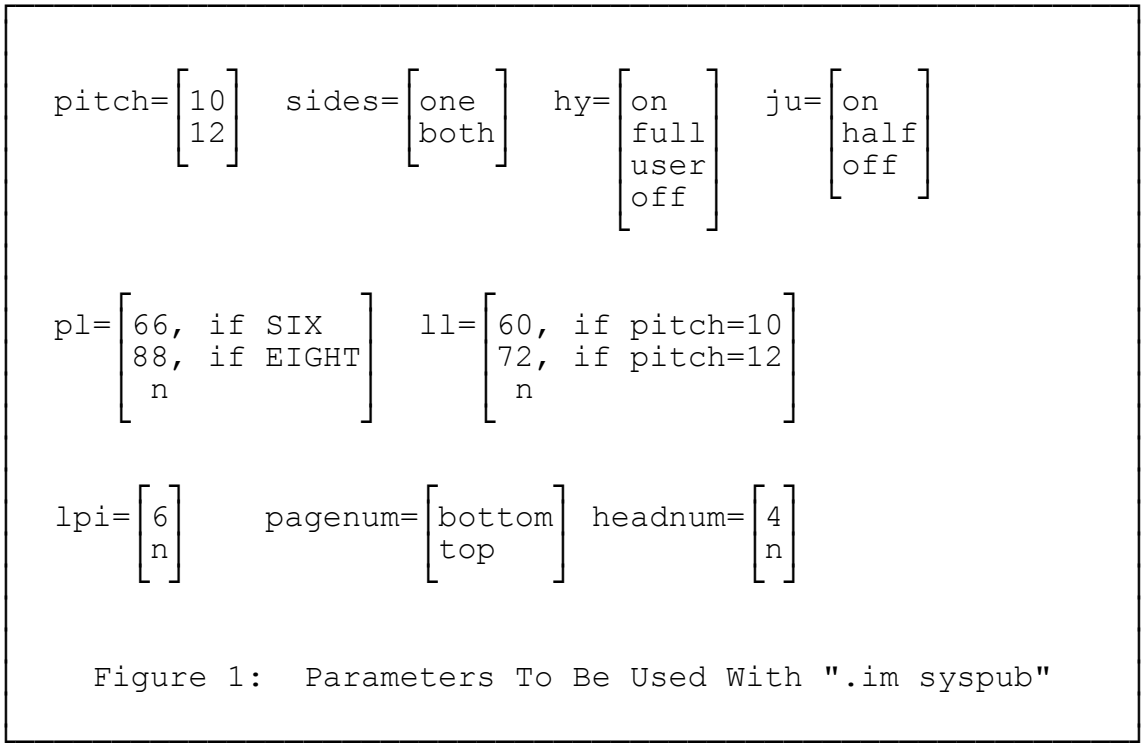


Figure 1: Parameters To Be Used With ".im syspub"

SYSPUB assumes that the output is being produced on a 10-pitch device (10 characters to the horizontal inch). If you are using a 12-pitch output device, specify "pitch=12".

If the final copy of your publication is to be reproduced on both sides of the page, the "sides" parameter will allow you to specify this.

The "hy" parameter controls hyphenation: "on" results in automatic hyphenation, "full" is the same as "on" but also

---

[1] A caution to experienced SCRIPT users: The names of these parameters may not be used as SCRIPT reference variables anywhere in your input file, nor may you use any SCRIPT reference variables which start with the letters "pub".

imbeds the hyphenation exception dictionary for you, "user" will hyphenate only at hyphen points defined in the input text (such as in compound words), and "off" causes hyphenation not to be performed at all.

The "ju", "pl", and "ll" parameters have the same function as their SCRIPT control-word equivalents.

By default, SYSPUB always numbers pages at the bottom of the pages; the "pagenum" parameter provides a way of having SYSPUB number the pages at the top, except for preliminary pages and the first page of each major division of the main body.

For those layouts which cause the various headings to be numbered, you can control the level to which headings are numbered by specifying the "headnum" parameter. By default, all levels of headings from the first level (chapters and appendicies) down to the fourth level (subsubsections) are numbered by those layouts. For example, specifying "headnum=1" will cause chapters and appendices to be numbered, but not sections, subsections, or subsubsections.

## 1.3 PLANNING YOUR PUBLICATION

SYSPUB can be very useful while you are still at the stage of planning the general organization of your publication. You can enter the SYSPUB commands to create the major divisions of the publication, and then format and print this first-draft "outline" document. Completing the publication then becomes a process of "filling in the blanks".

## 1.4 USING SCRIPT

If you are using SCRIPT under CMS, you will probably have to "define storage" to at least "400K". If you are using the BATCH Service, you will have to change your EXEC card to

```
//  EXEC  SCRIPT,SIZE=200K
```

Depending on the size of your publication, you might not need all 200K, but it is safer to start high and work down (the printout will tell you how much was actually used).

If you are specifying the "hy=full" parameter, you should add 44K to the above figures.

## 1.5 USING THE SYSPUB USER'S GUIDE

If you are using SYSPUB for the first time, you might find it most productive to adopt a step-by-step "workbook" approach to using this User's Guide. First, select the layout which you suspect is most appropriate for the publication you are going to prepare, and read up to the end of the chapter which describes that layout. Skim over the rest of the User's Guide so that you are aware of the additional capabilities of SYSPUB. While you are constructing your publication, treat the entire User's Guide as a reference manual.

# Chapter 2

## THE REPORT LAYOUT

The REPORT layout is intended for small publications. It provides the basic SYSPUB commands, as shown in Table 3. Figure 2 shows an example of the organization of the input file for a report.

```
.im syspub layout=report
.titlepage
THIS IS THE TITLE OF THE REPORT
.sk 2
Name of Author
.chapter 'Introduction'
text for this chapter
.chapter 'Hypothesis'
text
.chapter 'Method'
text
.chapter 'Observations'
text
.chapter 'Conclusions'
text
```

Figure 2: Sample Input File Using The REPORT Layout

TABLE 3

REPORT Layout Commands

.im syspub layout=report

| | |
|---|---|
| .titlepage | to define the start of the title page |
| .chapter | to create first-level divisions |
| .section | to create second-level divisions |
| .subsection | to create third-level divisions |
| .subsub | to create fourth-level divisions |
| .para | to start a new paragraph |
| .footnote, .footend | to define a footnote |
| .quote | to define a multiple-line quotation |
| .point | to create up to three levels of lists of numbered points |
| .tabnum, .tabbegin, .table, .tabend | to generate a table number, start the table, print the title of the table, and terminate the table |
| .fignum, .figbegin, .figure, .figend | similar to tables, but for figures |
| .boxon, .boxoff | to generate a box around text or a table or a figure |

## 2.1 THE TITLE OF THE PUBLICATION

The publications for which the REPORT layout is intended do not have a formal Title Page. Instead, they have a "title area" at the top of the first page, and the body of the report begins on this page, beneath the title area. The SYSPUB command

.titlepage

is used to start the formatting of the title area. It is followed, on the next input line, by the title of the publication (in capital letters and on as many input lines as are needed), and by whatever additional text you wish to appear in the title area. Do not attempt to centre the text on these input lines; SYSPUB will do that for you, automatically, for all the lines of text which appear in the title area.

## 2.2 STARTING A CHAPTER

The first-level divisions of the "main body" are called "chapters", and are created by using the SYSPUB command

```
.chapter 'title'
```

The chapter title will be centered and printed in capital letters.

## 2.3 STARTING A SECTION

The second-level divisions of a REPORT layout are called "sections". Sections are defined by using the SYSPUB command

```
.section 'title'
```

where "title" is the title of the section. The section title will be printed in uppercase and underscored.

### 2.3.1 Starting a Subsection

A section may be broken into third-level divisions called "subsections" by using the SYSPUB command

```
.subsection 'title'
```

where "title" is the title of the subsection. The subsection title will be printed as entered, underscored.

#### 2.3.1.1 Starting a Subsubsection

If necessary, subsections may be broken into "subsubsections" by using the SYSPUB command

```
.subsub 'title'
```

The title will be printed exactly as entered.

## 2.4 STARTING A PARAGRAPH

The ".para" command may be used to start a paragraph. It is used as shown below:

```
.para
text of paragraph
.para
text of next paragraph
```

By default, the ".para" command indents each paragraph by putting 3 blanks at the start of the first line of text following the ".para" command. This can be changed by specifying an "alternate paragraph indent" as the operand of the ".para" command. For example, if

```
.para 5
```

is specified, then the ".para" command will indent all paragraphs 5 spaces, from this point on and until the "paragraph indent" is re-set by another ".para" command with an "alternate paragraph indent" specified.

## 2.5 FOOTNOTES

Two SYSPUB commands are provided for the creation of footnotes. They are used in the manner indicated below:

```
text of the sentence containing the
.footnote 'word'
text of the footnote
.footend
to be referenced, followed by
the rest of the sentence, if any.
```

For example,[2] the first footnote at the bottom of this page was created by

```
For
.footnote 'example,'
This is a sample footnote.
.footend
the first footnote at the bottom ...
```

---

[2]This is a sample footnote.

### 2.5.1 Starting the Footnote

```
.footnote 'word'
```

The "word" to be referenced will be printed on the output line and the footnote number will be generated automatically and printed immediately behind it.[3]

If any punctuation is to come between the "word" and the footnote number, it should be specified as part of the first-operand "word" to be referenced. If any punctuation is to be placed immediately after the footnote number, it must be specified in quotes as the second operand of the ".footnote" command, as in:

```
.footnote 'word' 'punctuation'
```

Because the semicolon is the default SCRIPT control word separator, it is difficult to cause a semicolon to be accepted as part of either operand of the ".footnote" command. In fact, an error may result if you do not use the SCRIPT ".cw" CONTROL WORD SEPARATOR control word to nullify the control word separator character, as shown below.

```
.cw
.footnote 'word' ';'  (or .footnote 'word;')
text of the footnote
```

The ".footnote" command will reset the control word separator back to the semicolon before it returns to process the text of the footnote.

### 2.5.2 Underscoring the Word to be Referenced

If you want the "word" operand of the ".footnote" command to be underscored, do it as follows:

```
.footnote '.us word|'
```

The vertical bar at the end is essential.

---

[3] If the output is being produced in 'OFFLINE' mode, the footnote numbers are printed as superscripts. If the output is being produced in 'ONLINE' mode, the footnote numbers are printed as normal numbers, in parentheses. The 'ONLINE' or 'OFFLINE' mode is determined by the SCRIPT options OFFLINE (or PRINTER or DISK) and ONLINE (or MEMO). For more information, see Appendix A.

### 2.5.3 Terminating the Footnote

```
.footend
```

The ".footend" command must follow the text of the footnote. If the footnote is being used in reference to something in the middle of a sentence, the rest of that sentence must follow the ".footend" command.

## 2.6 QUOTATIONS

The material in this section pertains only to multiple-line (or "block") quotations; "in-line" material in quotes (like the preceding words "in-line") should be entered as normal text, without using the SYSPUB commands described below.

To begin the quotation, use the SYSPUB command

```
.quote begin
```

On the next input lines, enter the text of the quotation. To terminate the quotation, use the SYSPUB command

```
.quote end
```

For example, the input sequence

```
This is the last sentence preceding the quotation;
to start the quotation, use ".quote begin".
.quote begin
This is the quoted material.
Note that it is entered without quotes, and is
automatically indented and single-spaced by SYSPUB.
.quote end
To terminate the quotation use ".quote end";
this is the first sentence after the quotation.
```

produces:

This is the last sentence preceding the quotation; to start the quotation, use ".quote begin".

> This is the quoted material. Note that it is entered without quotes, and is automatically indented and single-spaced by SYSPUB.

To terminate the quotation, use ".quote end"; this is the first sentence after the quotation.

### 2.6.1 Footnotes Inside Quotations

If you want to footnote a "block" quotation, the SYSPUB commands for the footnote should be used inside those for the quotation, as shown in the following example:

```
.quote begin
text of quotation,
up to but not including the last
.footnote 'word'
text of footnote ...
.footend
.quote end
```

## 2.7 LISTS OF POINTS

It is often appropriate to present a sequence of information as a numbered list of points. The SYSPUB commands ".point begin", ".point", and ".point end" may be used to generate such a numbered list.

### 2.7.1 Starting a List of Points

```
.point begin
```

The SYSPUB command ".point begin" must immediately precede the input line containing the text for the first point in a list.

### 2.7.2 Continuing the List of Points

```
.point
```

The SYSPUB command ".point" is used to terminate the text of the preceding point and is followed by the input line containing the text of the next point. The number of the point will be one greater than the number of the preceding point.

For example, the input sequence

```
This is the last sentence before the list of points;
now comes the input to create the list of points.
.point begin
This is the text for the first point.
.point
This is the text for the next (and last) point.
.point end
```

produces:

This is the last sentence before the list of points; now comes the input to create the list of points.

1. This is the text for the first point.

2. This is the text for the next (and last) point.

### 2.7.3 Points Within Points

SYSPUB supports three levels of points. The ".point" command can also be used to begin a second-level point if you are already in the middle of a list of points.

```
.point 2
```

will cause SYSPUB to begin creating second-level points, numbered alphabetically. To return to the next point at the first level, specify

```
.point 1
```

and follow it with the text of the next first-level point.

If you are creating second-level points and want to start creating third-level points, then specify

```
.point 3
```

Third-level points are numbered as lower-case roman numerals. To return to second-level points, specify

```
.point 2
```

To return to first-level points from third-level points, specify

```
.point 1
```

### 2.7.4 Terminating the List of Points

```
.point end
```

The SYSPUB command ".point end" is used after the text of the last point, to return from the point-formatting mode to the "normal text" mode.

### 2.7.5 Altering the Numbering Style for Lists of Points

By default, SYSPUB numbers first-level points using arabic numerals, second-level points using lower-case alphabetics, and third-level points using lower-case roman numerals. You can change this style by using the "set" operand of the SYSPUB ".point" command. For example,

```
.point set 1 a i
```

will set the point-numbering style to the defaults just described.

```
.point set i a 1
```

will cause first-level points to be numbered using lower-case roman numerals ("i"), second-level points to use lower-case alphabetics ("a"), and third-level points to use arabic numerals ("1").

Operands other than "1", "a", and "i" are valid. A "b" operand causes SYSPUB to generate bullets for all points at the level for which it is specified. (If the output is being produced at an on-line terminal, asterisks are generated instead of bullets.) If a character other than one of "1", "a", "i", or "b" is specified, then that character will be used in a fashion similar to that for "bullets".

### 2.7.6 Limitations

There are a few things to keep in mind when using the above point-generating SYSPUB commands.

1. The "point" commands automatically indent the left and right margins, so that the text of the points are "set in" from the main text. Therefore, if you wish to use the SCRIPT ".in" INDENT control word in a point, use the additive rather than the absolute form of the arguments.

2. It is possible to use ".point end" to return from "point mode" temporarily (for example, to explain something about the preceding or following points) and then resume the "point mode" without interrupting the numbering sequence of the list of points. In this case, after the text for the "normal mode" has been specified, the list of points can be continued by using the SYSPUB command ".point" instead of ".point begin".

For example, the text of the above point was terminated with

".point end", and the text of the next point was started with ".point" rather than with ".point begin".

3. If you want to alter the formatting environment for all the points generated between the ".point begin" and ".point end" commands, do it immediately before the ".point begin" command. For example, if the normal formatting mode is "double-spaced and right-justified", but you want the text of the points to be single-spaced and not right-justified, you can specify

```
,ss;.ju no;.point begin
```

and then the text for the first point. The ".point end" command will restore the default formatting parameters. (The ",ss" above is a "no-break single space" control word; the comma is established as the no-break contro word indicator when you imbed SYSPUB -- see Appendix A for more details).

## 2.8 BOXES

The two SYSPUB commands ".boxon" and ".boxoff" may be used to start and terminate a box. For example,

```
.boxon
This text is surrounded by a box which
was created by the ".boxon" and
".boxoff" commands.
.boxoff
```

produces:

| |
|---|
| This text is surrounded by a box which was created by the ".boxon" and ".boxoff" commands. |

The conditions which must be adhered to and the restrictions which exist within the range of ".boxon" and ".boxoff" are defined below.

1. The left side of the box will be generated one position to the right of the current SCRIPT ".in" INDENT value. The right side of the box will be generated in the last position of the output line, as defined by the current value of the SCRIPT

".ll" LINE LENGTH value modified by the current "right-indent" value of the SCRIPT ".in" INDENT control word.

2. You may use the SCRIPT ".bx" control word to create "horizontal lines" within the range of ".boxon" and ".boxoff".

3. If you wish to use the SCRIPT ".in" indent control word within the range of ".boxon" and ".boxoff", then use the additive rather than the absolute form of the arguments; for example, use ".in +5" rather than ".in 5". This is necessary because of the SCRIPT ".in" control words issued by ".boxon" and ".boxoff":

```
.boxon  issues  ..in +3 -3
.boxoff issues  ..in -3 +3
```

4. The SYSPUB ".boxon" and ".boxoff" commands, by themselves, make no attempt to keep the box from being split over a page boundary. If you do not want it split across a page boundary, then use the SCRIPT ".cc" or ".fk" or ".fb" control words to ensure that the box is contiguous. If you use ".fb" or ".fk", or ".cc" in its "begin/end" form to do this, do not rely on the values of any of the SCRIPT system reference variables such as "&syspage" or "&sysline" within the range of ".boxon" and ".boxoff", as there is no guarantee that the box will print in the position in which it was formatted; use ".cc" with a numeric argument instead.

## 2.9 TABLES

Turabian [1973:159] makes an excellent statement concerning the attention you must give to tables if you are going to use them effectively:

> If tables are to serve satisfactorily the purpose for which they are made, they not only must be accurately compiled but must be so arranged that they can be easily read and interpreted. To these ends careful spacing, ruling, arrangement of headings, and, finally, the placing of the tables with respect to the text all contribute.

The following SYSPUB commands are used to construct tables. The SYSPUB command ".tabnum" is used to generate the table number. The SYSPUB command ".tabbegin" is used to

start the definition of the text and SCRIPT control words which create the table. The SYSPUB command ".table" is used to print the table number and title; and the SYSPUB command ".tabend" is used to end the definition of the table and to cause it to be positioned for printing. If the table will fit in the position at which you have defined it, it will do so. Otherwise, SCRIPT will promote it to another page (usually, the next page). To give you a better idea of how these commands are used, consider the following example; the commands themselves are described in more detail following the example.

### 2.9.1 Example of a Table

Assume that we now wish to make our first reference to a particular table. To begin, we will generate "the next available table number" and assign it to the reference variable "example".

```
.tabnum example
```

Then, we can use the reference variable "example" to make the reference to the table.

```
.ur As can be seen from Table &example.,
the quality of ... (rest of sentence).
```

which will actually print as

As can be seen from Table 4, the quality of ... (rest of sentence).

Then, at the end of the paragraph in which that sentence appears, we can specify the text and the SCRIPT control words and SYSPUB commands required to generate, position, and print the table itself.

```
.tabbegin
.table example 'This is a Sample Table'
first line of table
second line of table
 .
 .
 .
last line of table
.tabend
```

The table which the above commands create is printed below. The box around the table is not generated by the above commands; an explanation of how the box was generated is given later in this chapter.

TABLE 4

This is a Sample Table

first line of table
second line of table
.
.
.
last line of table

### 2.9.2 The Table Number

A table should be positioned as soon as possible after the first reference to it in the text. Since tables must be numbered in ascending order throughout the publication, the SYSPUB command

.tabnum refname

enables you to generate "the next available number" for a table and assign that number to the reference variable "refname", and then use "refname" to refer to the table in the text, before the table is defined, constructed, and printed.

### 2.9.3 Positioning the Table

It is desirable to print the table itself as soon as possible after it has first been referenced in the text. Therefore, at the end of the paragraph which contains the first reference to the table, the SYSPUB commands and SCRIPT control words required to define the table should be inserted, starting with the SYSPUB command

.tabbegin

The ".tabbegin" command causes single-spacing to be in effect and places you in unformatted mode. The SYSPUB ".tabend" command described below restores the formatting mode and the "line-spacing" to whatever was in effect before ".tabbegin" was encountered.

### 2.9.4 The Title of the Table

The ".tabbegin" command should be followed by the SYSPUB command

```
.table refname 'title of table'
```

which prints the word "Table", the value of "refname" (the table number), the title of the table, and leaves you in ".fo no" mode. It should then be followed by the text and SCRIPT control words needed to construct the table (or to leave space in which to paste in the table, if that is how it is to be done).

### 2.9.5 Terminating the Table

To terminate the table, the SYSPUB command

```
.tabend
```

must be inserted next. It causes the table to be positioned and printed, and restores the formatting environment for normal text. Every attempt will be made to keep the table contiguous on one page (unless the table requires more than one page).

If you specify this command in the form

```
.tabend page
```

then SYSPUB will add the number of blank lines required to result in a full-page table.

### 2.9.6 Limitations

You cannot define a footnote within the range of a table. Also, don't use the SCRIPT ".ix" index control word within a table; it will most likely result in the wrong page number in the index, since the table will probably print some other than where where it was formatted.

## 2.10 FIGURES

The considerations which must be given to tables also apply to figures. The SYSPUB commands for figures are exact parallels of those defined above for tables, with the exception that the ".figbegin" command leaves you in ".fo no" mode. For example,

```
.fignum sampfig
.figbegin
first line of figure
second line of figure
 .
 .
 .
last line of figure
.figure sampfig 'This is a Sample Figure'
.figend
```

produces Figure 3 below. Note that the text and SCRIPT control words which define the figure are placed before the SYSPUB ".figure" command, whereas, for a table, they are placed after the ".table" command.

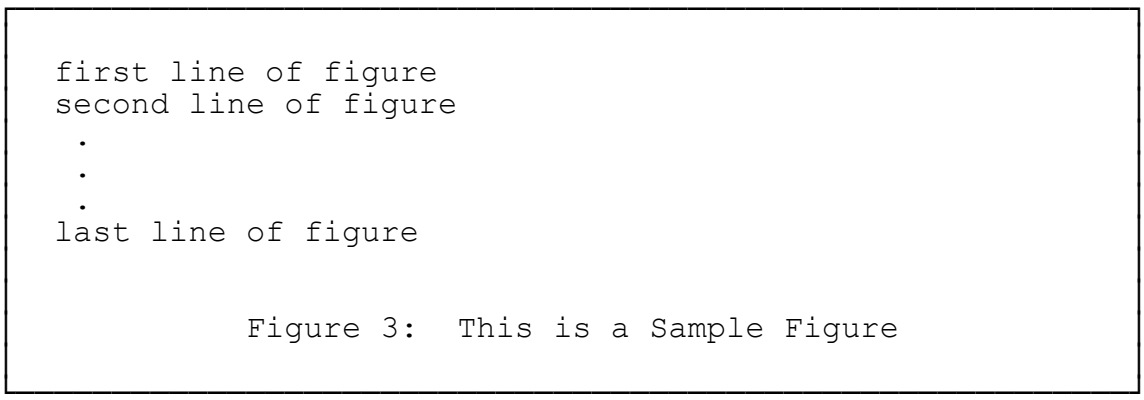


Figure 3: This is a Sample Figure

## 2.11 CALLING TABLES OR FIGURES BY SOME OTHER NAME

If you don't need to use both tables and figures in your publication, you can make use of the capabilites of the SYSPUB commands for tables and figures to create other entities.

For example, if your publication had a number of "examples", and you wanted to have them handled the same way SYSPUB handles tables and figures, you could instruct SYSPUB that your "figures" are really "examples", by specifying

```
.sr pubFIhdr = 'Example'
```

immediately after you imbed SYSPUB and before any of the SYSPUB commands for the main body of the publication. You would still use the SYSPUB commands for "figures", but they would all be annotated as "examples" in the output.

Similarly, if you wanted tables to be called "illustrations", you could do so by specifying

```
.sr pubTAhdr = 'Illustration'
```

## 2.12 PUTTING A BOX AROUND A TABLE OR FIGURE

If it is appropriate to draw a box around a table or figure (or whatever you are calling them) to set it off, the two SYSPUB commands ".boxon" and ".boxoff" may be used to create the box. They were used, for example, to put the box around Table 4. The ".boxon" command was placed immediately after the ".tabbegin" command, and the ".boxoff" command was placed immediately before the ".tabend" command.

# Chapter 3

# THE PAPER LAYOUT

The PAPER layout provides all of the commands available with REPORT, but in a layout style more suited to small research publications, technical papers, or term papers. The various levels of divisions of the "main body" are numbered (such as "1.2" for the second "section" in the first "chapter"). PAPER also provides the additional commands described in Table 5.

TABLE 5

PAPER Layout Commands

.im syspub layout=paper

| | |
|---|---|
| .prelim | for preliminary material, such as an abstract or acknowledgement |
| .appendix | to create appendices |
| .bibliography | to start a bibliography |
| .bib | to start a bibliographic entry |

## 3.1 PRELIMINARY MATERIAL

Any "preliminary" material which the paper requires may be generated by using the SYSPUB command

```
.prelim 'title'
```

The two most obvious uses of the ".prelim" command are to generate "abstract" and "acknowledgements" material, such as

```
.prelim 'Abstract'
```

followed by the text of the abstract, and

```
.prelim 'Acknowledgements'
```

followed by the text of the acknowledgements.

## 3.2 STARTING AN APPENDIX

An appendix is generated in exactly the same way as a chapter, by using the SYSPUB command

```
.appendix 'title'
```

## 3.3 THE BIBLIOGRAPHY

The SYSPUB command

```
.bibliography
```

starts the formatting of the bibliography. If the word "BIBLIOGRAPHY" is not an appropriate header for the bibliography, then use

```
.bibliography 'alternate header'
```

where "alternate header", for example, might be something like "Sources Consulted".

### 3.3.1 Starting a Bibliographic Entry

Each of the bibliographic entries is started with the SYSPUB command

```
.bib
```

If you do not have a style to which you must adhere, then it is suggested that the following general form be used to enter the text for the bibliographic entry.

```
.bib
last name of author, first name, initials.
.us title of reference.
place of publication: publisher, year.
```

You do not need to specify any SCRIPT control words for the formatting of the bibliographic entries; the ".bib" command does that for you (see the Bibliography at the end of this User's Guide for an example of the formatting).

In order to keep the text for a bibliographic entry on one page, SYSPUB internally places a SCRIPT ".cc" begin/end sequence around the text of the bibliographic entry. This means that you cannot use ".cc", ".cp", ".fk", ".fn", or ".fb" in conjunction with the SYSPUB commands for the bibliography.

### 3.3.2 Terminating the Bibliography

The text of the last bibliographic reference must be followed by the SYSPUB command

```
.bib end
```

### 3.3.3 Referencing Bibliographic Entries

In the main body of the text, bibliographic entries are referenced simply by specifying the author's last name followed by the date of the publication and the the appropriate page number(s) in the publication, as suggested by Turabian[1973:182-183].

The example in Figure 4 is taken from the Bibliography for this SYSPUB User's Guide. For an alternate method, see Appendix B.

```
.bibliography
.bib
.us Introduction to SCRIPT.
Waterloo:
University of Waterloo Computing Centre, 1977.
.bib
.us MLA Style Sheet.
2nd ed.  New York:
Modern Language Association of America, 1970.
.bib end
```

Figure 4: Input For a Sample Bibliography

## 3.4 CREATING ADDITIONAL PAGES AFTER THE MAIN BODY

The ".prelim" command can also be used to create additional pages after the main body of the publication.

# Chapter 4

## THE GUIDE LAYOUT

With layouts lesser than GUIDE, SYSPUB does not produce a Table of Contents, and hence is somewhat less expensive to use. With the GUIDE layout (or greater), SYSPUB includes the titles of preliminary pages, chapters, appendices, sections, subsections, and subsubsections in the Table of Contents, together with the titles specified by the commands introduced in this chapter. It also constructs a List of Tables and a List of Figures, using the titles specified by the SYSPUB commands which create tables and figures.

The GUIDE layout is intended for papers which are large enough to warrant a Table of Contents and/or an Index, or for other medium-sized documents which do not warrant starting each chapter on a new page. It is assumed that there will be at least one section created by the ".prelim" command (subsequent occurrences do not start new pages), followed by one or more sections created by ".chapter" (only the first chapter will begin on a new page), followed by zero or more sections created by ".appendix" (each appendix starts on a new page), possibly followed by the additional commands introduced in Table 6.

TABLE 6

GUIDE Layout Commands

.im syspub layout=guide

| | |
|---|---|
| .index | to print an index |
| .contents | to print a table of contents |
| .tables | to print a "list of tables" |
| .figures | to print a "list of figures" |

## 4.1 THE INDEX

If it is appropriate that your publication contain an index, then you should use the SCRIPT ".ix" control word to create the index entries, as they occur in the text of your publication. If you do not want your publication to have an index, ignore this section.

### 4.1.1 Printing the Index

At the end of the main body of the publication, use the SYSPUB command

```
.index
```

to cause the index to be printed. The word "INDEX" will be centred at the top of the first page of the index.

### 4.1.2 Publications With More Than One Index

If it is appropriate that your publication contain more than one index (the SCRIPT ".ix" control word allows you to construct up to nine concurrently), then each index can be printed by specifying the SYSPUB command

```
.index n 'title'
```

once for each index, where "n" is the index number (from 1 to 9) and "title" is the title to be centred at the top of the first page of index "n".

Note that this form of the ".index" command may also be used to specify an alternate title for a publication which contains only one index, by specifying

```
.index 1 'title'
```

### 4.1.3 Printing the Index in Multiple-Column Mode

By default, the index will be printed in single-column mode, the same as the rest of the publication. If your index entries are short, you may wish to have them printed in more than one column per page. For example,

```
.index n 'title' 2
```

will cause the index to be printed in two columns. You can specify a number larger than "2" for this third operand, but you may run into problems unless you have used the "ll" parameter to specify a line length greater than the default when you imbedded SYSPUB.

## 4.2 THE TABLE OF CONTENTS

The Table of Contents includes the titles and page numbers of any titles generated by the SYSPUB commands ".prelim", ".part", ".chapter", ".appendix", ".section", ".subsection", ".subsub", ".bibliography", and ".index". For chapters and appendices, the chapter and appendix numbers are printed to the left of the titles.

### 4.2.1 Printing the Table of Contents

The "contents" command causes the printing of the Table of Contents. It is of the form

```
.contents 'alternate header'
```

where "alternate header" is any character string you wish to use as the title of the Table of Contents. If you do not specify an "alternate header", then the header "TABLE OF CONTENTS" will be used.

Unless you have tables or figures, ".contents" will be the last SYSPUB command in your input file. The resulting Table of Contents pages will be numbered in lower-case roman numerals, starting one greater than the last "preliminary page" before the main body. You will have to remove these Table of Contents pages from the end of the output and insert them in their proper place.

### 4.2.2 Printing the List of Tables

If the publication contains tables, the SYSPUB command ".tables" should be used to cause the printing of the List of Tables. It is of the form

```
.tables 'alternate header'
```

where "alternate header" is any character string you wish to use as the title of the List of Tables. If you do not specify an "alternate header", then the header "LIST OF TABLES" will be used.

### 4.2.3 Printing the List of Figures

If the publication contains figures, the SYSPUB command ".figures" should be used to cause the printing of the List of Figures. It is of the form

```
.figures 'alternate header'
```

where "alternate header" is any character string you wish to use as the title of the List of Figures. If you do not specify an "alternate header", then the header "LIST OF FIGURES" will be used.

# Chapter 5

# THE MANUAL LAYOUT

The MANUAL layout is intended for documents which are large enough to warrant a formal title page and a number of preliminary pages. If the document is large enough, chapters may be grouped together in "parts". Preliminary pages, parts, chapters, and appendices each start on a new page. The additional SYSPUB commands are shown in Table 7.

TABLE 7

MANUAL Layout Commands

.im syspub layout=manual

| | |
|---|---|
| .part | to group chapters into "parts" |

## 5.1 THE TITLE PAGE

With the MANUAL layout, the text which follows the ".titlepage" command will appear on a "title page" by itself. This page will be page "i" of the publication, although it will not have a page number printed on it. The other "preliminary pages" of the publication, if any, will be numbered at the bottom of each page, beginning with "ii".

## 5.2 PARTS

If the main body of the publication is large enough that it warrants being separated into "parts", then the SYSPUB command

```
.part 'title'
```

may be used to generate each of the "part" title pages. The word "PART", the part number (in upper-case roman numerals), and the part title will be centered on an unnumbered page by themselves. The part title will print in uppercase on the part-title page, but will be added to the Table of Contents as you specified it.

## 5.3 CHAPTERS

Each first-level division started by the ".chapter" command will begin on a new page, with the word "Chapter" and the chapter number centered at the top of the page, and the title of the chapter centered below.

### 5.3.1 Calling the "Chapters" by Some Other Name

In some publications, the term "chapter" may not be appropriate, and therefore you may want some word other than "Chapter" to be used as a "header" at the beginning of each "chapter". For example, if you specify

```
.major 'Section'
```

immediately before the first occurence of ".chapter", SYSPUB will print the word "Section" at the top of the first page of each "chapter". Note that you must still use the ".chapter" command to create the major divisions of your publication, even though you are calling them something else.

## 5.4 EXAMPLE

Figure 5 illustrates the organization of the input file for the "manual" layout.

```
.im syspub layout=manual
.titlepage
THIS IS THE TITLE OF THE MANUAL
     .
     . other lines for the title page
     .
.prelim 'Abstract'
.chapter 'Introduction'
     .
     .
     .
.appendix 'other stuff'
.contents
.tables
.figures
```

Figure 5: Sample Input File Using The MANUAL Layout

# Chapter 6

## THE REFMAN LAYOUT

The REFMAN layout has not yet been fully implemented or tested. It is intended to produce output identical to that of MANUAL except for the numbering of pages, tables, and figures. It also assumes that the document is to be published on both sides of the page.

```
.im syspub layout=refman
```

# Chapter 7

## THE THESIS LAYOUT

The THESIS layout produces output identical¼ to that of the MANUAL layout, and provides the commands shown in Table 8 to create the additional preliminary pages required in a thesis.

TABLE 8

THESIS Layout Commands

.im syspub layout=thesis

| | |
|---|---|
| .author | to specify and position the name of the author on the title page |
| .course | to specify the name of the course for which the document is begin submitted, or |
| .degree | to specify the name of the degree for which the thesis is being submitted |
| .date | to generate the date and copyright lines |
| .declaration | creates the "author's declaration" page |
| .borrow | creates the "borrower's page" |

---

¼Chapter numbers will normally be printed as upper-case roman numerals. However, if the ".part" command has been used before the first ".chapter" command is encountered, then chapter numbers are printed as arabic numerals to avoid confusion.

## 7.1 ADDITIONAL COMMANDS FOR THE TITLE PAGE

### 7.1.1 The Author's Name

The author's name is positioned and printed on the Title Page by using the SYSPUB command

```
.author 'full name of author'
```

It may be followed by any additional lines of text needed to satisfy the requirements of the thesis.

If the author's name contains the apostrophe character ('), then the ".author" command must be specified instead as

```
.author "full name of author"
```

using the double-quote (") instead of apostrophes to delimit the author's name.

### 7.1.2 Degree

If the publication is being submitted as a thesis in fulfillment of degree requirements, then use the SYSPUB command

```
.degree 'title of degree'
```

followed on the next input line(s) by the name of the department granting the degree.

### 7.1.3 Course

If the publication is not really a thesis but is being submitted in partial fulfillment of the requirements for a particular course, then use the SYSPUB command

```
.course 'course code' 'title of course'
```

followed on the next input line(s) by any additional relevant information you must supply about the course.

### 7.1.4 The Date of the Publication

The ".date" command causes the "date" and "copyright" lines to be printed at the bottom of the page. It is of the form

```
.date 'copyright symbol'
```

The "copyright symbol" is optional; if the command is used as ".date" only, then the characters "(c)" will be used as the copyright symbol.

If the "date" and "copyright" lines which the ".date" command produces are not appropriate for your publication, you can omit the ".date" command, and instead use the appropriate SCRIPT control words and text lines.

## 7.2 THE AUTHOR'S DECLARATION PAGE

Most theses must have some form of "author's declaration" page. The SYSPUB command

```
.declaration
```

will generate such a page, with the appropriate words on it.

## 7.3 THE BORROWER'S PAGE

A thesis must have a "borrower's page". Such a page will be generated by the SYSPUB command

```
.borrow
```

## 7.4 EXAMPLE

Figure 6 illustrates the organization of the input file for a thesis.

```
.im syspub layout=thesis
.titlepage
THIS IS THE TITLE OF THE THESIS
.author 'my name'
.degree 'name of Degree'
Department granting the Degree
.date
.declaration
.borrow
.prelim 'Abstract'
.prelim 'Acknowledgements'
.chapter 'Introduction'
.chapter 'Hypothesis'
.chapter 'Method'
.chapter 'Observations'
.chapter 'Conclusions'
.appendix 'other stuff'
.contents
.tables
.figures
```

Figure 6: Sample Input File Using The THESIS Layout

# Chapter 8

# SPECIAL LAYOUTS

Several special-purpose layouts are available with SYSPUB, for layout styles particular to specific publishing groups. SYSPUB currently has layouts for IEEE and APA.

## 8.1 THE IEEE LAYOUT

The IEEE layout is intended for papers which are to be produced on the grid sheets provided by the IEEE Editorial Department for the preparation of papers in two-column format for IEEE photo-offset publications. It provides all of the SYSPUB commands which correspond to the PAPER layout, with the differences and/or exceptions noted below:

1. none of the headings produced by ".chapter", ".section", or ".subsection" will be numbered;

2. titles produced by ".chapter" will be centred, underscored, and capitalized;

3. titles produced by ".section" will underscored and printed flush with the left margin, exactly as entered;

4. titles printed by ".subsection" will be underscored and indented as the starting text in a new paragraph.

A sample input file using the IEEE layout is shown in Figure 7.

If the paper is being produced at 8 lines to the inch, then specify the parameter "lpi=8" on the ".im syspub" command.

```
.im syspub layout=ieee
TITLE OF PAPER
Name of Author
Author's Business Affiliation
City, Province, Country
.prelim 'Abstract'
text of short summary or abstract of paper
.chapter 'Title of First Major Heading in Paper'
text
.section 'Title of Second-Level Heading'
text
.subsection 'Title of Third-Level Heading'
etc
.bibliography 'References'
etc
```

Figure 7: Sample Input File Using The IEEE Layout

## 8.2 THE APA LAYOUTS

There are two layouts which conform to the style of the American Psychological Association. They provide all of the SYSPUB commands which correspond to the THESIS layout, with the differences and/or exceptions noted below:

1. headings for the various divisions in the main body will not be numbered, or named;

2. layout APA4 supports four levels of divisions of the text:

   a) titles produced by ".chapter" will be in upper-case, centered, and will start on a new page;

   b) titles produced by ".section" will underscored, centered, and printed as entered;

   c) titles produced by ".subsection" will be under-scored and printed flush with the left margin, exactly as entered;

   d) titles produced by ".subsub" will be under-scored and indented as the starting text in a new paragraph, exactly as entered.

3. layout APA3 supports three levels of divisions of the text:

   a) titles produced by ".chapter" will be underscored, centered, and printed as is;

   b) titles produced by ".section" will be underscored and printed flush with the left margin, exactly as entered;

   c) titles produced by ".subsection" will be underscored and indented as the starting text in a new paragraph, exactly as entered.

# Appendix A

# CHANGING THE FORMAT OF THE PUBLICATION

## A.1 TOP AND BOTTOM MARGINS AND TITLES

If you wish your publication to have a TOP MARGIN or BOTTOM MARGIN different than those which are the SCRIPT defaults, then specify the SCRIPT ".tm" and/or ".bm" control words before you imbed SYSPUB. SYSPUB will fail to work properly if you re-define them once SYSPUB has been imbedded.

SYSPUB, by default, removes from you all control over the number of title lines in the top and bottom margins, because it constantly issues its own SCRIPT ".hs" and ".fs" control words as it is deciding when to print the top and bottom title lines. You can re-define the top and bottom title after you imbed SYSPUB, but SYSPUB will decide when to print the top title and when to print the bottom title. If you wish to define any number of top and bottom title lines which are always to be printed at the top and bottom of each and every page, then do the following before you imbed SYSPUB:

```
.sr pubMYhs = number of top title lines desired
.sr pubMYfs = number of bottom title lines desired
then define the top and bottom title lines
```

If you do this, you must define at least one of each.

## A.2 CONTROLLING ENTRIES IN THE TABLE OF CONTENTS

By default, section (second-level), subsection (third-level), and subsubsection (fourth-level) headings are included in the Table of Contents. You can control the level of inclusion by setting the value of the "inclusion level", with the SCRIPT control word

```
.sr pubSWinc = value
```

A value of "4" or greater will cause section, subsection, and subsubsection headings to be included in the Table of Contents; this is the default. A value of "1" will cause chapter and appendix (first-level) headings to be included,

but section, subsection, and subsubsection headings will be omitted from the Table of Contents.

For example, if you wish to have all subsubsection headings omitted from the Table of Contents, then the SCRIPT control word

```
.sr pubSWinc = 3
```

should be specified before the first occurrence of the SYSPUB command ".subsub".

If you wish to omit the subsection and subsubsection headings from the Table of Contents for a particular chapter (or range of chapters), then specify the SCRIPT control word

```
.sr pubSWinc = 2
```

before the occurrence of the SYSPUB ".chapter" command which defines the first chapter for which you want them omitted, and then specify the SCRIPT control word

```
.sr pubSWinc = 4
```

at the very end of the chapter (or at the very end of the last chapter in the range of chapters) for which you want them to be omitted from the Table of Contents.

## A.3 CHANGING THE NUMBERING STYLES

### A.3.1 Parts, Chapters, and Appendices

If you do not like the default numbering styles, you can change any or all by inserting the SCRIPT control words

```
.sr pubPAnar = 'new style'
.sr pubCHnar = 'new style'
.sr pubAPnar = 'new style'
```

before the first occurence of ".part", ".chapter", or ".appendix" respectively. The "new style" must be one of the choices

```
arabic
roman upper
theatre       (don't use this for chapters)
```

"Theatre" numbering results in the sequence "A", "B", ..., "Z".

### A.3.2 Footnotes

You can force the footnote numbering to be done independent of the ONLINE or OFFLINE output mode by specifying one of the following before the first occurence of the ".footnote" command. Specifying

```
.sr pubfnsup = 'nosup'
```

will force the footnote numbers not to be generated as superscripts. Instead, they will be generated as though the output mode was ONLINE. Specifying

```
.sr pubfnsup = 'sup'
```

will force the footnote numbers to be generated as superscripts even if the output mode is ONLINE.

## A.4 SPECIAL CONSIDERATIONS

There are a number of things which SYSPUB does internally with which you may not interfere. They are presented below in terms of the SCRIPT control words on which they depend.

### A.4.1 Control Word Separator (cw)

All SYSPUB commands with the exception of those for footnotes demand that

```
.cw ;
```

be in effect.

### A.4.2 Control Word Indicator Literal (li)

SYSPUB establishes the period (.) as the control word indicator literal and the comma (,) as the nobreak control word indicator literal. These must be in effect whenever a SYSPUB command is encountered and also must be in effect whenever several circumstances over which you have no con-

---

½SYSPUB causes a number of "internal" commands to be invoked automatically (for example, at the top of each page, SYSPUB checks to see if there are any tables or figures to be printed).

trol occur.½ This means that the only time it is safe for you to change the control word indicator is in the "begin/end" range of a block of text defined by the ".cc" or ".fk" or ".fn" SCRIPT control words. Disasterous results will occur in other circumstances.

### A.4.3 Remote (rm)

SYSPUB issues a "first line of the text area" REMOTE using

```
.rm *
```

Therefore, you cannot; nor can you change the TOP MARGIN (tm) value after you imbed SYSPUB.

### A.4.4 Translate on Input (ti)

For your convenience, SYSPUB defines a translate table which will map the digits 0 through 9 into their superscript equivalents. All you need to do to take advantage of this is to use the "set" operand of ".ti" to define an escape character. For example, if you specify

```
.ti set #
```

as the "translate on input" escape character, then an input line containing the characters

```
The quantity "x squared" is written as x#2.
```

will print on the high-speed line printer as

The quantity "x squared" is written as $x^2$.

### A.4.5 Underscore, Underscore and Capitalize (us,uc)

SYSPUB establishes the vertical bar (|) as the "escape" character which turns underscoring off and on in the ".us" and ".uc" operand lines, by issuing a

```
.ud set |
```

# Appendix B

# AN ALTERNATE METHOD FOR BIBLIOGRAPHIES

The material below describes a method for preparing the Bibliography which is not often recommended because it is cumbersome. It may not be used with a layout less than MANUAL.

## B.1 ENTERING THE BIBLIOGRAPHIC ENTRIES

The bibliography, if present in a publication, is placed at the end of the publication (unless there is an index). However, to allow you to reference the bibliographic entries with symbolic references instead of absolute numbers, the SYSPUB commands to format the bibliography can be entered immediately after the SYSPUB commands for the title page and immediately before the SYSPUB command for the preliminary pages (or parts and chapters, if there are no preliminary pages). If you do this, you must use the ".bib" command in the form

```
.bib refname
```

where "refname" is a unique one- to eight-character "reference name" which the author assigns. Bibliographic reference numbers will be generated automatically and printed to the left of each reference.

## B.2 REFERENCING BIBLIOGRAPHIC ENTRIES

In the main body of the publication, the "refname" may be used to refer to the bibliographic entry by specifying the "refname" followed by a period followed by a colon followed by the appropriate page number(s) in the reference. For example, if "turabian" were the "refname" assigned to the publication by Turabian (see the Bibliography for this SYSPUB User's Guide), then it could be referenced in the form

```
.ur [&turabian.:182-183]
```

to reference the pages in that publication which describe this method. The number assigned to the bibliographic entry by the ".bib" command is substituted automatically for "ref-name" (in this case, "turabian"). Therefore, if bibliographic entries are added to or deleted from the bibliography during the writing of the publication, there is no need to have to worry about using the proper "reference number" in the main body of the paper.

## Appendix C

## OTHER SYSPUB REFERENCE VARIABLES

The following SYSPUB reference variables may be of some use to you.

pubXXnum where "XX" is one of the following two-letter combinations:

| | |
|---|---|
| BI | bibliographic entry number |
| FN | footnote number |
| CH | chapter number |
| FI | figure number |
| PA | part number |
| PO | point number |
| SE | section number |
| SS | subsubsection number |
| SU | subsection number |
| TA | table number |

For example, if you want to save the current chapter number for reference later in the document, then:

```
.chapter 'title of chapter'
.se thischap = &pubCHnum
     .
     .
     .
As was previously mentioned in
.ur Chapter &thischap., we ...
```

pubSWprt contains the current chapter (or appendix), section, subsection, and subsubsection numbers as a character string of the form

chapter.section.subsection.subsubsection

pubSWtop is the number of lines to be skipped at the top of the title page, the first page of the bibliography, the declaration page, and the first page created by each occurrence of the ".prelim", ".chapter", ".appendix", ".contents", ".tables", ".figures", and ".index" commands. Its default value is 5, but it can be changed by specifying the

```
.sr pubSWtop = number of spaces desired
```

SCRIPT control word immediately before invoking the SYSPUB command to which you want it to apply. The new value will be used by all of the above SYSPUB commands encountered thereafter, until you change it again.

pubSWbtw is the number of lines skipped before a section, subsection, or item, and before and after a table or figure. You can change it the same way you can change "pubSWtop", with the same resultant effect. Its default value is 3.

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# INDEX OF SYSPUB COMMANDS

TABLE OF CONTENTS

## LIST OF TABLES

LIST OF FIGURES