# opcit (version 2.0)

# a package for footnote-style bibliographical references

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#### 1 New features in version 2

Users of opcit that are familiar with the package will be interested in the following new features:

- The bug that used to forbid constructions like \cite[pp has been fixed, so you no longer need to type \cite[p{}p or \cite[p\relax p.
- The bibliography style has been fully recoded, and it is more complete now.
- Cross-referencing has been implemented, both between bibliographical entries (so that an article in a book makes reference to the book) and between footnotes (so that 'op. cit.' is a hyperlink to the footnote where the work was first cited, or alternatively a reference can be made to the footnote number).
- A way to omit information in the footnotes (but still list it in the final list) is now available. Using this you can avoid the annoying repetition potential to @INCOLLECTION entries, like '... pages 1-20, p. 13'.
- opcit now checks whether the optional argument to an *Idem*-citation is identical to the last one, in whose case omits it. This prevents things like two consecutive footnotes both saying '*Idem*, p. 13'. Also, appearance of '*Idem*' only happens if it was the immediately previous footnote that referred to the work.
- Global and local mechanisms are provided for turning off either or both 'Idem' or 'op. cit.' (substituting hereafter's).

These new features are implemented as options to the package. This means that the previous way to load the package, with a custom BibTeX style as an option, has changed. See section 3.1 below.

This second release of opcit owes its existence to both the encouragement and the suggestions I got from John Scott, the first opcit user I knew of (that wasn't an acquaintance of mine).

#### 2 Introduction

The basic bibliography styles of LATEX  $2_{\varepsilon}$  and BIBTEX, with labels between [ and ], are very foreign to the common uses of humanities-writing. In recent times, the category of bibliographical styles known as 'author-date' seems to have gained acceptance and become the standard way to refer to a final list of references. This category of styles has been successfully implemented in LATEX and BIBTEX, for example in formidable packages such as natbib, achicago, and harvard.

However, certain disciplines still use the 'old way' of footnote-referencing, above all in journal articles, which do not have a final list of 'References' to which a key can refer. Author-year styles have the significant drawback that the labels interfere with the flow of the discourse, both in writing and in reading; and, as Susan King and Oren Patashnik point out in their 'Editorial note' in the apalike.bst file, the main reason to use them (that changes to the bibliography does not mean "changing numbers in both references and text") is rendered meaningless by computerized typography. The 'footnote category' of bibliographical styles has not been directly addressed by LATEX package-writers before opcit.

Actually, there is a package intended to place the bibliography as footnotes, namely footbib. In this package, the labels appear as superscripts—[1]—and the information about the source is appended to the bottom of the page. This style is a kind of 'hybrid' between footnote and label styles: the numbering of the citations is independent from the footnotes, and if other footnotes (not bibliography ones) appear, they appear separated from the citations.

The system provided by opcit makes the references footnotes in the full sense. As is customary in this kind of style, it keeps track of the sources already been cited, in order to avoid multiple copies of the same, potentially long, footnote. So, for 'post-citations' (a later citation of a work already cited), it makes automatic use of conventions such as Idem and  $op.\ cit.$ —which gives the package its name—or allows the user to set 'hereafters' to repeatedly refer to the same publication.

What I regret most about this package is that I was not able to make it 'bst-independent,' i.e., able to run with any BIBTEX style that the user could possibly want to use. (This, for example, is one of the good things about footbib.) The main reason why this was not possible is that bst files are designed to print the information in a list, not as footnotes, inserting, for example, periods instead of commas, and giving the author names with last-name first.

The BIBTeX style I provide in this version is much more complete than that in the first one. However, I have maintained the premise that new styles can be created by the users. To that end, I have greatly expanded the comments to the code of opcit.bst below, so its adaptation is easier. As usual, any modification is welcome as long as the file name is changed. Also, if you are creating a new style, I would like to (collaborate and) consider it for inclusion in the opcit distribution.

<sup>&</sup>lt;sup>1</sup>By Eric Domenjoud, 1995.

#### 3 Use

#### 3.1 Loading the package

As usual, you have to load the package with \usepackage[\langle options \rangle] \{ opcit \}

The  $\langle options \rangle$ , all new to the second version, are:

custombst	Allows the user to issue a \bibliographystyle command
	to change the BibTeXused by default.
nocustombst	To use the default style. This is of course the default option.
hyperref	Makes the expression 'op. cit.' (or the one set by the user) a
	hyperlink to the first citation of the reference. Default if the
	hyperref package has been loaded before opcit; otherwise,
	it is not default.
nohyperref	No hyperlinks. Default when package hyperref is not
	loaded.
omitting	Omits certain information, such as pages, volume, series,
	etc., from the footnotes (you can of course control what is
	omitted and what is not). Selected by default.
noomitting	Turns off the omission mechanism altogether.
idemcheck	Checks for identical <i>Idem</i> -citations, omitting the optional
	argument. Selected by default.
noidemcheck	Turns off the check.

See below for detailed information on the effects of these options.

#### 3.2 Citations

\cite\*

\cite The user keeps citing with \cite. Thus, \cite{texbook} will produce the footnote '2'. The optional argument has the usual meaning, so for example, \cite[p.~100]{taruskin} creates '3'.

Note that opcit adds a period at the end of the footnotes; however, if the user adds it (for example, in \cite[Introduction.]{gellner}), it will not: '4'. It will also avoid it after '?' or '!'; in general, after any character with a \sfcode equal to the one of the period. (This is lost in \frenchspacing and similar situations, where opcit has no way to 'see' the period, and will always add one.)

A \cite command can also occur within the argument of a \footnote. In that case, the information on the source is added to the text of the footnote, with no period added.<sup>5</sup>

The starred version of \cite omits the author's name from the footnote. So:

<sup>&</sup>lt;sup>2</sup>Donald E. Knuth, *The T<sub>E</sub>Xbook* (Reading, Mass.: Addison Wesley, 1986).

 $<sup>^3</sup>$ Richard Taruskin, Defining Russia musically: Historical and Hermeneutical Essays (Princeton: Princeton University Press, 1997), p. 100.

 $<sup>^4\</sup>mathrm{Ernest}$  Gellner, Thought and change (Chicago: University of Chicago Press, 1964), introduction.

<sup>&</sup>lt;sup>5</sup>This is because it is assumed that the user will always 'close' the footnote with a final period. Issuing here \cite{martinb}, which produces Jesús Martín-Barbero, Communication, culture,

Gellner expanded one of the ideas presented from his mentioned book in a later study.  $\cite*{gellner2}^6$ 

#### 3.3 Post-citations

Post-citations—later citations of an already cited work—behave differently. For example, a new citation of the TEXbook through \cite{texbook} will not render the whole footnote text again, but rather '7'. The author name has been reduced to the last-name, and the rest of the information is replaced by 'op. cit.' Again, the period is appropriately handled: no period is added to the one at the end of this expression. But in the case of \cite[p.~101]{taruskin}, it is added: '8'. You can also use \cite\* to hide the author's name for op. cit.-citations.

This is not good when there are several works by the same author, in whose case opcit has no way to know which one is meant at each point. This is handled with the 'hereafter' mechanism (section 3.5).

New Feature nocheckidem

Another kind of situation arises when the same work is cited *consecutively*. In that case, the corresponding footnote(s) will say 'Idem'. In principle, this will be followed by the optional argument, if any. However, if two Idem-citations have the same optional argument, the second time it will not be typeset. (This can be turned off with the nocheckidem option.) In any case, a final period will be added if needed.

Thus, a further citation here of Taruskin's book (the one that was cited last in the previous paragraph), through \cite[p.~xxi]{taruskin}, renders '9'. If the same command (\cite[p.~xxi]{taruskin}) is issued again, the footnote will be '10', with no 'p. xxi' in it.

Since an Idem-citation will always hide the author's name, use of  $\cite*$  in those situations has no special effect.

New feature

As a reader, I have had the annoying experience of needing to find a reference for which the footnote to the page says only 'Bartoš: op. cit.' You are forced carefully to look through all the previous footnotes in search of the whole information. It was thus very nice to come across a book<sup>11</sup> with footnote references, but in which any post-citations indicated the footnote in which the work was first cited—something like '(note 14).' I then decided to implement this in opcit.

\bibref

So, command  $\begin{cases} bibref{\langle key \rangle} \end{cases} produces the number in which the <math>\langle key \rangle$  reference was  $\cite'd$  for the first time. (If the reference has not been  $\cite'd$  before, however, there will be an error message.) You can use  $\begin{cases} bibref anywhere, \end{cases}$ 

and hegemony: From media to mediations (London: SAGE Publications, 1993), I do not want opcit to add a period.

<sup>&</sup>lt;sup>6</sup>Nations and Nationalism (Ithaca: Cornell University Press, 1983).

<sup>&</sup>lt;sup>7</sup>Knuth, op. cit.

<sup>&</sup>lt;sup>8</sup>Taruskin, op. cit., p. 101.

 $<sup>^9 \</sup>mathit{Idem},$ p. xxi.

 $<sup>^{10}</sup> Idem.$ 

<sup>&</sup>lt;sup>11</sup> Jamie C. Kassler: *Music, Science, Philosophy: Models in the Universe of Thought* (Aldershot, Burlington, Singapore and Sydney: Ashgate, 2001).

in the main text, as the optional argument to a \cite, or in a footnote. For example, you can post-cite the TEXBook with \cite[note~\bibref]{texbook}, or \footnote{\cite{texbook}} (see footnote \bibref above).}, etc. In the first case you would get '12'.

hyperref

The footnote number printed by **\bibref** (either a manual or an automatic one) will be a hyperlink if the hyperref option is in place. In fact, this option provides satisfactory cross-referencing with hyperlinks: the 'op. cit.' expression itself will be a hyperlink if this option is chosen.

The hyperref option is in force by default if the hyperref package has been loaded (before opcit). If the package is loaded, but hyperlinks for citations are not desired, they can be turned off with the nohyperref option to opcit.

#### 3.3.1 Extra control

\resetcites

In long documents, for example books with chapters, it might be desirable to reset the citations so that they are again fully cited in the footnotes (even if they were already cited, say, in a previous chapter). This is done with the command \resetcites. It affects all the entries in the bibliography database.

\cited

The contrary procedure—to make the next citation of a work a post-citation, with *op. cit.* instead of the full information—is possible for individual entries:  $\cited{\langle key1\rangle, \langle key2\rangle, \ldots}$  will make opcit pretend that the entries in the argument were already cited. This is particularly useful with cross references among entries (see section 4.1).

#### 3.4 Customization

\opcittext \idemtext

The user can change the expressions 'op. cit.' and 'Idem' by \renewcommand'ing the \opcittext and \idemtext commands, respectively.

#### 3.5 The 'herafter' mechanism

hereafter = "" When two or more works by the same author are \cite'd, the op. cit. mechanism is not reliable. The user should then provide a 'hereafter' value for each work by the same author in the bib file. Then, opcit will use the value of this entry in the place of op. cit.

For example, if Gellner's mentioned books had hereafter entries of "T{\&}C" and "N{\&}N", respectively, the commands \cite{gellner} and \cite{gellner2} would produce '13' and '14' (of course, from the second time these works are cited on). Note that the strings were emphasized. The starred version \cite\* still hides the author's name, and the 'Idem' mechanism will apply if any of the works is \cite'd for the second time in a row.

<sup>&</sup>lt;sup>12</sup>Knuth, op. cit., note 2.

 $<sup>^{13}</sup>$ Gellner: T & C.

 $<sup>^{14} \</sup>text{Gellner: } N \& N.$ 

If no hereafter entry is found (and there are several references by the same author), a warning will be issued, and the deliberately unacceptable expression *?Op.?Cit.?* substituted.

The value of hereafter, that replaces 'op. cit.,' will be a hyperlink if the hyperref option is on.

\hereafter

The \hereafter command typesets the hereafter string of the last \cite'd work, so that we can say something like

\footnote{See \cite{gellner}; hereafter I will refer to this text as \hereafter.}

This mechanism can be used also for single works of a particular author. The result of \hereafter is not a hyperlink.

#### 3.6 Omitting text from the footnotes

New Feature \toomit

Sometimes it is desirable to omit some part of the bibliographical information from the footnotes, keeping it on the final references list. This is now allowed by opcit through the command \toomit. You use it in the .bib file, like this:

address = "Aldershot\toomit{, Burlington, Singapore and Sydney}",

The effect is that the argument of \toomit will be typeset in the final references list, but not in the footnotes.

Typical cases when this is useful are:

- Long addresses (example above).
- Long titles: title = "The Prisoner of Zenda\toomit{: being the story of three months in the life of an English gentleman}".
- Some translated titles: title = "Music and Discourse\toomit{ [Musicologie g{\'e}n{\'e}rale et s{\'e}miologie]}".

A special case of omission concerns page numbers for articles in journals or books. Since the page numbers for articles usually go at the end of the reference, they could clash with the optional argument to \cite (something like a 'pages 1-20, p. 13'). This cannot be fixed with \toomit, because the particle 'pages' is added by BibTeX, so it's not susceptible of \toomit. The same is true of the volume, the series, and number of a @BOOK entry, among others.

The solution is that opcit omits these fields altogether from the footnotes (they still appear in the final bibliography list).

\with

This is the default behavior, but it can be overriden. The  $\$  command forces the  $\langle field \rangle$  of the next reference to appear, even if it would by default be omitted. So, for example, to get a footnote that does include the pages of an article, you type  $\$  cite{foo}. Similarly, the volume of a book can be 'de-omitted' by typing  $\$  with{volume}\.

Several \with commands can go in succession. For example, if you want the page numbers of the article from a collected edition, and the volume of the book that contains, you can say \with{pages}\with{volume}\cite{book}.

The scope of \with is only the next \cite (each \cite sets all default omissions back on). On the other hand, nothing happens if a \cite does not have the  $\langle field \rangle$  that was requested with \with.

A more sophisticated version of \toomit allows the user to use \with in connection with it. \toomit [ $\langle category \rangle$ ] { $\langle text \rangle$ } will by default omit the  $\langle text \rangle$  (from the footnotes), but it could be forced typing \with [ $\langle category \rangle$ ]. Note that the  $\langle category \rangle$  is not a BibTeX field.

For example,

```
title = "Music and discourse: Toward a semiology of
  music\toomit[translation]{\ [Musicologie
  g{\'e}n{\'e}ral et s{\'e}miologie]}"
```

the translation will by default be omitted in the footnote, but there will be a \with{translation} that will include it.

noomitting

You can turn off the omissions by specifying the noomitting option to the package. In that case, the commands \toomit and \with have no effect.

#### 3.7 The final references list

The command **\bibliography** has the usual effect of producing a final section (or chapter) for 'References.' According to the BIBTEX style used, the format of the entries is different in the references list from the footnotes.

Frequently, a document with bibliographical references in footnote style does not include a final references list. But the user has to tell opcit where to find the BibTeX database, which is done by the \bibliography command. So there is now a \nobibliography that works just like \bibliography but produces no list. The command takes the file name(s) of the database(s) as its argument.

Bear in mind that if you use \nobibliography instead of \bibliography, some information that is by default omitted from the footnotes (see section 3.6) might be completely lost. opcit emits a warning of this in the log file.

# 4 The BibTeX style

The BIBTeX style (opcit.bst) that comes with this version 2 of opcit is fairly complete, but this does not mean that it can handle every conceivable combination of different pieces of information in any bibliographical reference. I have provided the standard entry types, and the fields are also about the same as in standard styles (with the notable addition of hereafter, discussed in section 3.5). So I repeat the *caveat* of Oren Patashnik: be creative in the use of entries and fields, and you will be able to achieve pretty much anything.<sup>15</sup>

New Feature

\nobibliography

 $<sup>^{15}{\</sup>rm It}$  is never a bad idea to read Patashnik's "BibTeXing" (February 8, 1988), file btxdoc.dvi in LATeX standard distribution.

For example: rather than providing a field for translation, which would imply provision of a host of additional fields—datetranslated, original, translator, ...—and would not be used very often, I have relied on the user's judicious use of fields like note and howpublished. The following conventions are true of all entry types without exception:

- howpublished is printed immediately after edition.
- note is printed at the end of an entry. It is also omitted from the footnotes (but can be retrieved with \with{note}).

#### 4.1 Cross referencing

crossref = "" Cross referencing through the crossref field has been fully implemented in version 2. Its exact behavior depends on whether a reference is being cited in a footnote, or it appears in the final list.

Consider, for example, the entry

```
@INCOLLECTION{derrida,
  title = "Deconstruction and actuality",
  author = "Jacques Derrida",
  crossref = "postmodern",
  pages="75--78"
}
```

If there is a \cite{derrida} in the document, the result will be equivalent to having typed: \footnote{Jacques Derrida, ''Deconstruction and actuality,'' in \cite{postmodern}.}

The last \cite is added automatically by opcit, as a result of the crossref field. Its output will be either a full citation of the book, or an 'op. cit.' expression, depending on whether the book has already been cited or not.

The citation that results from the crossref field will by default *not* count as the first citation of that entry ("postmodern" in the example). This means that a later citation of this same entry (be it by itself or within another cross reference) will expand the full information again. The command \cited (section 3.3.1) can be used to override this and make future citations of the cross reference be of the *op. cit.* type.

In addition, *Idem* is disabled for it. However, post-citations of the main reference ("derrida") are not affected at all by the cross reference mechanism, and will use the regular 'op. cit.' or '*Idem*' expressions.

In the final references list, the effect of the crossref field is more familiar: the entry will get the information for the missing fields from the entry that is being cross-referenced, just as in a standard BibTeX style.

#### 4.2 Other tools

The new field hereafter has already been explained (section 3.5), as well as the use of \toomit (section 3.6). Other features will be introduced in this section.

\bibpunctuation

The \bibpunctuation command expands into a comma in the footnotes, but into a period in the final references list. It is internally used by opcit.bst to separate the different pieces of information within an entry, and the user can use it just as well.

New Feature \bibcase

Use of \bibpunctuation is likely to need complement for the capitalization of what follows. After a comma, things should start lowercase; after a period, uppercase. This ambiguous case has been conceived for opcit as the 'bibliography-case,' and implemented in the command \bibcase. You can insert it anywhere and it will make the first letter of the following word either lower- or uppercase. For example, opcit.bst inserts \bibcase before the particle 'in' of an @INCOLLECTION entry. Applying braces, like in \bibcase{paideia}, would capitalize or de-capitalize the whole argument.

\bibcite

If you have to know it all, the implementation of crossref described in the previous section is made through the \bibcite command. It takes two arguments: the label to cite within the citation, and the whole information to be typeset in the final list. You can directly use this command in any field.

#### 4.3 The entry types

The opcit BibTeX style accepts the same entry types as the standard styles. Below you find examples of each of the entry types in both footnote and final-list layout, as well as explicit lists of omitted fields (see section 3.6).

#### 4.3.1 Book

Omitted fields: volume and series (recovered by \with{volume}); number and series (\with{number}); note (\with{note}).

@BOOK{berlinsky,
 author="David Berlinsky",
 title="Newton's Gift\toomit{: How Sir Isaac Newton
 Unlocked the System of the World}",
 publisher="Simon f\%\ Schustor"

publisher="Simon {\&} Schuster",
address="New~York and London",
vear="2000"}

The first footnote for this entry would read:

David Berlinsky, *Newton's Gift* (New York and London: Simon & Schuster, 2000).

In the final reference list, the entry looks like:

Berlinsky, David. Newton's Gift: How Sir Isaac Newton Unlocked the System of the World. New York and London: Simon & Schuster, 2000.

```
_ 2 __
@BOOK{tac,
    author="Ernest Gellner",
    title="Thought and Change",
    series="''The Nature of Human Society'' Series (ed.\
      Julian Pitt-Rivers and Ernest Gellner) Press",
   number="1",
    year="1964",
    address="Chicago",
    publisher="University of Chicago"}
Footnote layout:
     Ernest Gellner, Thought and Change (Chicago: University of Chicago Press,
     1964).
For the final-list of this and the rest of the examples see page 16 (footnote-layout
is illustrated in the main text).
                                    __ 3 _____
@BOOK{walker,
    title="The Final Years 1861--1886",
    volume="3",
    series="Franz Liszt",
    author="Alan Walker",
    publisher="Alfred A. Knopf",
    address="New York",
    year="1996"}
Footnote layout:
     Alan Walker, The Final Years 1861-1886 (New York: Alfred A. Kopf, 1996).
This is a case in which you might prefer typing \with{volume}\cite{walker},
with the following effect:
     Alan Walker, The Final Years 1861-1886, volume 3 of Franz Liszt (New
     York: Alfred A. Kopf, 1996).
4.3.2 Article
Omitted fields: pages, month, note.
                                     _ 1 _
@ARTICLE{sheldon,
    author="David A. Sheldon",
```

```
title="The Galant Style Revisited and Re-Evaluated",
journal="Acta Musicologica",
volume="47",
number="2",
year="1975",
pages="240--70"}
```

#### Footnote layout:

David A. Sheldon, "The Galant Style Revisited and Re-Evaluated," *Acta Musicologica* 47/2 (1975).

\_\_\_\_\_2 \_\_\_\_\_

```
@ARTICLE{nattiez,
```

```
author="{Jean-Jacques} Nattiez and Isabelle Schulte-Technoff",
title="L'etnomusicologia: strutturalismo o culturalismo?\toomit{
    Intervista con Jean-Jacques Nattiez di Isabelle Schulte-Technoff}",
journal="Musica/Realt{\'a}",
volume="61",
pages="109--131",
year="2000",
month="March"}
```

#### Footnote layout:

Jean-Jacques Nattiez and Isabelle Schulte-Technoff, "L'etnomusicologia: strutturalismo o culturalismo?," Musica/Realtà 61 (2000).

Or, alternatively, \with{month}\with{pages}\cite{nattiez} produces:

Jean-Jacques Nattiez and Isabelle Schulte-Technoff, "L'etnomusicologia: strutturalismo o culturalismo?," Musica/Realtà 61 (March 2000): 109–131.

#### 4.3.3 Incollection

For articles in an edited book. For use with  $\mbox{\sc BibT}_{\mbox{\sc E}}\mbox{\sc Cross-reference}$  (cross-reference (crossref) see examples 2ff.

Omitted fields: pages, chapter, note.

```
@INCOLLECTION{laudan,
title="Explaining the Success of Science\toomit{: Beyond
```

```
Epistemic Realism and Relativism}",
author="Larry Laudan",
booktitle="Science and the Quest for Reality",
editor="Alfred I. Tauber",
address="London",
publisher="MacMillan Press Ltd.",
pages="137--161",
year="1997"}
```

#### Footnote layout:

Larry Laudan, "Explaining the Success of Science," in Alfred I. Tauber (ed.), Science and the Quest for Reality (London: MacMillan Press Ltd., 1997).

Given the following entry:

@BOOK{grove,
 booktitle="Grove Music Online",
 editor="L. Macy",
 url="http://www.grovemusic.com/"}

another entry can make reference to it:

@INCOLLECTION{weber,
 title="Weber, Gottfried",
 author="Janna K. Saslaw",
 crossref="grove",

urldate="October 5, 2005"}

Then, citation of the latter in the footnotes will \cite the former. The layout of this 'nested' \cite will depend on the kind of entry it is (usually a book), and might also be op. cit., if it has already been cited. In this case the result is:

Janna K. Saslaw, "Weber, Gottfried," in L. Macy (ed.), *Grove Music Online*, http://www.grovemusic.com/ (accessed October 5, 2005).

#### 4.3.4 Inbook

For individual chapters or articles from books by a single author.

Omitted fields: pages, chapter, note.

@INBOOK{stuff, title="The Stuff of Change", booktitle="Thought and Change", pages="126--146", chapter="6", crossref="tac"}

This entry makes reference to the first example of  $\mathtt{QBOOK}$  to create the following footnote:

Ernest Gellner, "The Stuff of Change," chapter 6 of op. cit.

This would work best if the book entry had a field for hereafter, creating something like "chapter 6 of *Thought and Change*." On the other hand, \with{pages} adds "...chapter 6 (pages 126–146) of..."

```
@INBOOK{attemborough,
   author="David Attenborough",
   title="The Infinite Variety",
   type="Episode",
   chapter="1",
   booktitle="Life on Earth\toomit{ \upshape (videorecording)}",
   publisher="BBC",
   year="1979"}
```

#### Footnote layout:

David Attemborough, "The Infinite Variety," episode 1 of  $Life\ on\ Earth$  (BBC, 1979).

#### 4.3.5 PHDthesis

Omitted fields: note.

```
@PHDTHESIS{saslaw,
    author="Janna K. Saslaw",
    title="Gottfried Weber and the Concept of Mehrdeutigkeit",
    school="Columbia University",
    year="1992"}
```

#### Footnote layout:

Janna K. Saslaw, Gottfried Weber and the Concept of Mehrdeutigkeit (Ph. D. diss.), Columbia University, 1992.

#### 4.3.6 Mastersthesis

Analogous to phdthesis, but with 'M. A. thesis' instead of 'Ph. D. diss.'

#### 4.3.7 Proceedings

Essentially equivalent to @BOOK. One difference is the possible presence of organization (which only gets typeset if editor is missing); another is that there is no edition.

#### 4.3.8 Booklet

This entry type behaves exactly as @BOOK.

#### 4.3.9 Inproceedings

@INPROCEEDINGS is to @PROCEEDINGS what @INCOLLECTION is to @BOOK: there is no edition, and organization can replace editor. Otherwise the behavior is similar.

#### 4.4 Modifying the bibliography style

This section makes explicit the conventions that a BibTEX style (a bst file) should follow in order to support and be supported by opcit.

The basic form of a opcit-supported \bibitem is: \bibitem{\label\} \biblastnames{\label ast name(s)\} \label{lastnames} \label{lastname} \lab

As long as this scheme is strictly followed, opcit will run. 16

The style has therefore to have a method of finding out only the last name(s) of author/editor, to be passed to opcit as the argument to \biblastname. This is independent from the actual formatting of the names (that happens right before the first \bibpunctuation).

Other conventions are probably always needed, but not syntactically required:

- Instead of periods or commas, the style should append \bibpunctuation commands (this command is converted into commas in the footnotes, into periods in the references list).
- \bibcase commands should be added at strategic points (the particle 'in' for @INCOLLECTIONs, and in general everything that comes after a \bibpunctuation).

\sameauthors

• If the style substitutes a line for repeated author(s)' name(s), opcit needs a way to know the 'real' author. This is achieved by the style not typesetting the line by itself, but rather appending a \sameauthors command (defined by opcit as a rule of length \sameauthorsrule).

\bibhereafter

• The style should provide for handling of the hereafter field: its contents (if any) should be passed on to opcit as the argument to \bibhereafter, as part of the \( \langle additional \) declarations \( \rangle \).

Another kind of tools are those that are not hard-wired in opcit, but whose use is more or less mandatory with footnote-style referencing. For example, it is customary that the author's name appears, in the footnotes, as first-last name ('Ernest Gellner'), and as last-first ('Gellner, Ernest') in the final list. This is more a feature of the bst than of opcit itself, so it is supposed to be implemented there. As a result, it should be implemented in any BIBTEX intended for use with opcit.

This is done by making the bst itself define and use its own commands, advisably at the beginning of the bbl file, usually in the {begin.bib} function.

\newBibCommand

Typically, these definitions will make use of opcit's \newBibCommand:

<sup>&</sup>lt;sup>16</sup>This can be easily achieved in the style by suitably modifying the bibstart and fin.entry functions.

 $\mbox{\newBibCommand} \{\langle command \ name \rangle\} \{\langle footnote\text{-}style \rangle\} \{\langle list\text{-}style \rangle\}$ 

This means that the new command will expand to the first meaning when encountered in footnotes, and to the second when in the final list. Use of arguments with \newBibCommand is surprisingly intuitive, and is illustrated in the items below.

opcit.bst defines five tools in this way:

• \bibparenthesis should parenthesize its argument when in footnotes, but typeset it (after a period) in the final list. This is used for the publisher and the year of books: '(London: Penguin, 1989)' but '. London: Penguin, 1989'. This command is defined with

\newBibCommand{\bibparenthesis[1]}{ (#1)}{. \newblock #1}. Later, the {make.address.publisher.year} function of the bst makes use of this command.

- \newBibCommand{\SwapNames[2]}{#1 #2}{#2, #1} implements the ordering of names. The author/editor name then is issued as, for example, \SwapNames{Ernest}{Gellner}.
- \bibincite and \bibincitestar are the commands used by the bst file to implement cross references between entries. In their definition, they use internal opcit commands. I would recommend to copy them from opcit.bst, and in any case simply to add stuff to them. Leave the \recover@last alone, unless you know what you are doing!
- \GobbleOrNot is used to gobble (or not) the punctuation mark when a period ends the previous text. For example, the middle initial in 'Donald E. Knuth' would clash with \bibpunctuation in the final reference list: 'Knuth, Donald E. The TeXbook.' But the period has to be included in the footnote (Donald E. Knuth, The TeXbook'). Similarly, the particle 'Ph. D. diss.' has to gobble the following period in the final list, but not the closing parenthesis in the footnotes. Thus, \GobbleOrNot is defined as

\newBibCommand{\GobbleOrNot}{\relax}{\newblock\@gobble}

# The final list (examples)

Attenborough, David. "The Infinite Variety." Episode 1 of *Life on Earth* (videorecording). BBC, 1979

Berlinsky, David. Newton's Gift: How Sir Isaac Newton Unlocked the System of the World. New York and London: Simon & Schuster, 2000

Gellner, Ernest. "The Stuff of Change." Chapter 6[pages] (pages 126–146) of Thought and Change

- Laudan, Larry. "Explaining the Success of Science: Beyond Epistemic Realism and Relativism." In Alfred I. Tauber (ed.), *Science and the Quest for Reality*. London: MacMillan Press Ltd., 1997[pages]: 137–161
- Nattiez, Jean-Jacques and Isabelle Schulte-Technoff. "L'etnomusicologia: strutturalismo o culturalismo? Intervista con Jean-Jacques Nattiez di Isabelle Schulte-Technoff." *Musica/Realtà* 61 ([month]March 2000)[pages]: 109–131
- Saslaw, Janna K. gobble. "Weber, Gottfried." In L. Macy (ed.), *Grove Music Online*.http://www.grovemusic.com/ (accessed October 5, 2005)
- \_\_\_\_\_. Gottfried Weber and the Concept of Mehrdeutigkeit. Ph. D. diss gobble.. Columbia University. 1992
- Sheldon, David A. gobble. "The Galant Style Revisited and Re-Evaluated." *Acta Musicologica* 47/2 (1975)[pages]: 240–70
- Walker, Alan. The Final Years 1861–1886[volume]. Volume 3 of Franz Liszt. New York: Alfred A. Knopf, 1996

### 5 Implementation

#### Identification

```
1 (*package)
2 \NeedsTeXFormat{LaTeX2e}[1995/12/01]
3 \ProvidesPackage{opcit}[2006/09/20 Footnote references (Federico Garcia) Version 2]
4 \RequirePackage{xspace}
```

#### **Declarations**

```
5 \newif\ifopcit@bbl\opcit@bblfalse
  \begin{tabular}{ll} 6 \verb|\newif\ifopcit@footnote| opcit@footnotefalse \end{tabular}
  7 \newif\ifperi@d\peri@dfalse
  8 \newif\ifhyper@opcit
  9 \newif\if@omitting
 10 \newif\if@idem
11 \newif\ifcheck@idem
12 \newif\ifcheck@@idem
13 \newif\if@opcit
14 \newif\ifcustom@bst
15 \newcount\@lastcite
16 \end{\colored} \label{thmosque} \label{thmosque} \colored{\colored} \label{thmosque} \label{thm
17 \newtoks\opcit@redefs
18 \newtoks\opcit@defs
19 \newcommand*{\last@cited}{)OpcitFirst(}
20 \newcommand*{\opcittext}{\textit{op.\,cit.}}
21 \newcommand*{\idemtext}{\textit{Idem}}
22 \newcommand*{\sameauthors}{\rule{\sameauthorsrule}{.4pt}}
23 \newcommand*\opcitwarning[1]{\PackageWarning{noopcit option is called for,
               but '#1' has no hereafter.}}
25 \newcommand*\opcit@noreferror[1]{\PackageError{key '#1' has not been cited.}
                   {\string\bibref can be used only after the first citation of a work.
                    (You might also have mistyped the key.) Go on, but there won't be a
                   cross reference here.}\textbf{??}}
29 \let\@quoteornot\relax
```

#### **Options**

```
30 \DeclareOption{hyperref}{\hyper@opcittrue}
31 \DeclareOption{nohyperref}{\hyper@opcitfalse}
32 \DeclareOption{omitting}{\@omittingtrue}
33 \DeclareOption{noomitting}{\@omittingfalse}
34 \DeclareOption{noidem}{\@idemfalse}
35 \DeclareOption{idem}{\@idemtrue}
36 \DeclareOption{checkidem}{\check@idemtrue}
37 \DeclareOption{nocheckidem}{\check@idemfalse}
38 \DeclareOption{opcit}{\@opcittrue}
39 \DeclareOption{noopcit}{\@opcitfalse}
40 \DeclareOption{nocustombst}{\newcommand\opcit@bst{\bibliographystyle{opcitf}}}
41 \DeclareOption{custombst}{\let\opcit@bst\relax}
```

```
42 \@ifpackageloaded{hyperref}
43 {\ExecuteOptions{omitting,checkidem,nocustombst,idem,opcit,hyperref}}
44 {\ExecuteOptions{omitting,checkidem,nocustombst,idem,opcit}}
45 \ProcessOptions
46 \ifhyper@opcit\RequirePackage{hyperref}\fi
47 \opcit@bst
```

#### 5.1 The macros

The basic idea behind the working of opcit is that the bbl file produced by BIBTEX is read at the beginning of the document, not to produce the list of references, but to define the (internal) commands that will expand into the footnote references. For example, the entry texbook defines the commands \@texbook,\texbook@star, \texbook@author, and so on. These commands contain the actual text to be written in the footnotes.

The \cite command itself is redefined, based on circumstances, to execute the appropriate control sequence each time. At the beginning, \cite{texbook} means basically \footnote{\@texbook}. But it also redefines \@texbook so that the next time it is used it will expand to 'Knuth, op. cit.'

Before reading the bbl file, however, we have to define the 'communication commands' that enable the latter to pass information on to opcit.

#### 5.1.1 Communication commands

Punctuation marks are to be added only if the last character was not a period, a question or an exclamation mark (which have a \sfcode of 2000).

```
48 \newcommand{\newBibCommand}[3]{%
      \newcommand#1{#2}%
      \opcit@redefs\expandafter{\the\opcit@redefs%
50
         \renewcommand#1{#3}}}
52 \let\opcitstart\relax
53 \newBibCommand{\opcitend}{\relax}{\ifnum\spacefactor=\sfcode'?\else\unskip.\fi}
54 \newBibCommand{\bibpunctuation}{,\xspace}{%
      \ifnum\spacefactor=\sfcode'?\else\unskip.\fi\xspace}
  \newBibCommand{\biblastnames[1]}{%
      \global\@namedef{\@curr@bibitem @authors}{#1}}{\relax}
  \global\expandafter\edef\csname\@curr@bibitem @hereafter\endcsname{%
60
      \ifhyper@opcit
          \noexpand\hyperlink{\@curr@bibitem @key}{#1}\else#1\fi}}{\relax}
61
62 \newBibCommand{\bibcase[1]}{\lowercase{#1}}{\uppercase{#1}}
63 \newBibCommand\QuoteOrNot{\gdef\@quoteornot{','\global\let\@quoteornot\relax}}{\relax}
```

#### 5.1.2 Omitting mechanism

Here we use a feature of \@nameuse: an undefined command called by this method will not be an error, but a \relax. Thus, when a \with{ $\langle field \rangle$ } redefines \omit@field to be \@gobble, the result of \toomit (in the footnotes) will

be either \@gobble\@gobble or \relax\@gobble. In either case, \with has to take care of re-omitting (adding its argument to a list, eventually gone over by \finalize@cite).

```
64 \ightharpoons 64 \
                                                  \newBibCommand{\toomit[2][omitted]}{%
                                                                                 \label{lem:condition} $$ \operatorname{0mit0#1}\\ensuremath{0gobble{#2}}{\#2}} $$
66
                                                                                   \newcommand\with[1]{%
67
68
                                                                                                                 \global\expandafter\let\csname omit@#1\endcsname\@gobble
69
                                                                                                                 \edef\@reomit{\@reomit,#1}}
70
                                                  \newcommand\@reomit{omitted}%
71 \else
72
                                                  \newcommand\toomit[2][omitted]{#2}
73
                                                  \let\with\@gobble
74 \fi
```

#### 5.1.3 Reading the bbl

After having set up the communication, the bbl file is read (if it exists). This is done within a group, for thebibliography and \bibitem are redefined (the former as nothing). At the moment, the communication commands have their 'footnote meaning,' the first part of their definition (the second part has been stored in \opcit@redefs, to be redeemed later on).

In \bibitem, #1 is the label for the \cite command; #2 is a series of declarations written out to the bbl file by the BIBTEX style (one of them, required, is the command \biblastnames, whose argument contains only the last name(s) of the author(s)). #3 is the full author(s)' name(s), that appears the first time the work is \cite'd. Finally, #4 is the rest of the information for the entry.

```
75 \bgroup
      \renewcommand{\newBibCommand}[3]{%
76
77
          \newcommand#1{#2}%
78
          \global\opcit@defs\expandafter{\the\opcit@defs
79
              \newBibCommand{#1}{#2}{#3}}}
      \renewenvironment{thebibliography}[1]{\relax}{\relax}
80
      \def\toomit{\noexpand\toomit}%
81
      \def\QuoteOrNot{\noexpand\QuoteOrNot}%
82
83
      \long\def\bibitem#1#2\opcitstart #3\bibpunctuation \newblock#4\opcitend{%
84
          \ifx#3\sameauthors\else\def\@lastauthors{#3}\fi
85
          \global\expandafter\edef\csname#1@author\endcsname{\@lastauthors}%
          \global\def\@curr@bibitem{#1}%
86
          \global\expandafter\edef\csname #1@first\endcsname{%
87
               \noexpand\opcit@noreferror{#1}}%
88
          \global\@namedef{#1@star}{%
89
               \global\expandafter\edef\csname #1@first\endcsname{\thefootnote}%
90
              \ifhyper@opcit\hypertarget{#1@key}{}\fi
              #4}%
          \global\def\hereafter{\@nameuse{#1@hereafter}}%
93
94
          \global\expandafter\def\csname @#1\endcsname{%
              \@nameuse{#1@author}, \@nameuse{#1@star}}%
95
```

The last construction ensures that if a bbl was not found, LATEX will still understand \cite.

This reading of the bbl happens at the beginning of the job, but it can also happen by the user's request (to reset the cites to the full information), with \resetcites. Here goes that. I can't remember why exactly—it has something to do with argument expansion—but this cannot be done by defining a common command for both macros.

```
106 \newcommand*\resetcites{%
107
      \bgroup
         \renewcommand{\newBibCommand}[3]{%
108
109
            \newcommand##1{##2}%
            \global\opcit@defs\expandafter{\the\opcit@defs
110
                  \newBibCommand{##1}{##2}{##3}}}
111
         \renewenvironment{thebibliography}[1]{\relax}{\relax}
112
113
         \def\toomit{\noexpand\toomit}%
114
         \def\QuoteOrNot{\noexpand\QuoteOrNot}%
115
         \long\def\bibitem##1##2\opcitstart ##3\bibpunctuation \newblock##4\opcitend{%
116
            \fine $$ \left(\frac{\pi}{3}\right) = \frac{\pi}{3} 
117
            \global\expandafter\edef\csname##1@author\endcsname{\@lastauthors}%
            \global\def\@curr@bibitem{##1}%
118
            \global\expandafter\edef\csname ##1@first\endcsname{%
119
               \noexpand\opcit@noreferror{##1}}%
120
121
            \global\@namedef{##1@star}{%
122
                  \global\expandafter\edef\csname ##1@first\endcsname{\thefootnote}%
                  \ifhyper@opcit\hypertarget{##1@key}{}\fi
123
124
125
            \global\def\hereafter{\@nameuse{##1@hereafter}}%
            \global\expandafter\def\csname @##1\endcsname{%
126
               \@nameuse{##1@author}, \@nameuse{##1@star}}%
127
            128
            ##2}
129
         \let\newcommand\renewcommand
130
         \InputIfFileExists{\jobname.bbl}{\global\opcit@bbltrue}%
131
132
            {\global\opcit@bblfalse\PackageWarningNoLine{opcit}{%
                 No \jobname.bbl file. There will be no footnote references}}
133
      \egroup}
134
```

#### 5.1.4 The \cites

When opcit reads the bbl file, a series of commands are defined for each bibliographical entry. The most important are (for the entry foo):

- \foo@author has the full author name(s). It is used only the first time foo is \cite'd.
- \foo@authors contains the last name(s), to be used in post-citations.
- \foo@star contains the rest of the information for the entry. (The name of this command responds to \cite\* being a \cite without author.)
- \foo@hereafter equals \opcittext by default, but is changed by a \bibhereafter in the bbl file.
- \@foo expands initially to \foo@author, \foo@star—i.e., authors (full name) followed by info.

This information is used by \cite and \cite\* (redefined earlier as \opcit@cite). Before expanding into the actual information, they check if they appear in a footnote. <sup>17</sup> If not, they call a \footnote, appending a period at the end if necessary. Then, \cite calls \@foo, while \cite\* calls \foo@star.

Then they call the redefinition routine \renew@cites (section 5.1.5). The main task of this latter is to substitute \foo@authors (only last names) for the original \foo@author (full names), and redefine \foo@star (which was the rest of the information) as \foo@hereafter (which is either \opcittext or the user's hereafter field). (However, this simple main task is obscured in the code by the *Idem* mechanism.)

```
135 \newcommand{\opcit@cite}[2][\@empty]{\nocite{#2}%
136
       \ifnum\interlinepenalty=\interfootnotelinepenalty\opcit@footnotetrue
137
            \else\opcit@footnotefalse\expandafter\footnote\fi
138
       {\@nameuse{@#2}%
       \check@for@period{\@nameuse{@#2}}%
139
       \finalize@cite{#1}{#2}}}
140
141 \newcommand{\opcit@cite@star}[2][\@empty]{\nocite{#2}%
       \ifnum\interlinepenalty=\interfootnotelinepenalty\opcit@footnotetrue
142
143
            \else\opcit@footnotefalse\expandafter\footnote\fi
       {\@nameuse{#2@star}%
144
       \check@for@period{\@nameuse{#2@star}}%
145
       \finalize@cite{#1}{#2}}}
146
   \newcommand\finalize@cite[2]{%
147
       \global\@lastcite=\c@footnote\relax
148
       \ifx\@empty#1\else
149
150
            \ifcheck@@idem
151
                \check@for@period{\idemtext}%
                \def\this@opt{#1}%
152
```

 $<sup>^{17}{\</sup>rm This}$  requires the document class to set \interfootnotelinepenalty different from \interlinepenalty.

```
153
                \ifx\last@opt\this@opt\else
                    \check@for@period{#1},\@quoteornot\ #1%
154
155
            \else\check@for@period{#1},\@quoteornot\ #1%
156
157
            \fi
158
       \fi
       \ifopcit@footnote\peri@dtrue\fi
159
       \ifperi@d\else.\@quoteornot\fi
160
       \global\def\last@opt{#1}%
161
       \check@@idemfalse
162
       \if@omitting
163
            \@for\@tempcsa :=\@reomit \do
164
                {\global\expandafter\let\csname omit@\@tempcsa\endcsname\relax}%
165
            \global\def\@reomit{omitted}%
166
167
       \fi
168
       \renew@cites{#2}%
169
```

The first lines of \finalize@cite are part of the mechanism to catch identical optional arguments to two \cites in a row. It is a function whose methods are scattered here and there in the code, but it is simple enough if anyone ever needs to follow it.

#### 5.1.5 Redefinition routine

The redefinition routine is in charge of catching two identical \cite's in a row, in which case it typesets \identext. But the main task is to reduce \foo@star (the information other than author of the entry foo) to \foo@hereafter.

```
170 \newcommand{\renew@cites}[1]{%
                        \recover@last%
171
172
                        \global\def\last@cited{#1}%
                        \cited{#1}%
 173
 174
                        \ifopcit@footnote\else\if@idem
                                      \global\@namedef{@#1}{\@idem{@#1}}%
 175
176
                                      \global\@namedef{#1@star}{\@idem{@#1}}%
 177
                        \fi\fi
                        178
           \newcommand*\cited[1]{\@for\@tempcsa :=#1 \do{%
179
                        \verb|\global@namedef{@#1}{\@nameuse{#1@authors}, ~\@nameuse{#1@hereafter}}|| % \end{| } % $$ $ \end{| } % $$ \end
180
181
                        \global\@namedef{#1@star}{\@nameuse{#1@hereafter}}}%
 182 \newcommand\recover@last{%
                        \global\expandafter\edef\csname @\last@cited\endcsname{%
183
184
                                      \noexpand\@nameuse{\last@cited @authors},%
                                      ~{\noexpand\@nameuse{\last@cited @hereafter}}}%
 185
 186
                        \global\expandafter\edef\csname\last@cited @star\endcsname{%
 187
                                     {\noexpand\@nameuse{\last@cited @hereafter}}}%
 188
189 \newcommand\@idem[1] {\advance\@lastcite1\relax
                        \ifnum\@lastcite=\c@footnote
190
```

#### Additional functions and user commands

```
195 \def\check@for@period#1{{\normalsfcodes\setbox0\hbox{#1%}
       \ifnum\spacefactor=\sfcode'.\global\peri@dtrue\else
197
       \global\peri@dfalse\fi}}
198 \ifhyper@opcit
       \newcommand*\bibref[1]{\hyperlink{#1@key}{\@nameuse{#1@first}}}
199
200 \else
       \newcommand*\bibref[1]{\@nameuse{#1@first}}
201
202 \fi
203 \newcommand\nobibliography[1]{\if@filesw
204
       \immediate\write\@auxout{\string\bibdata{#1}}\fi
       \if@omitting\PackageWarningNoLine{opcit}{No final references list,
205
           there might be information within \string\toomit\space commands that will be lost}\i
206
207 \let\opcit@bibliography\bibliography
208 \renewcommand{\bibliography}{%
       \renewcommand\newBibCommand[3]{\relax}%
209
210
       \the\opcit@redefs\opcit@bibliography}
211 \newcommand{\thebib@renew}{}
212 \@ifundefined{chapter}{%
       213
214
       \renewcommand{\thebib@renew}{\chapter*{\bibname}\@mkboth{\bibname}{\bibname}}}%
215 \renewenvironment{thebibliography}[1]
        {\thebib@renew%
216
217
         \the\opcit@redefs%
218
         \left\{ \right\} 
219
              {\left\langle \right\rangle }
220
               \leftmargin\bibindent
               \itemindent -\bibindent
221
               \parsep \z@
222
223
               \@openbib@code
               \usecounter{enumiv}%
224
225
               \let\p@enumiv\@empty
226
               \renewcommand\theenumiv{\@arabic\c@enumiv}}%
227
         \sloppy
228
         \clubpenalty4000
229
         \@clubpenalty \clubpenalty
230
         \widowpenalty4000%
         \sfcode'\.\@m}
231
        {\def\@noitemerr
232
          {\@latex@warning{Empty 'thebibliography' environment}}%
233
234
         \endlist}
i/package;
```

# 6 The opcit.bst bibliography style

I have had no time to fully document this bibliography style, or even to purify it and make it most economical...

```
235 (*bst)
236 ENTRY
237
     { address
238
       author
239
       booktitle
       chapter
240
       edition
241
       editor
242
       hereafter
243
       howpublished
244
       institution
245
246
       journal
247
       key
248
       month
249
       note
250
       number
251
       organization
252
       pages
253
       publisher
254
       school
255
       series
       title
256
257
       type
258
259
       urldate
260
       volume
261
       year
262
     {}
263
     { label }
264
265
266\ {\tt INTEGERS}\ {\tt { output.state before.all mid.sentence after.sentence }}
         after.block quoted.state period.state }
269 STRINGS { s t last.authors quotes }
271 FUNCTION {init.state.consts}
272 { #0 'period.state :=
273 #0 'before.all :=
     "" 'last.authors :=
274
     "" 'quotes :=
275
276 }
278 FUNCTION {new.block}
279 { output.state before.all =
```

```
'skip$
280
281
     { after.block 'output.state := }
282 if$
283 }
284 FUNCTION {not}
285 { #0 }
286 { #1 }
287 if$
288 }
289
290 FUNCTION {and}
291 { 'skip$
     { pop$ #0 }
293 if$
294 }
295
296 FUNCTION {or}
'skip$
298
299 if$
300 }
301
302 FUNCTION {field.or.null}
303 { duplicate$ empty$
304 { pop$ "" }
305
       'skip$
306 if$
307 }
308
309 FUNCTION {emphasize}
310 { duplicate$ empty$
311 { pop$ "" }
      { "{\em " swap$ * "}" * }
312
   if$
313
314 }
316 INTEGERS { nameptr namesleft numnames }
317
318 \ \textit{FUNCTION} \{ \textit{format.names} \}
319 { 's :=
320 #1 'nameptr :=
   s num.names$ 'numnames :=
321
     numnames 'namesleft :=
       { namesleft #0 > }
323
       { s nameptr "{ff }{vv^{}}{11}{, ~jj}" format.name$ 't :=
325
         nameptr #1 >
           { namesleft #1 >
326
               { ", " * t * }
327
               { numnames #2 >
328
                   { "," * }
329
```

```
'skip$
330
                if$
331
                t "others" =
                    { " et~al." * }
                     { " and " * t * }
334
                if$
335
                }
336
              if$
337
            }
338
            'nt
339
         if$
340
        nameptr #1 + 'nameptr :=
341
342
        namesleft #1 - 'namesleft :=
343
344
      while$
345 }
346
347 FUNCTION {format.swap.names}
348 { 's :=
349 s num.names$ 'numnames :=
    "\SwapNames{" s #1 "{ff}" format.name$
350
     duplicate$ #-1 #1 substring$
351
352
     { #1 'period.state := }
353
354
       'skip$
     if$
355
     * "}{" *
356
     s #1 "\{vv^{\sim}\}\{11\}" format.name$ * "}" *
357
     s #1 "{, jj}" format.name$ *
358
     numnames #3 >
359
       { " et~al." * #1 'period.state := }
360
361
       { numnames #1 >
362
            { #2 'nameptr :=
                numnames #1 - 'namesleft :=
363
364
                    { namesleft #0 > }
                    { s nameptr "\{ff^{\sim}\}\{vv^{\sim}\}\{11\}\{, jj\}" format.name$ 't :=
365
366
                         namesleft #1 >
                             { ", " * t * }
367
                             { " and " * t * }
368
369
                         nameptr #1 + 'nameptr :=
370
                         namesleft #1 - 'namesleft :=
371
                    }
372
                    while$
373
374
            'skip$
375
          if$
376
377
378
     if$
379 }
```

```
380
381 FUNCTION {format.authors}
       author empty$
       { ""
383
         "" 'last.authors :=
384
385
386
       { author format.names
         last.authors =
387
            { "\sameauthors" }
388
            { before.all output.state =
389
                { author format.swap.names }
390
391
                { author format.names }
392
              if$ }
393
         if$
          author format.names 'last.authors :=
394
395
396
     if$
397 }
398
399 FUNCTION {format.editors}
400 { editor empty$
       { "" }
401
402
       { before.all output.state =
           { editor format.swap.names }
404
           { editor format.names }
         if$
405
       }
406
     if$
407
408 }
409
410 FUNCTION {format.editors.ed}
411 { editor empty$
       { "" }
412
413
       { before.all output.state =
414
           { editor format.swap.names }
415
           { editor format.names }
         if$
416
         editor num.names$ #1 >
417
           { " (eds.)" * }
418
           { " (ed.)" * }
419
         if$
420
         #0 'period.state :=
421
422
423
     if$
424 }
426 FUNCTION {n.dashify}
427 { 't :=
428
     { t empty$ not }
429
```

```
{ t #1 #1 substring$ "-" =
430
431
       { t #1 #2 substring$ "--" = not
           { "--" *
432
             t #2 global.max$ substring$ 't :=
433
434
              { t #1 #1 substring$ "-" = }
            {
435
            { "-" *
436
             t #2 global.max$ substring$ 't :=
437
438
             while$
439
440
         if$
441
442
443
       { t #1 #1 substring$ *
         t #2 global.max$ substring$ 't :=
444
445
         if$
446
       }
447
     while$
448
449 }
450
451 FUNCTION {format.date}
452 { year empty$
       { month empty$
           { "" }
454
           { "there's a month but no year in " cite$ * warning$
455
              "\toomit[month]{" month * " }" *
456
           }
457
         if$
458
       }
459
       { month empty$
460
461
            'year
           { "\toomit[month]{" month * " }" * year * }
462
463
         if$
464
465
     if$
466 }
467
468 FUNCTION {tie.or.space.connect}
469 { duplicate$ text.length$ #3 <
       { "~" }
470
       {""}
471
472
     if$
    swap$ * *
473
474 }
476 FUNCTION{either.warning}
477 {
      empty$
478
            pop$'
            { "can't use both " swap$ * " fields in " * cite$ * warning$ }
479
```

```
if$
480
481 }
482 FUNCTION {format.bvolume}
483 { volume empty$
       { "" }
484
        \{ \ \ \hbox{\tt "bibcase volume" volume tie.or.space.connect} \\
485
486
          series empty$
            'skip$
487
            { " of " * series emphasize * }
488
          if$
489
          "volume and number" number either.warning
490
491
492
     if$
493 }
494
495 FUNCTION {format.number.series}
496 { volume empty$
       { number empty$
497
            { series empty$
498
                { "" }
499
                { ", series " * series * "" }
500
              if$
501
            }
502
            { "\bibcase number"
503
              number tie.or.space.connect
505
              series empty$
                { "there's a number but no series in " cite$ * warning$ }
506
                { " in " * series * }
507
              if$
508
            }
509
          if$
510
511
       }
       { "" }
512
513
     if$
514 }
515
516 INTEGERS { multiresult}
517
518 FUNCTION {multi.page.check}
519 { 't :=
    #0 'multiresult :=
520
       { multiresult not
521
         t empty$ not
522
          and
523
524
525
       { t #1 #1 substring$
         duplicate$ "-" =
526
          swap$ duplicate$ "," =
527
          swap$ "+" =
528
          or or
529
```

```
{ #1 'multiresult := }
530
       { t #2 global.max$ substring$ 't := }
531
532
533
     while$
534
     multiresult
535
536 }
537
538 FUNCTION {format.pages}
539 { pages empty$
       { "" }
540
       { pages multi.page.check
541
            { "\toomit[pages]{\bibcase " swap$ * pages n.dashify tie.or.space.connect "}" * }
542
            { "\toomit[pages]{\bibcase " swap$ * pages tie.or.space.connect "}" * }
543
544
         if$
       }
545
     if$
546
547 }
548
549 FUNCTION {format.vol.num.date.pages}
550 { volume empty$
        'skip$
551
552
       { volume }
553
554
     number empty$
555
       'skip$
       { "/" number *
556
         volume empty$
557
            { "there's a number but no volume in " cite$ * warning$ }
558
           { * }
559
         if$
560
561
       }
562
     if$
     " (" * format.date * ")" *
563
564
     pages empty$
565
        'skip$
       { duplicate$ empty$
566
           { pop$ "" format.pages * }
567
           { ": " format.pages * }
568
569
         if$
570
571
     if$
572 }
574 FUNCTION {format.chapter.pages}
575 { chapter empty$
       { pages empty$
           { "" }
577
           { ": " format.pages }
578
```

if\$

579

```
580
        { "\newblock\bibpunctuation "
581
582
          type empty$
           { "\bibcase chapter" * }
583
            { type "1" change.case$ * }
584
          if$
585
          {\it chapter\ tie.or.space.connect}
586
          pages empty$
587
        'skip$
588
        { ", pages " * format.pages * }
589
          if$
590
591
592
     if$
593 }
594
595 FUNCTION{get.lastnames}
596 { 's :=
     s num.names$ 'numnames :=
597
     s #1 "{vv~}{ll}" format.name$
598
     numnames #3 >
599
       { " et~al." * }
600
        { numnames #1 >
601
            { #2 'nameptr :=
602
603
                numnames #1 - 'namesleft :=
                     { namesleft #0 > }
604
                     { s nameptr "\{vv^*\}\{11\}" format.name$ 't :=
605
                         namesleft #1 >
606
                             { ", " * t * }
607
                             { " and " * t * }
608
                         if$
609
                         nameptr #1 + 'nameptr :=
610
611
                         namesleft #1 - 'namesleft :=
                     }
612
                     while$
613
            }
614
615
            'skip$
          if$
616
617
     if$
618
619 }
620
621 FUNCTION {make.address.publisher.year}
622 {
623
       address empty$
624
            'skip$
625
            { address * }
626
       if$
627
       publisher empty$
            'skip$
628
            { address empty$
629
```

```
{ publisher * }
630
631
                { ": " * publisher * }
            if$
632
            }
633
       if$
634
       format.date duplicate$ "" =
635
            'pop$
636
            { swap$ duplicate$ "" =
637
                { * }
638
                { swap$ ", " swap$ * * }
639
           if$}
640
641
       if$
       duplicate$ "" =
642
643
            'skip$
            { "\bibparenthesis{" swap$ * "}" * }
644
       if$
645
646 }
647
648 FUNCTION {make.url}
       "\url{" url * "}" *
649 {
       urldate empty$
650
651
            { "there is url but no urldate in " cite$ * warning$ }
            { " (accessed " * urldate * ")" * }
652
653
       if$
654 }
655
656 FUNCTION {output.bibitem}
657 { newline$
     "\bibitem{" write$
658
     cite$ "}" * write$
659
660
661
     newline$
662
     "\biblastnames{" write$
663
     author empty$
664
       { editor empty$
665
            { organization empty$
                { "no last names in " cite$ * warning$ }
666
                { organization }
667
                if$
668
           }
669
           { editor get.lastnames
670
              editor num.names$ #1 >
671
                { " (eds.)" * }
672
                { " (ed.)" * }
673
674
              if$
675
           }
         if$
676
677
678
       { author get.lastnames }
       if$
679
```

```
"}" * write$
680
     before.all 'output.state :=
681
682 }
683
684\ {\it FUNCTION} \{ output.start \}
685 { hereafter empty$
            'skip$
686
            { "\bibhereafter{{\noexpand\em " write$ hereafter "}}" * write$ }
687
           if$
688
       newline$
689
       "\opcitstart " write$
690
691 }
693 FUNCTION{output.as.block}
       duplicate$ "" =
            'pop$
695
            { period.state #1 =
696
                { "\GobbleOrNot" #0 'period.state := }
697
698
              if$
699
              "\bibpunctuation" * quotes * write$ newline$ "\newblock " swap$ * write$
700
              #1 'output.state :=
701
702
703
       if$
       "" 'quotes :=
704
705 }
706
707 FUNCTION{output.omitted}
708 { 't :=
      duplicate$ "" =
709
         { pop$ }
710
711
         { "\toomit[" t * "]{\bibpunctuation\bibcase " * swap$ * "}" * write$ }
712
713 }
714
715 FUNCTION {fin.entry}
716 { write$
      note empty$ {""} {note} if$ "note" output.omitted
717
      "\opcitend" write$
718
      newline$
719
720 }
721
722 FUNCTION{empty.warning}
       't :=
723 {
724
       duplicate$ empty$
            { pop$ "empty " t * " in " * cite$ * warning$ ""}
725
726
            'skip$
727
       if$
728 }
729
```

```
730 FUNCTION{empty.chapter.and.pages.warning}
     't :=
731 {
732
      chapter empty$
733
         { pages empty$
             { pop$ "empty " t * " in " * cite$ * warning$ "" }
734
735
             'skip$
           if$
736
         }
737
          'skip$
738
      if$
739
740
741 }
742
743 FUNCTION{book}
744 {
       output.bibitem
       output.start
745
       author empty$
746
            { format.editors.ed "author and editor" empty.warning write$ }
747
            { format.authors "author and editor" editor either.warning write$ }
748
749
       title emphasize "title" empty.warning output.as.block
750
       edition empty$
751
            'skip$
752
            { "\bibcase " edition * " edition" * output.as.block }
753
754
       if$
       howpublished missing$
755
756
            'skip$
            { "\bibcase " howpublished * output.as.block }
757
       if$
758
       format.bvolume "volume" output.omitted
759
       format.number.series "number" output.omitted
760
761
       make.address.publisher.year write$
762
       url empty$
763
            'skip$
764
           { make.url output.as.block }
765
       if$
766
       fin.entry
767 }
768
769 FUNCTION{article}
       output.bibitem
770 {
771
       output.start
       format.authors "author" empty.warning write$
772
       "'' title * "title" empty.warning output.as.block "'' 'quotes :=
773
       howpublished empty$
774
775
            { "\bibpunctuation', \newblock\toomit[howpublished]{\bibcase
776
                " howpublished * write$
777
              "}" 'quotes :=
778
779
```

```
780
       journal emphasize "journal" empty.warning
781
782
       " " * format.vol.num.date.pages "year" empty.warning * output.as.block
783
       url empty$
784
           'skip$
           { make.url output.as.block }
785
       if$
786
       fin.entry
787
788 }
789
790 FUNCTION {incollection}
791 { output.bibitem
     output.start
     format.authors "author" empty.warning write$
     "''" title * "title" empty.warning output.as.block "'' 'quotes :=
794
     "\bibcase in " output.as.block
795
     crossref empty$
796
797
       'skip$
       { "\bibincite{" crossref * "}" * write$ }
798
799
     if$
     "{" write$
800
     editor empty$
801
       'skip$
802
       { format.editors.ed ", " * write$ }
803
804
     booktitle emphasize "booktitle" empty.warning write$
805
806
     edition empty$
       'skip$
807
       { "\bibcase " edition * " edition" * output.as.block }
808
809
     make.address.publisher.year write$
810
     url empty$
811
812
         'skip$
813
         { make.url output.as.block }
814
     if$
     "}" write$
     format.chapter.pages write$
816
     fin.entry
817
818 }
819
820 FUNCTION {inbook}
821 { output.bibitem
     output.start
823
     author empty$
824
         { format.editors.ed "author and editor" empty.warning write$ }
825
         { format.authors "author and editor" editor either.warning write$ }
826
     if$
     "'' title * "title" empty.warning output.as.block "'' 'quotes :=
827
828
     chapter empty$
       'skip$
829
```

```
830
       { type empty$
         { "\bibcase chapter " chapter * }
831
         { "\bibcase " type * " " * chapter * }
832
         if$
833
834
     if$
835
     pages empty$
836
         'skip$
837
838
         { chapter empty$
            { "\bibcase pages" pages n.dashify tie.or.space.connect }
839
            { "\toomit[pages]{ (pages" * pages n.dashify tie.or.space.connect ")}" * }
840
841
           if$
         }
842
843
     if$
844
     "chapter and pages" empty.warning
     " of " *
845
     crossref empty$
846
       { booktitle emphasize * "booktitle" empty.warning
847
         edition empty$
848
             'skip$
849
             { ", " * edition "l" change.case$ * " edition" * }
850
851
852
         howpublished missing$
           skip$'
853
           { ", " * howpublished * }
         if$
855
856
         output.as.block
         make.address.publisher.year write$
857
858
       { "\bibincitestar{" * crossref * "}{" * booktitle emphasize * "}" * output.as.block }
859
     if$
860
861
     fin.entry
862 }
863
864 FUNCTION{phdthesis}
865 { output.bibitem
     output.start
     format.authors "author" empty.warning write$
867
     title emphasize "title" empty.warning
868
     \verb| "\bibparenthesis{Ph.\,D.\ diss\GobbleOrNot.}|" * output.as.block| \\
869
     address\ empty\$
870
       { "" }
871
       { address ": " * }
872
873
     school "school" empty.warning * output.as.block
874
875
     month empty$
       { "" }
876
       { month " " * }
877
878
     if$
     year "year" empty.warning * output.as.block
879
```

```
880
    fin.entry
881 }
882
883 FUNCTION{mastersthesis}
884 { output.bibitem
     output.start
885
     format.authors "author" empty.warning write$
886
     title emphasize "title" empty.warning
887
     "\bibparenthesis{M.\,A.\ thesis}" * output.as.block
888
     address empty$
889
       { "" }
890
       { address ": " * }
891
892
     if$
     school "school" empty.warning * output.as.block
893
894
       { "" }
895
       { month " " * }
896
897
     year "year" empty.warning * output.as.block
898
899
     fin.entry
900 }
901
902 FUNCTION{proceedings}
       output.bibitem
904
       output.start
905
       editor empty$
           { organization "editor and organization" empty.warning write$ }
906
           { format.editors.ed "editor" empty.warning write$ }
907
       if$
908
       title emphasize "title" empty.warning output.as.block
909
       format.bvolume "volume" output.omitted
910
       format.number.series "number" output.omitted
911
912
       make.address.publisher.year write$
913
       fin.entry
914 }
916 FUNCTION {booklet}
917 { book }
918
919 FUNCTION {inproceedings}
920 { output.bibitem
     output.start
921
     format.authors "author" empty.warning write$
922
     "'' title * "title" empty.warning output.as.block "'' 'quotes :=
923
     "\bibcase in " output.as.block
925
     crossref empty$
926
       'skip$
       { "\bibincite{" crossref * "}" * write$ }
927
928
     if$
     "{" booktitle emphasize * "booktitle" empty.warning write$
929
```

```
editor empty$
930
931
       { organization "editor and organization" empty.warning output.as.block }
       { ", edited by " format.editors * write$ }
932
933
     make.address.publisher.year write$
934
    "}" write$
935
     format.chapter.pages write$
936
937
     fin.entry
938 }
939
940
941 FUNCTION {misc}
942 { output.bibitem
    output.start
     format.authors "author" empty.warning write$
944
     title output.as.block
945
     howpublished missing$
946
947
       'skip$
       { howpublished output.as.block }
948
949
    if$
    format.date output.as.block
950
951
    fin.entry
952 }
954 FUNCTION {default.type} { misc }
956 MACRO {jan} {"January"}
957
958 MACRO {feb} {"February"}
959
960 MACRO {mar} {"March"}
962 MACRO {apr} {"April"}
964 MACRO {may} {"May"}
966 MACRO {jun} {"June"}
968 MACRO {jul} {"July"}
970 MACRO {aug} {"August"}
972 MACRO {sep} {"September"}
974 MACRO {oct} {"October"}
976 MACRO {nov} {"November"}
978 MACRO {dec} {"December"}
979
```

```
980 MACRO {acmcs} {"ACM Computing Surveys"}
982 MACRO {acta} {"Acta Informatica"}
984 MACRO {cacm} {"Communications of the ACM"}
986 MACRO {ibmjrd} {"IBM Journal of Research and Development"}
987
988 MACRO {ibmsj} {"IBM Systems Journal"}
990 MACRO {ieeese} {"IEEE Transactions on Software Engineering"}
992 MACRO {ieeetc} {"IEEE Transactions on Computers"}
994 MACRO {ieeetcad}
995 {"IEEE Transactions on Computer-Aided Design of Integrated Circuits"}
997 MACRO {ipl} {"Information Processing Letters"}
999 MACRO {jacm} {"Journal of the ACM"}
1000
1001 MACRO {jcss} {"Journal of Computer and System Sciences"}
1003 MACRO {scp} {"Science of Computer Programming"}
1005 MACRO {sicomp} {"SIAM Journal on Computing"}
1006
1007 MACRO {tocs} {"ACM Transactions on Computer Systems"}
1009 MACRO {tods} {"ACM Transactions on Database Systems"}
1010
1011 MACRO {tog} {"ACM Transactions on Graphics"}
1013 MACRO {toms} {"ACM Transactions on Mathematical Software"}
1015 MACRO {toois} {"ACM Transactions on Office Information Systems"}
1017 MACRO {toplas} {"ACM Transactions on Programming Languages and Systems"}
1019 MACRO {tcs} {"Theoretical Computer Science"}
1020
1021 READ
1022
1023 FUNCTION {sortify}
1024 { purify$
1025
      "1" change.case$
1026 }
1027
1028 INTEGERS { len }
1029
```

```
1030 FUNCTION {chop.word}
1031 { 's :=
     'len :=
    s #1 len substring$ =
       { s len #1 + global.max$ substring$ }
1034
1035
        's
1036
     if$
1037 }
1038
1039 FUNCTION {sort.format.names}
1040 { 's :=
1041
     #1 'nameptr :=
1042
1043
     s num.names$ 'numnames :=
      numnames 'namesleft :=
1044
       { namesleft #0 > }
1045
        { nameptr #1 >
1046
           {""*}
1047
1048
            'skip$
1049
          if$
          s nameptr "{vv{ } }{11{ }}{ ff{ }}{ jj{ }}" format.name$ 't :=
1050
          nameptr numnames = t "others" = and
1051
1052
            { "et al" * }
1053
            { t sortify * }
          if$
1054
          nameptr #1 + 'nameptr :=
1055
1056
          namesleft #1 - 'namesleft :=
1057
     while$
1058
1059 }
1060
1061 FUNCTION {sort.format.title}
1062 { 't :=
1063 "A " #2
       "An " #3
1064
         "The " #4 t chop.word
1065
1066
       chop.word
1067
     chop.word
1068
     sortify
      #1 global.max$ substring$
1069
1070 }
1071
1072 FUNCTION {author.sort}
1073 { author empty$
        { key empty$
1075
        { "to sort, need author or key in " cite$ * warning$
1076
1077
        { key sortify }
1078
          if$
1079
```

```
1080
        { author sort.format.names }
1081
      if$
1083 }
1084
1085 FUNCTION {author.editor.sort}
1086 { author empty$
        { editor empty$
1087
1088
        { key empty$
            { "to sort, need author, editor, or key in " cite$ * warning$
1089
1090
1091
1092
            { key sortify }
1093
          if$
1094
        { editor sort.format.names }
1095
          if$
1096
1097
        { author sort.format.names }
1098
1099
      if$
1100 }
1101
1102 FUNCTION {author.organization.sort}
1103 { author empty$
        { organization empty$
        { key empty$
1105
            { "to sort, need author, organization, or key in " cite$ * warning$
1106
1107
            }
1108
1109
            { key sortify }
1110
          if$
1111
1112
        { "The " #4 organization chop.word sortify }
1113
          if$
1114
1115
        { author sort.format.names }
1116
      if$
1117 }
1118
1119 FUNCTION {editor.organization.sort}
1120 { editor empty$
        { organization empty$
1121
        { key empty$
1122
            { "to sort, need editor, organization, or key in " cite$ * warning$
1123
1124
1125
1126
            { key sortify }
1127
          if$
        }
1128
        { "The " #4 organization chop.word sortify }
1129
```

```
if$
1130
1131
1132
                                     { editor sort.format.names }
1133
                           if$
1134 }
1135
1136 FUNCTION {presort}
1137 { type$ "book" =
                            type$ "inbook" =
1138
1139
                            or
                                      'author.editor.sort
1140
                                      { type$ "proceedings" =
1141
1142
                                       'editor.organization.sort
1143
                                     { type$ "manual" =
1144
                                                          'author.organization.sort
                                                          'author.sort
1145
                                               if$
1146
                                     }
1147
                                               if$
1148
                                     }
1149
1150
                            if$
1151
1152
1153
                           year field.or.null sortify
1154
1155
1156
                           title field.or.null
1157
                           sort.format.title
1158
1159
                           #1 entry.max$ substring$
1160
1161
                              'sort.key$ :=
1162 }
1163 FUNCTION {begin.bib}
1164 { preamble$ empty$
1165
                                       'skip$
                                      { preamble$ write$ newline$ }
1166
                            if$
1167
                             "\newBibCommand{\bibparenthesis[1]}{ (\#1)}{. \newblock \#1}" write$ newline$
1168
                             "\newBibCommand{\bibincite[2]}{\newBibCommand{\bibincite[2]}{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\newBibCommand{\ne
1169
                             \verb|"\newBibCommand{\bibincitestar[2]}{\recover@last "write$ newline$}|
1170
                                                         \@nameuse{#1@star}}{#2}" write$ newline$
1171
                             "\newBibCommand{\SwapNames[2]}{#1 #2}{#2, #1}" write$ newline$
1172
                             \verb| '' new Bib Command {\Gobble Or Not} {\relax} {\new block \@gobble} | write $ new line $ for the line $ for
1173
                             "\begin{the bibliography}{} \{\}"
                                                                                                                                                                          write$ newline$
1175 }
1176 ITERATE {presort}
1177
1178 SORT
```

1179

```
1180 EXECUTE {begin.bib}
1181
1182 EXECUTE {init.state.consts}
1183
1184 ITERATE {call.type$}
1185
1186 FUNCTION {end.bib}
1187 { newline$
1188    "\end{thebibliography}" write$ newline$
1189 }
1190
1191 EXECUTE {end.bib}
1192 \( /\bst \)
```