OXREF – Biblatex styles inspired by the *Oxford Guide to Style*

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v3.1

Contents

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Introduction

This document provides the documented sources for the oxref biblography styles:

- oxnotes: a style similar to the standard verbose and its variants, intended for use with footnotes;
- oxnum: a style similar to the standard numeric, intended for use with numeric in-text citation labels;
- oxalph: a style similar to the standard alphabetic, intended for use with alphabetic in-text citation labels;
- oxyear: a style similar to the standard authoryear, intended for use with parenthetical in-text citations.

1.1 Quick start

The styles are self-contained, so you can load them with biblatex:

```
1    \usepackage[style=oxnotes]{biblatex}
```

```
1    \usepackage[style=oxalph]{biblatex}
```

```
1    \usepackage[style=oxnum]{biblatex}
```

```
1    \usepackage[style=oxyear]{biblatex}
```

For further information, including some additional options you can set, please refer to the separate documentation files oxnotes-doc.pdf, oxnum-doc.pdf, oxalph-doc.pdf, and oxyear-doc.pdf respectively.

1.2 Installation

1.2.1 Dependencies

To compile the documentation you will need to have the minted package working, which in turn relies on Python 2.6+ and Pygments. See the documentation of that package for details.

1.2.2 Managed way

The latest stable release of the biblatex-oxref bundle has been packaged for TeX Live and MiK-TeX. If you are running TeX Live and have tlmgr installed, you can install the bundle simply by running tlmgr install biblatex-oxref. If you are running MiKTeX, you can install the bundle

by running `mpm --install=biblatex-oxref`. Both `tlmgr` and `mpm` have GUI versions that you might find friendlier.

1.2.3 AUTOMATED WAY

A makefile is provided which you can use with the Make utility on UNIX-like systems:

- Running `make source` generates the derived files
  - README.md
  - oxref.bbx, oxnotes.bbx, oxnotes-ibid.bbx, oxnotes-note.bbx, oxnotes-inote.bbx, oxnotes-trad1.bbx, oxnotes-trad2.bbx, oxnotes-trad3.bbx, oxyear.bbx, oxnum.bbx, oxalph.bbx
  - oxnotes.cbx, oxnotes-ibid.cbx, oxnotes-note.cbx, oxnotes-inote.cbx, oxnotes-trad1.cbx, oxnotes-trad2.cbx, oxnotes-trad3.cbx, oxyear.cbx, oxnum.cbx, oxalph.cbx
  - american-oxref.lbx, british-oxref.lbx, english-oxref.lbx, spanish-oxref.lbx
  - oxnotes.dbx, oxnotes-ibid.dbx, oxnotes-note.dbx, oxnotes-inote.dbx, oxnotes-trad1.dbx, oxnotes-trad2.dbx, oxnotes-trad3.dbx, oxyear.dbx, oxnum.dbx, oxalph.dbx
  - oxref.bib
  - oxref.ins
  - oxnotes-doc.tex, oxyear-doc.tex, oxnum-doc.tex, oxalph-doc.tex
- Running `make` generates the above files and also oxref.pdf, oxnotes-doc.pdf, oxyear-doc.pdf, oxnum-doc.pdf and oxalph-doc.pdf.
- Running `make inst` installs the files in the user's TeX tree. You can undo this with `make uninst`.
- Running `make install` installs the files in the local TeX tree. You can undo this with `make uninstall`.
- Running `make clean` removes auxiliary files from the working directory.
- Running `make distclean` removes the generated files from the working directory as well.

1.2.4 MANUAL WAY

To install the bundle from scratch, follow these instructions. If you have downloaded the zip file from the Releases page on GitHub, you can skip the first two steps.

1. Run `luatex oxref.dtx` to generate the source files. (You can safely skip this step if you are confident about step 2.)
2. Compile oxref.dtx, oxnotes-doc.tex, oxyear-doc.tex, and oxnum-doc.tex with LuaLaTeX and Biber to generate the documentation. You will need to enable shell escape so that minted can typeset the listings.
3. Move the files to your TeX tree as follows:
   - `source/latex/biblatex-oxref`: oxref.dtx, (oxref.ins)
   - `tex/latex/biblatex-oxref`: american-oxref.lbx, british-oxref.lbx, english-oxref.lbx, spanish-oxref.lbx oxalph.bbx, oxalph.cbx, oxalph.dbx, oxnotes.bbx, oxnotes.cbx, oxnotes.dbx, oxnotes-ibid.bbx, oxnotes-ibid.cbx, oxnotes-ibid.dbx, oxnotes-inote.bbx, oxnotes-inote.cbx, oxnotes-inote.dbx, oxnotes-note.bbx, oxnotes-note.cbx, oxnotes-note.dbx, oxnotes-trad1.bbx, oxnotes-trad1.cbx, oxnotes-trad1.dbx, oxnotes-trad2.bbx, oxnotes-trad2.cbx, oxnotes-trad2.dbx, oxnotes-trad3.bbx, oxnotes-trad3.cbx, oxnotes-trad3.dbx, oxnum.bbx, oxnum.cbx, oxnum.dbx, oxref.bbx, oxyear.bbx, oxyear.cbx, oxyear.dbx

- `doc/latex/biblatex-oxref`: README.md, oxalph-doc.pdf, oxalph-doc.tex, oxnotes-doc.pdf, oxnotes-doc.tex, oxnum-doc.pdf, oxnum-doc.tex, oxref.bib, oxref.pdf, oxyear-doc.pdf, oxyear-doc.tex

4. You may then have to update your installation's file name database before TeX and friends can see the files.

1.3 Licence

Copyright 2016–2023 Alex Ball.

This work consists of the documented LaTeX file oxref.dtx and a Makefile.

The text files contained in this work may be distributed and/or modified under the conditions of the LaTeX Project Public License (LPPL), either version 1.3c of this license or (at your option) any later version.

This work is 'maintained' (as per LPPL maintenance status) by Alex Ball.

2

Bibliography styles

2.1 Base style: oxref.bbx

2.1.1 Loading dependencies, setting up languages, applying options

Dependencies:

- For ease of maintenance, we will patch some definitions with xpatch instead of writing out our own in full.
- We will manipulate strings with xstring.
- We will use graphicx for stretching \bibnamedashes

```
20    \RequirePackage{etoolbox}
21    \RequirePackage{xpatch}
22    \RequirePackage{xstring}
23    \RequirePackage{graphicx}
```

Language support may be widened in future, but for now we support British and American English. Adapted language files have the following suffix.

```
24    \DeclareLanguageMappingSuffix{-oxref}
```

We provide some additional bibliography strings:

- roles expressed as functions;

```
25    \NewBibliographyString{%
26      director, performer, reader, conductor, serieseditor, holder, editorcm,
27      directors, performers, readers, conductors, serieseditors, holders, editorcms,
```

- roles expressed as actions;

```
28      bydirector, byperformer, byreader, byconductor, byserieseditor, byholder, byeditorcm,
```

- publication details;

```
29      facsimile, revised, revisedenlarged, revisedreprint, suppto, equals, original, amendedby,
```

- publication state;

```
30        inpressin,
```

- pagination;

```
31        book, books, canto, cantos, stanza, stanzas, act, acts, scene, scenes, folio, folios,
32        article, articles, clause, clauses, regulation, regulations, rule, rules,
33        booktotal, booktotals, cantototal, cantototals, stanzatotal, stanzatotals,
34        acttotal, acttotals, scenetotal, scenetotals, foliototal, foliototals,
35        articletotal, articletotals, clausetotal, clausetotals, regulationtotal,
36        regulationtotals, ruletotal, ruletotals,
```

- types;

```
37        facebook, tweet, podcast, clip, webcast, poster,
```

- miscellaneous;

```
38        nolocation, modified, recorded, uploaded, filed, issued,
```

- labels;

```
39        anon, pseudo, urldown,
```

- country names, patents, and patent requests;

```
40        countryjp, patentjp, patreqjp,
```

- borrowed from other styles.

```
41        1column, 2column, inflayer, suplayer, paper, papyrus, parchment,
42        eucase, eujoinedcases, commissiondecision, application,
43        order, bill, draft, opened, signed, adopted, inforce,
44      }
```

The \blx@ox@langbibstring utility is used to prefix a bibstring with one or more language names, but since this only works in certain languages, by default it discards the language names (first argument) and just prints the bibstring (second argument). This is overridden in english-oxref.lbx and friends.

```
45      \def\blx@ox@langbibstring#1#2{\bibstring{#2}}
```

We base our styles on the standard on the principle of least surprise (and to aid with maintenance in the face of new biblatex versions). We set some defaults different to the standard ones, but the author can still override them.

```
46      \RequireBibliographyStyle{standard}
47      \ExecuteBibliographyOptions{urldate=comp,pagetracker,timezeros=false,time=12h,isbn=false}
```

Here are the new default punctuation conventions. The new \recordseriespunct is used for audiovisual resources, while \cacasetitlepunct and \uscasetitlepunct are for punctuation following the case title in Canadian and American cases respectively.

```
48    \renewcommand*{\labelnamepunct}{\addcomma\space}
49    \renewcommand*{\newunitpunct}{\addcomma\space}
50    \renewcommand*{\subtitlepunct}{\addcolon\space}
51    \renewcommand*{\intitlepunct}{\nopunct\space}
52    \renewcommand*{\bibnamedash}{\resizebox{2em}{\height}{\textemdash}\addthinspace}
53    \newcommand*{\recordseriespunct}{\addcomma\space}
54    \newcommand*{\cacasetitlepunct}{\addcomma\space}
55    \newcommand*{\uscasetitlepunct}{\addcomma\space}
56    \renewcommand*{\relateddelim}{\addsemicolon\space}
57    \DeclareDelimFormat{revsdnamedelim}{\addcomma}
58    \DeclareDelimFormat{authortypedelim}{\addspace}
59    \DeclareDelimFormat{editortypedelim}{\addspace}
60    \DeclareDelimFormat{translatortypedelim}{\addspace}
```

2.1.2 NAMES

We declare some new name formats so that authors/editors/others who appear mid-reference can be handled differently from those that appear at the head of the reference.

```
61    \DeclareNameAlias{bookauthor}{default}
62    \DeclareNameAlias{bookeditor}{default}
```

Traditionally, Oxford style (for the humanities) prints author names in small capitals in the bibliography, but in normal case in citations. This is falling out of fashion, so we introduce it as an option.

```
63    \newtoggle{blx@ox@scnames}
64    \DeclareBibliographyOption{scnames}[true]{%
65      \settoggle{blx@ox@scnames}{#1}
66    }
```

The style manuals prefer to omit titles but accept they may need to be included in some circumstances. There are some titles that are only used with full names and some that may be used with initials, so we provide an option for manually switching them off.

```
67    \newtoggle{blx@ox@nametitle}\toggletrue{blx@ox@nametitle}%
68    \DeclareBiblatexOption{global,type,entry}{usenametitles}[true]{%
69      \settoggle{blx@ox@nametitle}{#1}}
```

We provide some additional macros for formatting names with titles. Here is the one for natural name order.

```
70    \newbibmacro*{name:title-given-family}[5]{%
71      \usebibmacro{name:delim}{#2#3#1}%
72      \usebibmacro{name:hook}{#2#3#1}%
73      \ifdefvoid{#5}{}{\iftoggle{blx@ox@nametitle}{\mkbibnametitle{#5}\isdot\bibnamedelimd}{}}%
74      \ifdefvoid{#2}{}{\mkbibnamegiven{#2}\isdot\bibnamedelimd}%
75      \ifdefvoid{#3}{}{%
76        \mkbibnameprefix{#3}\isdot
77        \ifprefchar
78          {}
79          {\ifuseprefix{\bibnamedelimc}{\bibnamedelimd}}}%
80      \mkbibnamefamily{#1}\isdot
81      \ifdefvoid{#4}{}{\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}\isdot}}
```

Here is the one for inverted name order.

```
82      \newbibmacro*{name:family-title-given}[5]{%
83        \ifuseprefix{%
84          \usebibmacro{name:delim}{#3#1}%
85          \usebibmacro{name:hook}{#3#1}%
86          \ifdefvoid{#3}{}{%
87            \ifcapital{%
88              \mkbibnameprefix{\MakeCapital{#3}}\isdot
89            }{%
90              \mkbibnameprefix{#3}\isdot}%
91            \ifprefchar{}{\bibnamedelimc}}%
92          \mkbibnamefamily{#1}\isdot
93          \ifdefvoid{#4}{}{\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}\isdot}%
94          \ifboolexpe{%
95            (test {\ifdefvoid{#5}} or not togl {blx@ox@nametitle})
96            and
97            test {\ifdefvoid{#2}}%
98          }{}{%
99            \printdelim{revsdnamedelim}}%
100         \ifdefvoid{#5}{}{\iftoggle{blx@ox@nametitle}{\bibnamedelimd\mkbibnametitle{#5}\isdot}{}}%
101         \ifdefvoid{#2}{}{\bibnamedelimd\mkbibnamegiven{#2}\isdot}%
102       }{%
103         \usebibmacro{name:delim}{#1}%
104         \usebibmacro{name:hook}{#1}%
105         \mkbibnamefamily{#1}\isdot
106         \ifdefvoid{#4}{}{\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}\isdot}%
107         \ifboolexpe{%
108           (test {\ifdefvoid{#5}} or not togl {blx@ox@nametitle})
109           and
110           test {\ifdefvoid{#2}}
111           and
112           test {\ifdefvoid{#3}}%
113         }{}{%
114           \printdelim{revsdnamedelim}}%
115         \ifdefvoid{#5}{}{\iftoggle{blx@ox@nametitle}{\bibnamedelimd\mkbibnametitle{#5}\isdot}{}}%
116         \ifdefvoid{#2}{}{\bibnamedelimd\mkbibnamegiven{#2}\isdot}%
117         \ifdefvoid{#3}{}{\bibnamedelimd\mkbibnameprefix{#3}\isdot}}}
```

Oxford style (for the humanities) is to write author names surname first in the bibliography, but in natural order in citations. We implement this, along with the case changing option, in the following name format. We also add a second hash for checking if names (e.g. author and authoraddon) are the same.

```
118     \def\blx@ox@lasthash{}
119     \DeclareNameFormat{bib-family-given/cite-given-family}{%
120       \iffieldannotation{inferred}{\ifnumequal{\value{listcount}}{1}{\bibopenbracket}{}}{}%
121       \ifitemannotation{inferred}{\bibopenbracket}{}%
122       \ifbibliography{%
123         \iftoggle{blx@ox@scnames}{%
124           \renewcommand*{\mkbibnamefamily}[1]{\textsc{##1}}%
125           \renewcommand*{\mkbibnamegiven}[1]{\textsc{##1}}%
126           \renewcommand*{\mkbibnameprefix}[1]{\textsc{##1}}%
127           \renewcommand*{\mkbibnamesuffix}[1]{\textsc{##1}}%
128           \renewcommand*{\mkbibnametitle}[1]{##1}%
129         }{}%
130         \ifgiveninits{%
131           \usebibmacro{name:family-title-given}%
132             {\namepartfamily}%
133             {\namepartgiveni}%
134             {\namepartprefix}%
135             {\namepartsuffix}%
136             {\nameparttitle}%
```

```
137        }{%
138          \usebibmacro{name:family-title-given}%
139            {\namepartfamily}%
140            {\namepartgiven}%
141            {\namepartprefix}%
142            {\namepartsuffix}%
143            {\nameparttitle}%
144        }%
145        \savefield{hash}{\blx@ox@lasthash}%
146        \ifitemannotation{pseudo}{%
147          \addspace\printtext[parens]{%
148            \iftoggle{blx@ox@scnames}{%
149              \textsc{\bibsstring{pseudo}}%
150            }{%
151              \bibsstring{pseudo}%
152            }}%
153        }{}%
154        \iftoggle{blx@ox@scnames}{%
155          \renewcommand*{\mkbibnamefamily}[1]{##1}%
156          \renewcommand*{\mkbibnamegiven}[1]{##1}%
157          \renewcommand*{\mkbibnameprefix}[1]{##1}%
158          \renewcommand*{\mkbibnamesuffix}[1]{##1}%
159          \renewcommand*{\mkbibnametitle}[1]{##1}%
160        }{}%
161        \ifboolexpe{%
162          test {\ifnumgreater{\value{listcount}}{1}}
163          or (
164            test {\ifdefvoid\namepartgiven}
165            and
166            test {\ifdefvoid\namepartprefix}
167          )
168        }{}{\usebibmacro{name:revsdelim}}%
169      }{%
170        \ifgiveninits{%
171          \usebibmacro{name:title-given-family}%
172            {\ifitemannotation{pseudo}{\biblstring{pseudo}}{}\namepartfamily}%
173            {\namepartgiveni}%
174            {\namepartprefix}%
175            {\namepartsuffix}%
176            {\nameparttitle}%
177        }{%
178          \usebibmacro{name:title-given-family}%
179            {\ifitemannotation{pseudo}{\biblstring{pseudo}}{}\namepartfamily}%
180            {\namepartgiven}%
181            {\namepartprefix}%
182            {\namepartsuffix}%
183            {\nameparttitle}%
184        }%
185        \savefield{hash}{\blx@ox@lasthash}%
186      }%
187      \ifitemannotation{inferred}{\bibclosebracket}{}%
188      \usebibmacro{name:andothers}%
189      \iffieldannotation{inferred}{%
190        \ifboolexpr{
191          test {\ifnumequal{\value{listcount}}{\value{maxnames}}}
192          or
193          test {\ifnumequal{\value{listcount}}{\value{listtotal}}}
194          or (
195            test {\ifnumequal{\value{listcount}}{\value{minnames}}}
196            and
197            test {\ifnumgreater{\value{listtotal}}{\value{maxnames}}}
198          )
```

```
199        }{\bibclosebracket}{}%
200      }{}%
201    }
```

We change the regular given-family format to include the alternative-name hash and use the title-enhanced name format. We also add a toggle for triggering special formatting if authoraddon or editoraddon are annotated with variant.

```
202    \newtoggle{blx@ox@variantname}
203    \DeclareNameFormat{given-family}{%
204      \ifgiveninits
205        {\usebibmacro{name:title-given-family}
206          {\namepartfamily}
207          {\namepartgiveni}
208          {\namepartprefix}
209          {\namepartsuffix}
210          {\nameparttitle}}
211        {\usebibmacro{name:title-given-family}
212          {\namepartfamily}
213          {\namepartgiven}
214          {\namepartprefix}
215          {\namepartsuffix}
216          {\nameparttitle}}%
217      \savefield{hash}{\blx@ox@lasthash}%
218      \ifitemannotation{variant}{%
219        \global\settoggle{blx@ox@variantname}{true}%
220      }{%
221        \global\settoggle{blx@ox@variantname}{false}}%
222      \usebibmacro{name:andothers}}
```

We do likewise for the regular family-given format.

```
223    \DeclareNameFormat{family-given}{%
224      \ifgiveninits
225        {\usebibmacro{name:family-title-given}
226          {\namepartfamily}
227          {\namepartgiveni}
228          {\namepartprefix}
229          {\namepartsuffix}
230          {\nameparttitle}}
231        {\usebibmacro{name:family-title-given}
232          {\namepartfamily}
233          {\namepartgiven}
234          {\namepartprefix}
235          {\namepartsuffix}
236          {\nameparttitle}}%
237      \savefield{hash}{\blx@ox@lasthash}%
238      \ifitemannotation{variant}{%
239        \global\settoggle{blx@ox@variantname}{true}%
240      }{%
241        \global\settoggle{blx@ox@variantname}{false}}%
242      \ifboolexpe{%
243        test {\ifnumgreater{\value{listcount}}{1}}
244        or (
245          test {\ifdefvoid\namepartgiven}
246          and
247          test {\ifdefvoid\namepartprefix}
248        )
249      }{}{\usebibmacro{name:revsdelim}}%
250      \usebibmacro{name:andothers}}
```

There is no comma before numeric suffixes, but there is before textual ones (e.g. 'junior').

```
251    \xpatchbibmacro{name:given-family}%
252      {\bibnamedelimd\mkbibnamesuffix{#4}}%
253      {\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}}%
254    {}{\wlog{WARNING: biblatex-oxref failed to patch name:given-family}}
255    \xpatchbibmacro{name:family-given}%
256      {\bibnamedelimd\mkbibnamesuffix{#4}}%
257      {\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}}%
258    {}{\wlog{WARNING: biblatex-oxref failed to patch name:family-given}}
```

Pseudonyms are printed after the main name, enclosed in parentheses (OGS) or brackets (NHR). Biblatex provides the nameaddon field for this use case, but it is a literal field (it doesn't format the name provided).

```
259    \DeclareFieldFormat{nameaddon}{\mkbibbrackets{#1}}
260    \DeclareFieldFormat{namevariant}{\mkbibparens{\bibstring{equals}\space #1}}
```

We provide an alternative method that uses new name fields authoraddon and editoraddon. To do this, we define a bibmacro that reimplements the loopcode logic of \printnames, but operates on two name lists simultaneously; we use saveboxes to extract the hashes, and only print the alternative name if it has a different hash. The same technique is used by oxyear below to pair up names with the short form used in references, so this bibmacro is written to handle both cases.

The namepairs bibmacro takes two arguments: the data fields holding the main name and alternative name respectively.

```
261    \newcounter{namepairs}
262    \newsavebox{\blx@ox@namebox}
263    \newsavebox{\blx@ox@altnamebox}
264    \newbibmacro*{namepairs}[2]{%
265      \setcounter{namepairs}{0}%
266      \savebibmacro{name:andothers}%
267      \renewbibmacro*{name:andothers}{}%
268      \whileboolexpr{%
269        test {\ifnumless{\value{namepairs}}{\value{#1}}}
270        and (
271          test {\ifdefvoid{\c@maxnames}}
272          or
273          test {\ifnumequal{\c@maxnames}{0}}
274          or
275          test {\ifnumless{\value{#1}}{\c@maxnames}}
276          or
277          test {\ifnumequal{\value{#1}}{\c@maxnames}}
278          or
279          test {\ifdefvoid{\c@minnames}}
280          or
281          test {\ifnumequal{\c@minnames}{0}}
282          or
283          test {\ifnumless{\value{namepairs}}{\c@minnames}}
284        )
285      }{%
286        \stepcounter{namepairs}%
287        \ifnumgreater{\value{namepairs}}{1}{%
288          \ifnumequal{\value{#1}}{2}{%
289            \setunit*{\addspace\bibstring{and}\addspace}%
290          }{%
291            \ifnumequal{\value{namepairs}}{\value{#1}}{%
292              \setunit*{\addcomma\space\bibstring{and}\addspace}%
293            }{%
```

```
294            \setunit*{\addcomma\space}%
295          }%
296        }%
297      }{}%
298      \savebox{\blx@ox@namebox}{%
299        \printnames[#1][\value{namepairs}-\value{namepairs}]{#1}%
300      }%
301      \let\blx@ox@firsthash=\blx@ox@lasthash
```

This is the part intended for authoraddon and editoraddon. Note that it contains an additional test for the variant name toggle.

```
302      \IfEndWith{#2}{addon}{%
303        \savebox{\blx@ox@altnamebox}{%
304          \printnames[by#1][\value{namepairs}-\value{namepairs}]{#2}%
305        }%
306        \let\blx@ox@secondhash=\blx@ox@lasthash
307        \ifdefstrequal{\blx@ox@firsthash}{\blx@ox@secondhash}{%
308          \unhbox\blx@ox@namebox
309        }{%
310          \unhbox\blx@ox@namebox\addspace
311          \iftoggle{blx@ox@variantname}{%
312            \ifbibliography{%
313
               ↪  \printtext[namevariant]{\printnames[#1][\value{namepairs}-\value{namepairs}]{#2}}%
314            }{}%
315          }{%
316            \printtext[nameaddon]{\unhbox\blx@ox@altnamebox}%
317          }%
318        }%
```

This is the part intended for shortauthor and shorteditor. There are differences in the formatting, and the alternative name is actually printed before the main name.

```
319      }{%
320        \savebox{\blx@ox@altnamebox}{%
321          \printnames[#1][\value{namepairs}-\value{namepairs}]{#2}%
322        }%
323        \let\blx@ox@secondhash=\blx@ox@lasthash
324        \ifdefstrequal{\blx@ox@firsthash}{\blx@ox@secondhash}{%
325          \unhbox\blx@ox@namebox
326        }{%
327          \unhbox\blx@ox@altnamebox
328          \addspace\mkbibparens{\unhbox\blx@ox@namebox}%
329        }%
330      }%
331    }%
```

Now we return to common code.

```
332      \ifboolexpr{
333        test {\ifnumequal{\value{namepairs}}{\c@minnames}}
334        and
335        test {\ifnumgreater{\value{#1}}{\c@maxnames}}
336      }{%
337        \ifnumgreater{\c@minnames}{1}{%
338          \finalandcomma
339        }{}%
340        \printdelim{andothersdelim}\bibstring{andothers}%
341      }{}%
```

```
342         \restorebibmacro{name:andothers}%
343     }
```

We use this now for authors. We provide additional handling to support printing editors or translators promoted to joint authorship status.

```
344    \newbibmacro*{author+altauthor}{%
345      \ifboolexpr{
346        test {\ifnameundef{authoraddon}}
347        and
348        test {\ifnameundef{jointauthor}}
349      }{%
350        \printnames{author}%
351      }{%
352        \ifnumequal{\value{authoraddon}}{\value{author}}{%
353          \usebibmacro{namepairs}{author}{authoraddon}%
354        }{%
355          \printnames{author}%
356          \ifnameundef{authoraddon}{}{%
357            \setunit*{\addspace}%
358            \printtext[nameaddon]{\printnames[byauthor]{authoraddon}}}%
359        }%
360        \ifnameundef{jointauthor}{}{%
361          \setunit{\addcomma\space}%
362          \iffieldundef{jointauthortype}{%
363            \bibstring{byeditor}%
364          }{%
365            \printfield{jointauthortype}}%
366          \setunit{\addspace}%
367          \printnames[author]{jointauthor}%
368        }%
369      }%
370    }
371    \DeclareFieldFormat{jointauthortype}{%
372      \ifbibstring{by#1}{\bibstring{by#1}}{#1}}
```

This is the (simpler) implementation for editors.

```
373    \newbibmacro*{editor+alteditor}{%
374      \ifnameundef{editoraddon}{%
375        \printnames{editor}%
376      }{
377        \ifnumequal{\value{editoraddon}}{\value{editor}}{%
378          \usebibmacro{namepairs}{editor}{editoraddon}%
379        }{%
380          \printnames{editor}%
381          \setunit*{\addspace}%
382          \printtext[nameaddon]{\printnames[byeditor]{editoraddon}}%
383        }%
384      }%
385    }
```

Traditional Oxford style is to use dashes instead of repeating author names, but NHR recommends abandoning the practice as it interferes with text mining. We therefore turn this feature off by default, but allow authors to switch it on with dashed=true.

```
386    \newbibmacro*{bbx:savehash}{}
387    \DeclareBibliographyOption{dashed}[true]{%
388      \ifstrequal{#1}{true}{%
389        \ExecuteBibliographyOptions{pagetracker}%
```

```
390        \renewbibmacro*{bbx:savehash}{\savefield{fullhash}{\bbx@lasthash}}%
391      }{%
392        \renewbibmacro*{bbx:savehash}{}%
393      }%
394    }
395    \InitializeBibliographyStyle{%
396      \global\undef\bbx@lasthash}
397    \newbibmacro*{bbx:dashcheck}[2]{%
398      \ifboolexpr{
399        test {\iffieldequals{fullhash}{\bbx@lasthash}}
400        and
401        not test \iffirstonpage
402        and
403        (
404          not bool {bbx@inset}
405          or
406          test {\iffieldequalstr{entrysetcount}{1}}
407        )
408      }{#1}{#2}%
409    }
```

The following is used in the authortitle and authoryear styles to switch off the dash check macro for reference sets.

```
410    \newbool{bbx@inset}
411    \DeclareBibliographyDriver{set}{%
412      \booltrue{bbx@inset}%
413      \entryset{}{}%
414      \newunit\newblock
415      \usebibmacro{setpageref}%
416      \finentry}
```

We provide options for how to handle the author name 'Anonymous'.

```
417    \newtoggle{blx@ox@autoanon}
418    \newtoggle{blx@ox@abbranon}
419    \DeclareBibliographyOption[string]{anon}[short]{%
420      \ifcsdef{blx@ox@opt@anon@#1}{%
421        \csuse{blx@ox@opt@anon@#1}%
422      }{%
423        \PackageError{biblatex-oxref}
424        {Invalid option 'anon=#1'}
425        {Valid values are 'long', 'short', and 'literal'.}}}
426    \csdef{blx@ox@opt@anon@literal}{\togglefalse{blx@ox@autoanon}}
427    \csdef{blx@ox@opt@anon@long}{\toggletrue{blx@ox@autoanon}\togglefalse{blx@ox@abbranon}}
428    \csdef{blx@ox@opt@anon@short}{\toggletrue{blx@ox@autoanon}\toggletrue{blx@ox@abbranon}}
```

We copy the author to rawauthor for easier testing.

```
429    \DeclareStyleSourcemap{
430      \maps[datatype=bibtex]{%
431        \map{%
432          \step[fieldsource=author]%
433          \step[fieldset=rawauthor, origfieldval]%
434        }
435      }%
436    }
```

The author macro is enhanced from the standard version by

- checking if the author name is 'Anonymous';

- including a dash check, to see if the name(s) should be replaced with a dash (as in `authortitle` and `authoryear`);

- inserting the `nameaddon` field if provided;

- inserting the author type if provided (as in `authoryear`).

```
437    \newcommand*{\oxrefanon}{Anonymous}
438    \newtoggle{blx@ox@isanon}
439    \renewbibmacro*{author}{%
440      \iffieldequals{rawauthor}{\oxrefanon}{%
441        \toggletrue{blx@ox@isanon}%
442      }{%
443        \togglefalse{blx@ox@isanon}}%
444      \ifboolexpr{
445        test \ifuseauthor
446        and
447        ( not test {\ifnameundef{author}} )
448        and (
449          ( not togl {blx@ox@isanon} )
450          or
451          ( not togl {blx@ox@autoanon} )
452          or
453          test {\ifbibliography}
454        )
455      }
456      {\usebibmacro{bbx:dashcheck}
457        {\bibnamedash}
458        {\usebibmacro{bbx:savehash}%
459          \ifboolexpr{
460            togl {blx@ox@autoanon}
461            and
462            togl {blx@ox@isanon}
463          }{%
464            \iftoggle{blx@ox@abbranon}{\bibcpsstring{anon}}{\bibcplstring{anon}}%
465          }{%
466            \usebibmacro{author+altauthor}%
467          }%
468          \iffieldundef{nameaddon}
469          {}
470          {\setunit{\addspace}%
471            \printfield{nameaddon}}%
472          \setunit{\printdelim{authortypedelim}}}%
473        \iffieldundef{authortype}
474        {}
475        {\usebibmacro{authorstrg}%
476          \setunit{\addspace}}}%
477      {\global\undef\bbx@lasthash}}
478    \DeclareFieldFormat{authortype}{\mkbibparens{#1}}
```

We make the punctuation between a title and 'by [author]' configurable.

```
479    \newcommand{\titlebyauthordelim}{\addcomma\space}
```

Following `authortitle` and `authoryear`, we redefine the `editor` and `editor+others` macros to use a common `bbx:editor` macro. The macro we use is the similar to the normal one except we delegate printing editor names to `editor+alteditor`, and we don't yet add the year label.

```
480    \renewbibmacro*{editor}{%
481      \usebibmacro{bbx:editor}{editorstrg}}
482    \renewbibmacro*{editor+others}{%
```

```
483        \usebibmacro{bbx:editor}{editor+othersstrg}}
484    \newbibmacro*{bbx:editor}[1]{%
485      \ifboolexpr{
486        test \ifuseeditor
487        and
488        not test {\ifnameundef{editor}}
489      }
490      {\usebibmacro{bbx:dashcheck}
491        {\bibnamedash}
492        {\usebibmacro{editor+alteditor}%
493         \setunit{\printdelim{editortypedelim}}%
494         \usebibmacro{bbx:savehash}}%
495        \usebibmacro{#1}%
496        \clearname{editor}}
497      {\global\undef\bbx@lasthash}}
498    \DeclareFieldFormat{editortype}{\mkbibparens{#1}}
```

We do the same for `translator` as well.

```
499    \renewbibmacro*{translator}{%
500      \usebibmacro{bbx:translator}{translatorstrg}}
501    \renewbibmacro*{translator+others}{%
502      \usebibmacro{bbx:translator}{translator+othersstrg}}
503    \newbibmacro*{bbx:translator}[1]{%
504      \ifboolexpr{
505        test \ifusetranslator
506        and
507        not test {\ifnameundef{translator}}
508      }
509      {\usebibmacro{bbx:dashcheck}
510        {\bibnamedash}
511        {\printnames{translator}%
512          \setunit{\printdelim{translatortypedelim}}%
513          \usebibmacro{bbx:savehash}}%
514        \usebibmacro{#1}%
515        \clearname{translator}%
516        \setunit{\addspace}}%
517      {\global\undef\bbx@lasthash}}
518    \xpatchbibmacro{translatorstrg}%
519      {\bibstring}%
520      {\bibstring[\mkbibparens]}%
521    {}{\wlog{WARNING: biblatex-oxref failed to patch translatorstrg}}%
522    \xpatchbibmacro{translator+othersstrg}%
523      {\bibstring}%
524      {\bibstring[\mkbibparens]}%
525    {}{\wlog{WARNING: biblatex-oxref failed to patch translator+othersstrg}}%
```

When referencing one work from a collection by the same author, Oxford style traditionally puts 'id.' in the bookauthor position (instead of omitting it as in standard biblatex).

```
526    \renewbibmacro*{bybookauthor}{%
527      \ifnamesequal{author}{bookauthor}%
528      {\bibstring{idem\thefield{gender}}}%
529      {\printnames{bookauthor}}}
```

Similarly, with mixed collections, if referencing a work by the editor of the collection, the editor name is replaced with 'id.'. We insert this logic into a copy of the editor+others macro, which will *not* get a year inserted into it by oxyear.

```
530   \newbibmacro*{bookeditor}{%
531     \ifboolexpr{
532       test \ifuseeditor
533       and
534       not test {\ifnameundef{editor}}
535     }{%
536       \ifnamesequal{author}{editor}{%
537         \bibstring{idem\thefield{gender}}%
538         \setunit{\addspace}%
539         \usebibmacro{editor+othersstrg}%
540         \clearname{editor}%
541       }{%
542         \printnames[bookeditor]{editor}%
543         \setunit*{\addspace}%
544         \usebibmacro{editor+othersstrg}%
545         \clearname{editor}%
546       }%
547     }{}}
```

We provide a macro for printing series editors.

```
548   \newbibmacro*{byserieseditor}{%
549     \ifnameundef{serieseditor}
550       {}
551       {\usebibmacro{bytypestrg}{serieseditor}{serieseditor}%
552        \setunit{\addspace}%
553        \printnames[byeditor]{serieseditor}%
554        \newunit}}
555
```

2.1.3 TITLES

Title handling is mostly as it is in the standard styles, except that the `titleaddon` is printed in square brackets; it is not preceeded by punctuation.

```
556   \renewbibmacro*{title}{%
557     \ifboolexpr{
558       test {\iffieldundef{title}}
559       and
560       test {\iffieldundef{subtitle}}
561     }
562     {}
563     {\printtext[title]{%
564         \printfield[titlecase]{title}%
565         \setunit{\subtitlepunct}%
566         \printfield[titlecase]{subtitle}}%
567       \setunit{\addspace}}%
568     \usebibmacro{origtitle}%
569     \setunit*{\addspace}%
570     \printfield{titleaddon}%
571     \iffieldequalstr{relatedtype}{equals}{%
572       \iftoggle{bbx:related}{%
573         \usebibmacro{related:init}%
574         \usebibmacro{related}%
575         \clearfield{related}%
576       }{}%
577     }{}%
578   }
579   \DeclareFieldFormat{titleaddon}{\mkbibbrackets{#1}}
```

The `origtitle` field is used for translated works. If the cited work is a native language translation of a foreign work, the original title is given in parentheses. If the cited work is foreign translation of a native language work, the original title is printed in square brackets, preceded by the name of the foreign language (if appropriate) and 'translation of'.

```
580    \DeclareFieldFormat{origtitle}{\mkbibemph{#1}}
581    \newbibmacro*{origtitle}{%
582      \iffieldundef{origtitle}{}{%
583        \iflistundef{language}{%
584          \printtext[parens]{\printfield{origtitle}}%
585        }{%
586          \printtext[brackets]{%
587            \blx@ox@langbibstring{\printlist{language}}{translationof}\addspace
588            \printfield{origtitle}}}}}
```

2.1.4 Dates and times

Year ranges are truncated (e.g. 2012–3). Therefore, we provide a command that compares two years, and outputs a full or truncated version of the second year, depending on how similar it is to the first. It is adapted from code by Marco Daniel.[1]

```
589    \newcommand{\blx@ox@compyear}[2]{%
590      \def\num@one{#1}%
591      \def\num@two{#2}%
592      \StrLen{\num@one}[\num@one@len]%
593      \StrLen{\num@two}[\num@two@len]%
```

The year is only trimmed if it is greater than, but has the same number of digits as, the comparison number.

```
594      \ifboolexpr{
595        test {\ifnumequal{\num@one@len}{\num@two@len}}
596        and
597        test {\ifnumless{\num@one}{\num@two}}
598      }{%
```

For years since 1000, at least two digits must be the same before trimming occurs.

```
599        \StrCompare{\num@one}{\num@two}[\Result]%
600        \ifnum\num@two@len>3%
601          \IfStrEq{\Result}{2}{\def\Result{1}}{}%
602        \fi
```

In legal references, the truncated year is at least two digits.

```
603        \ifboolexpr{
604          (
605            test {\ifentrytype{jurisdiction}}
606            or
607            test {\ifentrytype{legislation}}
608          )
609          and
610          test {\IfStrEq{\Result}{4}}
611        }{\def\Result{3}}{}%
```

Since `\Result` is the number of digits to trim from the left hand side of the year, plus one, we provide an extra sacrificial zero before trimming.

---

[1] http://tex.stackexchange.com/questions/23483/

```
612        \StrGobbleLeft{0\num@two}{\Result}%
613      }{\num@two}}
```

We patch the date range formats from `biblatex.sty` to use the above function.

```
614    \patchcmd{\mkdaterangefull}{%
615      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
616    }{%
617      \iffielddundef{#2endmonth}%
618        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
619        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
620    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangefull}}
621    \patchcmd{\mkdaterangefullextra}{%
622      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
623    }{%
624      \iffielddundef{#2endmonth}%
625        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
626        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
627    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangefullextra}}
628    \patchcmd{\mkdaterangetrunc@i}{%
629      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
630    }{%
631      \iffielddundef{#2endmonth}%
632        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
633        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
634    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangetrunc@i}}
635    \patchcmd{\mkdaterangetruncextra@i}{%
636      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
637    }{%
638      \iffielddundef{#2endmonth}%
639        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
640        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
641    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangetruncextra@i}}
```

We provide a way of prefacing dates (and times) with a type. This is mainly intended for online resources.

```
642    \DeclareFieldFormat{datetype}{%
643      \ifbibstring{#1}{\bibstring{#1}}{#1\isdot}%
644    }
645    \newtoggle{blx@ox@timefirst}
646    \DeclareBiblatexOption{global,type,entry}{timefirst}[true]{%
647      \settoggle{blx@ox@timefirst}{#1}}
648    \newbibmacro*{date+time}{%
649      \ifboolexpr{
650        test {\iffielddundef{year}}
651        and
652        test {\iffielddundef{yeardivision}}
653        and
654        test {\iffielddundef{month}}
655        and
656        test {\iffielddundef{hour}}
657      }{}{%
658        \printfield{datetype}}%
659      \setunit*{\addspace}%
660      \iftoggle{blx@ox@timefirst}{%
661        \printtime
662        \setunit*{\addcomma\space}}{}%
663      \printdate
664      \iftoggle{blx@ox@timefirst}{}{%
665        \setunit*{\addcomma\space}%
```

```
666        \printtime}%
667    }
668    \renewbibmacro*{date}{\usebibmacro{date+time}}
```

We provide an equivalent for origdate. This is mainly intended for audiovisual resources (for the date of recording).

```
669    \DeclareFieldFormat{origdatetype}{%
670      \ifbibstring{#1}{\bibstring{#1}}{#1\isdot}%
671    }
672    \newbibmacro*{origdate+time}{%
673      \ifboolexpr{
674        test {\iffieldundef{origyear}}
675        and
676        test {\iffieldundef{origyeardivision}}
677        and
678        test {\iffieldundef{origmonth}}
679        and
680        test {\iffieldundef{orighour}}
681      }{}{%
682        \printfield{origdatetype}}%
683      \setunit*{\addspace}%
684      \iftoggle{blx@ox@timefirst}{%
685        \printorigtime
686        \setunit*{\addcomma\space}}{}%
687      \printorigdate
688      \iftoggle{blx@ox@timefirst}{}{%
689        \setunit*{\addcomma\space}%
690        \printorigtime}%
691    }
```

If a date is inferred, it goes in square brackets.

```
692    \DeclareFieldFormat{date}{%
693      \def\currentfield{date}%
694      \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
695      \undef\currentfield}
696    \DeclareFieldFormat{origdate}{%
697      \def\currentfield{origdate}%
698      \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
699      \undef\currentfield}
700    \DeclareFieldFormat{eventdate}{%
701      \def\currentfield{eventdate}%
702      \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
703      \undef\currentfield}
```

2.1.5 Editions, pages, and other number-like fields

We let edition take a localization key as well as a number.

```
704    \xpatchfieldformat{edition}%
705      {#1\isdot}%
706      {\ifbibstring{#1}{\bibstring{#1}}{#1\isdot}}%
707    {}{\wlog{WARNING: biblatex-oxref failed to patch edition}}
```

Page ranges are compressed, but are not usually marked with 'pp.'. The exception is if the page numbers are not obviously numbers.

```
708    \DeclareFieldFormat{pages}{%
709      \iffieldundef{bookpagination}%
710        {\mkcomprange{#1}}%
711        {\mkcomprange[{\mkpageprefix[bookpagination]}]{#1}}%
712    }
```

The same is true in citations.

```
713    \DeclareFieldFormat{postnote}{%
714      \iffieldundef{pagination}%
715      {\mkcomprange{#1}}%
716      {\mkcomprange[{\mkpageprefix}]{#1}}%
717    }
718
```

2.1.6 PUBLISHERS

The *Oxford Guide to Style* says it is fine to omit publisher names uniformly from bibliographic information. This is odd, but we can support it with a simple option.

```
719    \DeclareBibliographyOption{nopublisher}[true]{%
720      \DeclareFieldInputHandler{publisher}{\def\NewValue{}}%
721    }
```

The style guides are less forgiving about omitting the place of publication. We provide a bibliography option that fills in such gaps with the nolocation localization string for selected entry types. It works using a source map, which is a clean solution but cannot easily be switched off again or used on a per-type basis.

```
722    \DeclareBibliographyOption{nolocation}[true]{%
723      \DeclareStyleSourcemap{
724        \maps[datatype=bibtex]{
725          \map{
726            \pertype{book}
727            \pertype{mvbook}
728            \pertype{bookinbook}
729            \pertype{inbook}
730            \pertype{suppbook}
731            \pertype{collection}
732            \pertype{mvcollection}
733            \pertype{incollection}
734            \pertype{suppcollection}
735            \pertype{reference}
736            \pertype{mvreference}
737            \pertype{inreference}
738            \pertype{proceedings}
739            \pertype{mvproceedings}
740            \pertype{inproceedings}
741            \step[notfield=location, fieldset=location,
                 ↪  fieldvalue={\noexpand\bibstring{nolocation}}]
742          }
743        }
744      }%
745    }
```

We also provide an entry option that has the same effect; this works using the \restorelist mechanism instead.

```
746  \newtoggle{blx@ox@noloc}
747  \def\blx@ox@noloc{{\bibstring{nolocation}}}
748  \DeclareEntryOption{nolocation}[true]{%
749    \settoggle{blx@ox@noloc}{#1}%
750    \iflistundef{location}{%
751      \iftoggle{blx@ox@noloc}{\restorelist{location}{\blx@ox@noloc}}{}%
752    }{}}
```

2.1.7 URLs

The OGS recommends the ISO convention of enclosing URLs in angle brackets, but NHR recommends leaving URLs bare so as not to interfere with text-mining. The latter is the default.

```
753  \DeclareBibliographyOption{isourls}[true]{%
754    \ifstrequal{#1}{true}
755      {\DeclareFieldFormat{url}{$\langle$\url{##1}$\rangle$}}
756      {\DeclareFieldFormat{url}{\url{##1}}}%
757  }
758  \ExecuteBibliographyOptions{isourls=false}
```

NHR specifies that URLs should be broken across lines after slashes and percents, and before other punctuation. They should never break after hyphens.

```
759  \renewcommand*{\biburlsetup}{%
760    \Urlmuskip=0mu plus 2mu\relax
761    \mathchardef\UrlBigBreakPenalty=100\relax
762    \mathchardef\UrlBreakPenalty=200\relax
763    \def\UrlBigBreaks{\do\/\do\:}%
764    \def\UrlNoBreaks{\do\(\do\[\do\{\do\<}%
765    \def\UrlBreaks{%
766      \do\>\do\}\do\]\do\)\do\\\do\|%
767      \do\'\do\$\do\*\do\^\do\"}%
768    \appto\UrlSpecials{%
769      \do\!{\mathbin{}\mskip-\Urlmuskip\mathchar`\!\mskip\Urlmuskip}%
770      \do\&{\mathbin{}\mskip-\Urlmuskip\mathchar`\&\mskip\Urlmuskip}%
771      \do\+{\mathbin{}\mskip-\Urlmuskip\mathchar`\+\mskip\Urlmuskip}%
772      \do\,{\mathbin{}\mskip-\Urlmuskip\mathchar`\,\mskip\Urlmuskip}%
773      \do\-{\mathbin{}\mskip-\Urlmuskip\mathchar`\-\mskip\Urlmuskip}%
774      \do\.{\mathbin{}\mskip-\Urlmuskip\mathchar`\.\mskip\Urlmuskip}%
775      \do\;{\mathbin{}\mskip-\Urlmuskip\mathchar`\;\mskip\Urlmuskip}%
776      \do\={\mathbin{}\mskip-\Urlmuskip\mathchar`\=\mskip\Urlmuskip}%
777      \do\?{\mathbin{}\mskip-\Urlmuskip\mathchar`\?\mskip\Urlmuskip}%
778      \do\_{\mathbin{}\mskip-\Urlmuskip\_\mskip\Urlmuskip}%
779      \do\#{\mathbin{}\mskip-\Urlmuskip\#\mskip\Urlmuskip}%
780    }%
781    \ifnumgreater{\value{biburlnumpenalty}}{0}
782      {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburlnumpenalty}}}}%
783       \do\1\do\2\do\3\do\4\do\5\do\6\do\7\do\8\do\9\do\0}
784      {}%
785    \ifnumgreater{\value{biburlucpenalty}}{0}
786      {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburlucpenalty}}}}%
787       \do\A\do\B\do\C\do\D\do\E\do\F\do\G\do\H\do\I\do\J
788       \do\K\do\L\do\M\do\N\do\O\do\P\do\Q\do\R\do\S\do\T
789       \do\U\do\V\do\W\do\X\do\Y\do\Z}
790      {}%
791    \ifnumgreater{\value{biburllcpenalty}}{0}
792      {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburllcpenalty}}}}%
793       \do\a\do\b\do\c\do\d\do\e\do\f\do\g\do\h\do\i\do\j
794       \do\k\do\l\do\m\do\n\do\o\do\p\do\q\do\r\do\s\do\t
```

```
795        \do\u\do\v\do\w\do\x\do\y\do\z}
796      {}%
797    \let\do=\noexpand}
```

URL dates are set off with a comma rather than parentheses.

```
798    \DeclareFieldFormat{urldate}{\bibstring{urlseen}\space#1}
799    \xpatchbibmacro{url+urldate}%
800      {\setunit*{\addspace}}%
801      {\setunit*{\addcomma\addspace}}%
802    {}{\wlog{WARNING: biblatex-oxref failed to patch url+urldate}}
```

The DOI is introduced by 'doi' in lowercase.

```
803    \xpatchfieldformat{doi}%
804      {\mkbibacro{DOI}}%
805      {\printtext{doi}}%
806    {}{\wlog{WARNING: biblatex-oxref failed to patch doi}}
```

Unlike URLs, DOIs are preceded by a full stop.

```
807    \xpatchbibmacro{doi+eprint+url}%
808      {\printfield{doi}}%
809      {\setunit{\addperiod\space}\printfield{doi}}%
810    {}{\wlog{WARNING: biblatex-oxref failed to patch doi+eprint+url}}
811
```

2.1.8 Addenda

The publication state is given in parentheses. Other addenda are added plain.

```
812    \renewbibmacro*{addendum+pubstate}{%
813      \ifboolexpr{
814        test {\iffieldundef{pubstate}}
815        or
816        test {\iffieldequalstr{labeldatesource}{pubstate}}
817      }{}{%
818        \nopunct
819        \ifbibstring{\thefield{pubstate}}{%
820          \printtext[pubstate]{\bibstring{\thefield{pubstate}}}%
821        }{%
822          \printfield{pubstate}}}%
823      \setunit{\addsemicolon\addspace}\newblock
824      \printfield{addendum}}
825    \DeclareFieldFormat{pubstate}{\mkbibparens{#1}}
```

Publication descriptions are printed plain for unpublished works, and in brackets for other entry types.

```
826    \DeclareFieldFormat{howpublished}{\mkbibbrackets{#1}}
827    \DeclareFieldFormat[misc,unpublished]{howpublished}{#1}
```

2.1.9 Articles and periodicals

Subtypes for articles and similar are in square brackets.

```
828    \DeclareFieldFormat[article,periodical,suppperiodical,review]{entrysubtype}{\mkbibbrackets{#1}}
```

We provide a configurable command for testing if a title is abbreviated. We test for ASCII capitals and a limited number of accented capitals by default, but users can extend or replace the list if it causes problems.

```
829    \global\let\blx@ox@abbrevstring\@empty
830    \newrobustcmd*{\DeclareAbbrEndChars}{%
831      \@ifstar{%
832        \blx@ox@apptoabbrevstring
833      }{%
834        \global\let\blx@ox@abbrevstring\@empty
835        \blx@ox@apptoabbrevstring}}
836    \def\blx@ox@apptoabbrevstring#1{
837      \xdef\blx@ox@abbrevstring{\blx@ox@abbrevstring#1}}
838    \DeclareAbbrEndChars{%
839      A\^{A}BCDEFG\u{G}HI\^{I}JKLMNO\"{O}\^{O}PQRSTU\"{U}\^{U}VWXYZ.}%
840    \newcommand*{\ifabbrev}[3]{%
841      \StrRight{#1}{1}[\blx@ox@lastchar]%
842      \expandafter\IfSubStr*{\blx@ox@abbrevstring}{\blx@ox@lastchar}{#2}{#3}%
843    }
```

We renew the `journal+issuetitle` macro so that if a work takes up a whole issue (signified by using `issuetitle` *instead* of `title`), the title and journal title are separated by '=' instead of the usual punctuation. It also inserts an appropriate localization string if the publication status demands it. We insert a comma after the journal title, regardless of what follows. There is also a comma after numeric (but not textual) series.

```
844    \renewbibmacro*{journal+issuetitle}{%
845      \ifboolexpr{
846        test {\iffieldundef{title}}
847        and
848        not test {\iffieldundef{issuetitle}}
849      }{%
850        \usebibmacro{issue}%
851        \setunit{\addspace =\addspace}%
852      }{%
853        \ifboolexpr{
854          ( not test {\iffieldundef{pubstate}} )
855          and
856          test {\ifbibxstring{\thefield{pubstate}in}}
857        }{%
858          \printtext{\bibstring{\thefield{pubstate}in}\space}%
859          \clearfield{pubstate}%
860        }{}}%
861      \usebibmacro{journal}%
862      \iffieldundef{journalsubtitle}{%
863        \ifabbrev{\strfield{journaltitle}}{\setunit{\addspace}}{\newunit}%
864      }{%
865        \ifabbrev{\strfield{journalsubtitle}}{\setunit{\addspace}}{\newunit}}%
866      \iffieldundef{series}{}{%
867        \newunit\newblock
868        \printfield{series}%
869        \ifbibxstring{\thefield{series}}{%
870          \setunit{\addspace}%
871        }{%
872          \newunit}}%
873      \usebibmacro{volume+number+eid}%
874      \setunit{\addspace}%
```

```
875      \usebibmacro{issue+date}%
876      \newunit}
```

We renew the `title+issuetitle` macro (for whole periodical issues) to apply the same punctuation changes after the periodical name and series. At the same time, we delegate handling of volume and issue numbers to the appropriate macro so we can customize it.

```
877    \renewbibmacro*{title+issuetitle}{%
878      \usebibmacro{periodical}%
879      \iffieldundef{subtitle}{%
880        \ifabbrev{\strfield{title}}{\setunit{\addspace}}{\newunit}%
881      }{%
882        \ifabbrev{\strfield{subtitle}}{\setunit{\addspace}}{\newunit}}%
883      \iffieldundef{series}{}{%
884        \newunit\newblock
885        \printfield{series}%
886        \ifbibxstring{\thefield{series}}{%
887          \setunit{\addspace}%
888        }{%
889          \newunit}}%
890      \usebibmacro{volume+number+eid}%
891      \setunit{\addspace}%
892      \usebibmacro{issue+date}%
893      \newunit}
```

OGS and NHR provide plentiful options for formatting volume and issue numbers. We implement four of them here as options. The default is to use a slash between volume and issue number. Note that we prevent the `volume+number+eid` macro from actually printing the EID; this is printed by `issue+date` instead (see below).

```
894    \DeclareBibliographyOption[string]{issuestyle}[slash]{%
895      \ifcsdef{blx@ox@issuestyle@#1}{%
896        \csuse{blx@ox@issuestyle@#1}%
897      }{%
898        \PackageError{biblatex-oxref}
899          {Invalid option 'issuestyle=#1'}
900          {Valid values are 'slash', 'colon', 'comma', 'parens'}%
901      }%
902    }
903    \csdef{blx@ox@issuestyle@slash}{%
904      \renewbibmacro*{volume+number+eid}{%
905        \printfield{volume}%
906        \setunit*{\addslash}%
907        \printfield{number}%
908      }%
909    }
910    \csdef{blx@ox@issuestyle@colon}{%
911      \renewbibmacro*{volume+number+eid}{%
912        \printfield{volume}%
913        \setunit*{\addcolon\space}%
914        \printfield{number}%
915      }%
916    }
917    \csdef{blx@ox@issuestyle@comma}{%
918      \renewbibmacro*{volume+number+eid}{%
919        \printfield{volume}%
920        \setunit*{\addcomma\space}%
921        \printfield{number}%
922      }%
923    }
```

```
924    \csdef{blx@ox@issuestyle@parens}{%
925      \renewbibmacro*{volume+number+eid}{%
926        \printfield{volume}%
927        \setunit*{\addspace}%
928        \printfield[parens]{number}%
929      }%
930    }
931    \ExecuteBibliographyOptions{issuestyle=slash}
```

OGS consistently prints dates of newspapers and magazines bare, but those of academic journals in parentheses. NHR seems to favour printing dates in parentheses regardless, but notes that some publishing houses take the OGS approach.

We provide an option for switching between the two approaches. If active and an issue has no volume or issue numbers (first block), the year division and date are printed bare. Otherwise (second block) they are printed in parentheses just as in the standard version of the macro.

```
932    \newtoggle{blx@ox@varissuedate}
933    \DeclareBiblatexOption{global,type,entry}{varissuedate}[true]{%
934      \settoggle{blx@ox@varissuedate}{#1}}
935    \DeclareBiblatexOption{global,type,entry}{issuedate-plain}[true]{%
936      \settoggle{blx@ox@varissuedate}{#1}}
937    \renewbibmacro*{issue+date}{%
938      \ifboolexpr{
939        test {\iffieldundef{issue}}
940        and
941        test {\iffieldundef{year}}
942        and
943        test {\iffieldundef{yeardivision}}
944        and
945        test {\iffieldundef{month}}
946      }{}{%
947        \ifboolexpr{
948          togl {blx@ox@varissuedate}
949          and
950          test {\iffieldundef{volume}}
951          and
952          test {\iffieldundef{number}}
953        }{%
954          \newunit
955          \printtext{%
956            \iffieldundef{issue}{%
957              \usebibmacro{date}
958            }{%
959              \printfield{issue}%
960              \setunit*{\addspace}%
961              \usebibmacro{date}}}%
962        }{%
963          \printtext[parens]{%
964            \iffieldundef{issue}{%
965              \usebibmacro{date}%
966            }{%
967              \printfield{issue}%
968              \setunit*{\addspace}%
969              \usebibmacro{date}}}}}%
970      \newunit
971      \printfield{eid}%
972    }
```

Our `article` driver is like the standard one except

- it has no 'in' macro;

- there is a handler for the suppto relation;
- there is no language macro;
- the punctuation before related items is configurable.

```
973   \DeclareBibliographyDriver{article}{%
974     \usebibmacro{bibindex}%
975     \usebibmacro{begentry}%
976     \usebibmacro{author/translator+others}%
977     \setunit{\printdelim{nametitledelim}}\newblock
978     \usebibmacro{title}%
979     \setunit{\titlebyauthordelim}\newblock
980     \usebibmacro{byauthor}%
981     \newunit\newblock
982     \usebibmacro{bytranslator+others}%
983     \newunit\newblock
984     \printfield{version}%
985     \newunit\newblock
986     \usebibmacro{journal+issuetitle}%
987     \newunit
988     \usebibmacro{byeditor+others}%
989     \iffieldequalstr{relatedtype}{suppto}{%
990       \setunit{\addsemicolon\space}%
991       \iftoggle{bbx:related}{%
992         \usebibmacro{related:init}%
993         \usebibmacro{related}%
994         \clearfield{related}%
995       }{}%
996     }{}%
997     \newunit
998     \usebibmacro{note+pages}%
999     \newunit\newblock
1000    \iftoggle{bbx:isbn}
1001      {\printfield{issn}}
1002      {}%
1003    \newunit\newblock
1004    \usebibmacro{doi+eprint+url}%
1005    \newunit\newblock
1006    \usebibmacro{addendum+pubstate}%
1007    \iftoggle{bbx:related}
1008      {\usebibmacro{related:init}%
1009       \usebibmacro{related}}
1010      {}%
1011    \setunit{\bibpagerefpunct}\newblock
1012    \usebibmacro{pageref}%
1013    \usebibmacro{finentry}}
```

Similar changes are made to the `periodical` driver.

```
1014   \DeclareBibliographyDriver{periodical}{%
1015     \usebibmacro{bibindex}%
1016     \usebibmacro{begentry}%
1017     \usebibmacro{editor}%
1018     \setunit{\printdelim{nametitledelim}}\newblock
1019     \usebibmacro{title+issuetitle}%
1020     \newunit\newblock
1021     \usebibmacro{byeditor}%
1022     \newunit\newblock
1023     \printfield{note}%
1024     \newunit\newblock
1025     \iftoggle{bbx:isbn}
1026       {\printfield{issn}}
```

```
1027          {}%
1028        \newunit\newblock
1029        \usebibmacro{doi+eprint+url}%
1030        \newunit\newblock
1031        \usebibmacro{addendum+pubstate}%
1032        \iftoggle{bbx:related}
1033          {\usebibmacro{related:init}%
1034           \usebibmacro{related}}
1035          {}%
1036        \setunit{\bibpagerefpunct}\newblock
1037        \usebibmacro{pageref}%
1038        \usebibmacro{finentry}}
```

The suppperiodical driver is just like the article one, except the note comes sooner after the title. This is to allow it to be used as a descriptor. Since we're breaking the alias, we need to explicitly replicate the article formatting for the rest of the entry.

```
1039    \DeclareFieldFormat[suppperiodical]{title}{%
1040      \def\currentfield{title}%
1041      \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
1042      \undef\currentfield}
1043    \DeclareFieldFormat[suppperiodical]{volume}{#1}% volume of a journal
1044    \DeclareFieldFormat[suppperiodical]{number}{#1}% number of a journal
1045    \DeclareFieldFormat[suppperiodical]{series}{% series of a journal
1046      \ifinteger{#1}
1047      {\mkbibordseries{#1}~\bibstring{jourser}}
1048      {\ifbibstring{#1}{\bibstring{#1}}{#1}}}
1049    \DeclareBibliographyDriver{suppperiodical}{%
1050      \usebibmacro{bibindex}%
1051      \usebibmacro{begentry}%
1052      \usebibmacro{author/translator+others}%
1053      \setunit{\printdelim{nametitledelim}}\newblock
1054      \usebibmacro{title}%
1055      \setunit{\titlebyauthordelim}\newblock
1056      \usebibmacro{byauthor}%
1057      \newunit\newblock
1058      \usebibmacro{bytranslator+others}%
1059      \newunit\newblock
1060      \printfield{note}\clearfield{note}%
1061      \newunit\newblock
1062      \printfield{version}%
1063      \newunit\newblock
1064      \usebibmacro{journal+issuetitle}%
1065      \newunit
1066      \usebibmacro{byeditor+others}%
1067      \iffieldequalstr{relatedtype}{suppto}{%
1068        \setunit{\addsemicolon\space}%
1069        \iftoggle{bbx:related}{%
1070          \usebibmacro{related:init}%
1071          \usebibmacro{related}%
1072          \clearfield{related}%
1073        }{}%
1074      }{}%
1075      \newunit
1076      \usebibmacro{note+pages}%
1077      \newunit\newblock
1078      \iftoggle{bbx:isbn}
1079        {\printfield{issn}}
1080        {}%
1081      \newunit\newblock
1082      \usebibmacro{doi+eprint+url}%
```

```
1083        \newunit\newblock
1084        \usebibmacro{addendum+pubstate}%
1085        \iftoggle{bbx:related}
1086          {\usebibmacro{related:init}%
1087           \usebibmacro{related}}
1088          {}%
1089        \setunit{\bibpagerefpunct}\newblock
1090        \usebibmacro{pageref}%
1091        \usebibmacro{finentry}}
```

2.1.10 BOOKS AND WORKS IN BOOKS

By default, editors do not appear before the title in book or reference entries.

```
1092        \ExecuteBibliographyOptions[book,mvbook,reference,mvreference]{useeditor=false,usetranslator=false}
```

The titles of books that have been collected into an anthology are treated like regular chapters and set in quotes. Poems and plays, however, are set in italics.

```
1093        \DeclareFieldFormat[bookinbook]{title}{%
1094          \ifboolexpr{
1095            test {\iffieldequalstr{entrysubtype}{poem}}
1096            or
1097            test {\iffieldequalstr{entrysubtype}{play}}
1098          }{%
1099            \mkbibemph{#1}%
1100          }{%
1101            \mkbibquote{#1\isdot}}}
```

Unlike the standard styles, we have a separate driver for inreference, so we need to change the title style accordingly.

```
1102        \DeclareFieldFormat[inreference]{title}{\mkbibquote{#1\isdot}}
```

Volume numbers in monograph-style entries are formatted as roman numerals (if they are indeed numbers). We take some care here to support simple ranges (e.g. 1-3, 4–9). Support for more complex ranges may be considered on request.

```
1103        \DeclareFieldFormat[book,mvbook,bookinbook,inbook,suppbook,%
1104        collection,mvcollection,incollection,suppcollection,%
1105        proceedings,mvproceedings,inproceedings,%
1106        reference,mvreference,inreference]{volume}{%
1107        \IfSubStr{#1}{-}{%
1108          \StrCount{#1}{-}[\blx@ox@dashnum]%
1109          \StrBefore{#1}{-}[\blx@ox@volnum]%
1110          \expandafter\ifinteger\blx@ox@volnum{\Rn{\blx@ox@volnum}}{\blx@ox@volnum}\bibrangedash
1111          \StrBehind[\blx@ox@dashnum]{#1}{-}[\blx@ox@volnum]%
1112          \expandafter\ifinteger\blx@ox@volnum{\Rn{\blx@ox@volnum}}{\blx@ox@volnum}%
1113        }{%
1114          \ifinteger{#1}{\Rn{#1}}{#1}}}
```

Where a multi-volume work is more like a series, the volume number and main title are put in a bracketted block between the volume title and the usual publication block.

```
1115        \newbibmacro*{maintitle+volume}{%
1116          \ifboolexpr{
1117            test {\iffieldundef{maintitle}}
```

```
1118          or
1119          test {\iffieldundef{volume}}
1120        }{}%
1121        {\printtext[maintitle+volume]{%
1122          \bibstring{volume}\addspace
1123          \printfield{volume}\printfield{part}\addspace
1124          \bibstring{ofseries}\addspace
1125          \usebibmacro{maintitle}}}
1126      }
1127      \DeclareFieldFormat{maintitle+volume}{\mkbibbrackets{#1}}
```

The in before the booktitle is suppressed for works in yearbooks.

```
1128      \renewbibmacro*{in:}{%
1129        \iffieldequalstr{entrysubtype}{yearbook}{}{%
1130          \bibstring{in}%
1131          \printunit{\intitlepunct}}}
```

Oxford style signifies formal publication by putting the relevant details in parentheses.

```
1132      \DeclareFieldFormat{publication}{\mkbibparens{#1}}
```

Standard biblatex puts a space between series name and number. OGS separates them with a comma. It also has an example with a series editor.

```
1133      \renewbibmacro*{series+number}{%
1134        \printfield{series}%
1135        \setunit*{\addcomma\space}%
1136        \usebibmacro{byserieseditor}%
1137        \setunit*{\addcomma\space}%
1138        \printfield{number}}
```

We provide an option for displaying the series information before, instead of within, the publication block.

```
1139      \newtoggle{blx@ox@altbookseries}
1140      \DeclareBibliographyOption[string]{bookseries}[in]{%
1141        \ifstrequal{#1}{out}{%
1142          \toggletrue{blx@ox@altbookseries}%
1143        }{%
1144          \togglefalse{blx@ox@altbookseries}%
1145          \ifstrequal{#1}{in}{}{%
1146            \PackageError{biblatex-oxref}
1147            {Invalid option 'bookseries=#1'}
1148            {Valid values are 'in' and 'out'.}}}}
```

When citing both the first and a later edition, the first one comes first, and the later one comes after a semicolon. As per standard biblatex, the elements of a single edition are separated by commas except that the publisher is preceded by a colon. The origdate is only printed here if at least one of the edition, the origlocation or the origpublisher is also specified.

```
1149      \newcounter{locpubpairs}
1150      \newbibmacro*{edition+publisher+location+date}{%
1151        \printlist{origlocation}%
1152        \iflistundef{origpublisher}%
1153          {\setunit*{\addcomma\space}}%
1154          {\setunit*{\addcolon\space}}%
1155        \printlist{origpublisher}%
```

```
1156        \setunit*{\addcomma\space}%
1157        \ifboolexpr{
1158          test {\iflistundef{origlocation}}
1159          and
1160          test {\iflistundef{origpublisher}}
1161          and
1162          test {\iffieldundef{edition}}
1163        }{}{%
1164          \printorigdate}%
1165        \setunit{\addsemicolon\space}%
1166        \printfield{edition}%
1167        \setunit*{\addcomma\space}%
```

If there are the same number of locations and publishers, and there are more than one pair, we print them pairwise rather than in two separate lists. This uses the same principle as the `namepairs` bibmacro, but does not have the list truncation apparatus.

```
1168        \ifboolexpr{%
1169          test {\ifnumcomp{\value{publisher}}{>}{1}}
1170          and
1171          test {\ifnumequal{\value{location}}{\value{publisher}}}
1172        }{%
1173          \setcounter{locpubpairs}{0}%
1174          \savebibmacro{list:andothers}%
1175          \renewbibmacro*{list:andothers}{}%
1176          \whileboolexpr{%
1177            test {\ifnumcomp{\value{locpubpairs}}{<}{\value{publisher}}}
1178          }{%
1179            \stepcounter{locpubpairs}%
1180            \ifnumcomp{\value{locpubpairs}}{>}{1}{%
1181              \ifnumequal{\value{publisher}}{2}{%
1182                \setunit*{\addspace\bibstring{and}\addspace}%
1183              }{%
1184                \ifnumequal{\value{locpubpairs}}{\value{publisher}}{%
1185                  \setunit*{\addcomma\space\bibstring{and}\addspace}%
1186                }{%
1187                  \setunit*{\addcomma\space}%
1188                }%
1189              }%
1190            }{}%
1191            \printlist[][\value{locpubpairs}-\value{locpubpairs}]{location}%
1192            \setunit*{\addcolon\space}%
1193            \printlist[][\value{locpubpairs}-\value{locpubpairs}]{publisher}%
1194          }%
1195          \restorebibmacro{list:andothers}%
1196        }{%
1197          \printlist{location}%
1198          \iflistundef{publisher}%
1199          {\setunit*{\addcomma\space}}%
1200          {\setunit*{\addcolon\space}}%
1201          \printlist{publisher}%
1202        }%
1203        \setunit*{\addcomma\space}%
1204        \usebibmacro{date}%
1205    }
```

Oxford style is to provide publication details – series name and number, edition, publisher, location, date – in a parenthetical block after the title information.

```
1206  \newbibmacro*{series+number+edition+publisher+location+date}{%
1207    \iftoggle{blx@ox@altbookseries}{%
1208      \usebibmacro{series+number}%
1209      \setunit{\addspace}\newblock}{}%
1210    \ifboolexpr{
1211      test {\iffieldundef{series}}
1212      and
1213      test {\iffieldundef{number}}
1214      and
1215      test {\iffieldundef{edition}}
1216      and
1217      test {\iflistundef{publisher}}
1218      and
1219      test {\iflistundef{location}}
1220      and
1221      test {\iffieldundef{year}}
1222      and
1223      test {\iffieldundef{yeardivision}}
1224      and
1225      test {\iffieldundef{month}}
1226    }{}{%
1227      \nopunct
1228      \printtext[publication]{%
1229      \iftoggle{blx@ox@altbookseries}{}{%
1230        \usebibmacro{series+number}%
1231        \setunit{\addsemicolon\addspace}}%
1232      \usebibmacro{edition+publisher+location+date}%
1233      \usebibmacro{copub}}}%
1234    \iffieldequalstr{relatedtype}{copub}{\clearfield{related}}%
1235    \setunit{\addspace}\newblock
1236    \usebibmacro{origpub}%
1237  }
```

The edition information for reference works is recorded earlier in the reference, so we provide a variant that excludes it from the publication block.

```
1238  \newbibmacro*{series+number+publisher+location+date}{%
1239    \iftoggle{blx@ox@altbookseries}{%
1240      \usebibmacro{series+number}%
1241      \setunit{\addspace}\newblock}{}%
1242    \ifboolexpr{
1243      test {\iffieldundef{series}}
1244      and
1245      test {\iffieldundef{number}}
1246      and
1247      test {\iflistundef{publisher}}
1248      and
1249      test {\iflistundef{location}}
1250      and
1251      test {\iffieldundef{year}}
1252      and
1253      test {\iffieldundef{yeardivision}}
1254      and
1255      test {\iffieldundef{month}}
1256    }{}{%
1257      \nopunct
1258      \printtext[publication]{%
1259      \iftoggle{blx@ox@altbookseries}{}{%
1260        \usebibmacro{series+number}%
1261        \setunit{\addsemicolon\addspace}}%
1262      \usebibmacro{publisher+location+date}%
```

```
1263            \usebibmacro{copub}}}%
1264        \iffieldequalstr{relatedtype}{copub}{\clearfield{related}}%
1265        \setunit{\addspace}\newblock
1266        \usebibmacro{origpub}%
1267      }
```

The copub macro prints co-publication details.

```
1268    \newbibmacro*{copub}{%
1269      \ifboolexpr{
1270        togl {bbx:related}
1271        and
1272        test {\iffieldequalstr{relatedtype}{copub}}
1273      }{%
1274        \setunit{\addsemicolon\space}%
1275        \usebibmacro{related:init}%
1276        \usebibmacro{related}%
1277      }{}%
1278    }
```

The `origpub` macro prints the origdate field if it has not yet been cleared.

```
1279    \newbibmacro*{origpub}{%
1280      \ifboolexpr{
1281        test {\iflistundef{origlocation}}
1282        and
1283        test {\iflistundef{origpublisher}}
1284        and
1285        test {\iffieldundef{edition}}
1286        and
1287        ( not test {\iffieldundef{origyear}} )
1288      }{%
1289        \printtext[parens]{\bibstring{origpubin}\space\printorigdate}%
1290      }{}%
1291    }
```

The changes to the book driver compared to the standard style are as follows:

- `maintitle` is processed with `volume` just before `series`, instead of with `title`;
- `edition` is processed where the standard style processes `note`, and vice versa;
- `volumes` is omitted;
- `series` to date information is delegated to a separate macro;
- support is added for `howpublished` field;

```
1292    \DeclareBibliographyDriver{book}{%
1293      \usebibmacro{bibindex}%
1294      \usebibmacro{begentry}%
1295      \usebibmacro{author/editor+others/translator+others}%
1296      \setunit{\printdelim{nametitledelim}}\newblock
1297      \usebibmacro{title}%
1298      \setunit{\titlebyauthordelim}\newblock
1299      \usebibmacro{byauthor}%
1300      \newunit\newblock
1301      \usebibmacro{byeditor+others}%
1302      \newunit\newblock
1303      \printfield{note}%
1304      \newunit\newblock
1305      \usebibmacro{maintitle+volume}%
```

```
1306    \newunit
1307    \usebibmacro{series+number+edition+publisher+location+date}%
1308    \setunit{\addspace}%
1309    \printfield{howpublished}%
1310    \newunit\newblock
1311    \usebibmacro{chapter+pages}%
1312    \newunit
1313    \printfield{pagetotal}%
1314    \newunit\newblock
1315    \iftoggle{bbx:isbn}
1316      {\printfield{isbn}}
1317      {}%
1318    \newunit\newblock
1319    \usebibmacro{doi+eprint+url}%
1320    \newunit\newblock
1321    \usebibmacro{addendum+pubstate}%
1322    \iftoggle{bbx:related}
1323      {\usebibmacro{related:init}%
1324       \usebibmacro{related}}
1325      {}%
1326    \setunit{\bibpagerefpunct}\newblock
1327    \usebibmacro{pageref}%
1328    \usebibmacro{finentry}}
```

Unlike the standard styles, we have a separate driver for mvbook which behaves slightly differently. It is in fact closer to the standard book driver. The changes are as follows:

- volume/part is processed just after maintitle+title;
- edition is processed where the standard style processes note;
- note is processed after volumes;
- series to date information is delegated to a separate macro;

```
1329    \DeclareBibliographyDriver{mvbook}{%
1330      \usebibmacro{bibindex}%
1331      \usebibmacro{begentry}%
1332      \usebibmacro{author/editor+others/translator+others}%
1333      \setunit{\printdelim{nametitledelim}}\newblock
1334      \usebibmacro{maintitle+title}%
1335      \newunit
1336      \ifboolexpr{
1337        test {\iffieldequalstr{relatedtype}{multivolume}}
1338        or
1339        ( not test {\iffieldundef{maintitle}} )
1340      }{}{%
1341        \printfield{volume}%
1342        \printfield{part}}%
1343      \setunit{\titlebyauthordelim}\newblock
1344      \usebibmacro{byauthor}%
1345      \newunit\newblock
1346      \usebibmacro{byeditor+others}%
1347      \newunit\newblock
1348      \printfield{volumes}%
1349      \newunit\newblock
1350      \printfield{note}%
1351      \newunit\newblock
1352      \ifboolexpr{
1353        test {\iffieldequalstr{relatedtype}{multivolume}}
1354        and
1355        test {\iffieldundef{maintitle}}
1356      }{%
```

```
1357        \printfield{volume}%
1358        \printfield{part}%
1359     }{}%
1360     \newunit\newblock
1361     \usebibmacro{series+number+edition+publisher+location+date}%
1362     \newunit\newblock
1363     \usebibmacro{chapter+pages}%
1364     \newunit
1365     \printfield{pagetotal}%
1366     \newunit\newblock
1367     \iftoggle{bbx:isbn}
1368        {\printfield{isbn}}
1369        {}%
1370     \newunit\newblock
1371     \usebibmacro{doi+eprint+url}%
1372     \newunit\newblock
1373     \usebibmacro{addendum+pubstate}%
1374     \iftoggle{bbx:related}
1375        {\usebibmacro{related:init}%
1376         \usebibmacro{related}}
1377        {}%
1378     \setunit{\bibpagerefpunct}\newblock
1379     \usebibmacro{pageref}%
1380     \usebibmacro{finentry}}
```

Our inbook driver modifies the standard one in just the same way as our mvbook driver modifies
the standard book.

```
1381     \DeclareBibliographyDriver{inbook}{%
1382     \usebibmacro{bibindex}%
1383     \usebibmacro{begentry}%
1384     \usebibmacro{author/translator+others}%
1385     \setunit{\printdelim{nametitledelim}}\newblock
1386     \usebibmacro{title}%
1387     \setunit{\titlebyauthordelim}\newblock
1388     \usebibmacro{byauthor}%
1389     \newunit\newblock
1390     \usebibmacro{in:}%
1391     \usebibmacro{bybookauthor}%
1392     \newunit\newblock
1393     \usebibmacro{maintitle+booktitle}%
1394     \newunit
1395     \iffieldundef{maintitle}
1396        {\printfield{volume}%
1397         \printfield{part}}
1398        {}%
1399     \newunit\newblock
1400     \usebibmacro{byeditor+others}%
1401     \newunit\newblock
1402     \printfield{volumes}%
1403     \newunit\newblock
1404     \printfield{note}%
1405     \newunit\newblock
1406     \usebibmacro{series+number+edition+publisher+location+date}%
1407     \newunit\newblock
1408     \usebibmacro{chapter+pages}%
1409     \newunit\newblock
1410     \iftoggle{bbx:isbn}
1411        {\printfield{isbn}}
1412        {}%
1413     \newunit\newblock
```

```
1414        \usebibmacro{doi+eprint+url}%
1415        \newunit\newblock
1416        \usebibmacro{addendum+pubstate}%
1417        \iftoggle{bbx:related}
1418          {\usebibmacro{related:init}%
1419           \usebibmacro{related}}
1420          {}%
1421        \setunit{\bibpagerefpunct}\newblock
1422        \usebibmacro{pageref}%
1423        \usebibmacro{finentry}}
```

Our suppbook driver is just like inbook except that the note is moved nearer the title so it can be used as a descriptor.

```
1424      \DeclareFieldFormat[suppbook]{title}{%
1425        \def\currentfield{title}%
1426        \iffieldannotation{descriptor}{#1}{\mkbibemph{#1}}%
1427        \undef\currentfield}
1428      \DeclareBibliographyDriver{suppbook}{%
1429        \usebibmacro{bibindex}%
1430        \usebibmacro{begentry}%
1431        \usebibmacro{author/translator+others}%
1432        \setunit{\printdelim{nametitledelim}}\newblock
1433        \usebibmacro{title}%
1434        \setunit{\titlebyauthordelim}\newblock
1435        \usebibmacro{byauthor}%
1436        \newunit\newblock
1437        \printfield{note}%
1438        \setunit{\addspace}\newblock
1439        \usebibmacro{in:}%
1440        \usebibmacro{bybookauthor}%
1441        \newunit\newblock
1442        \usebibmacro{maintitle+booktitle}%
1443        \newunit
1444        \iffieldundef{maintitle}
1445          {\printfield{volume}%
1446           \printfield{part}}
1447          {}%
1448        \newunit\newblock
1449        \usebibmacro{byeditor+others}%
1450        \newunit\newblock
1451        \printfield{volumes}%
1452        \newunit\newblock
1453        \usebibmacro{series+number+edition+publisher+location+date}%
1454        \newunit\newblock
1455        \usebibmacro{chapter+pages}%
1456        \newunit\newblock
1457        \iftoggle{bbx:isbn}
1458          {\printfield{isbn}}
1459          {}%
1460        \newunit\newblock
1461        \usebibmacro{doi+eprint+url}%
1462        \newunit\newblock
1463        \usebibmacro{addendum+pubstate}%
1464        \iftoggle{bbx:related}
1465          {\usebibmacro{related:init}%
1466           \usebibmacro{related}}
1467          {}%
1468        \setunit{\bibpagerefpunct}\newblock
1469        \usebibmacro{pageref}%
1470        \usebibmacro{finentry}}
```

We also provide a bookinbook driver that handles origdate differently.

```
1471  \DeclareBibliographyDriver{bookinbook}{%
1472    \usebibmacro{bibindex}%
1473    \usebibmacro{begentry}%
1474    \usebibmacro{author/translator+others}%
1475    \setunit{\printdelim{nametitledelim}}\newblock
1476    \usebibmacro{title}%
1477    \setunit{\titlebyauthordelim}\newblock
1478    \usebibmacro{byauthor}%
1479    \newunit\newblock
1480    \usebibmacro{in:}%
1481    \usebibmacro{bybookauthor}%
1482    \newunit\newblock
1483    \usebibmacro{maintitle+booktitle}%
1484    \newunit
1485    \iffieldundef{maintitle}
1486      {\printfield{volume}%
1487       \printfield{part}}
1488      {}%
1489    \newunit\newblock
1490    \usebibmacro{byeditor+others}%
1491    \newunit\newblock
1492    \printfield{volumes}%
1493    \newunit\newblock
1494    \printfield{note}%
1495    \newunit\newblock
1496    \usebibmacro{series+number+edition+publisher+location+date}%
1497    \newunit\newblock
1498    \usebibmacro{chapter+pages}%
1499    \newunit\newblock
1500    \iftoggle{bbx:isbn}
1501      {\printfield{isbn}}
1502      {}%
1503    \newunit\newblock
1504    \usebibmacro{doi+eprint+url}%
1505    \newunit\newblock
1506    \usebibmacro{addendum+pubstate}%
1507    \iftoggle{bbx:related}
1508      {\usebibmacro{related:init}%
1509       \usebibmacro{related}}
1510      {}%
1511    \setunit{\bibpagerefpunct}\newblock
1512    \usebibmacro{pageref}%
1513    \usebibmacro{finentry}}
```

Our collection driver modifies the standard one in just the same way as our book driver.

```
1514  \DeclareBibliographyDriver{collection}{%
1515    \usebibmacro{bibindex}%
1516    \usebibmacro{begentry}%
1517    \usebibmacro{editor+others}%
1518    \setunit{\printdelim{nametitledelim}}\newblock
1519    \usebibmacro{title}%
1520    \newunit\newblock
1521    \usebibmacro{byeditor+others}%
1522    \newunit\newblock
1523    \printfield{note}%
1524    \newunit\newblock
1525    \usebibmacro{maintitle+volume}%
1526    \newunit
1527    \usebibmacro{series+number+edition+publisher+location+date}%
```

```
1528      \newunit\newblock
1529      \usebibmacro{chapter+pages}%
1530      \newunit
1531      \printfield{pagetotal}%
1532      \newunit\newblock
1533      \iftoggle{bbx:isbn}
1534        {\printfield{isbn}}
1535        {}%
1536      \newunit\newblock
1537      \usebibmacro{doi+eprint+url}%
1538      \newunit\newblock
1539      \usebibmacro{addendum+pubstate}%
1540      \iftoggle{bbx:related}
1541        {\usebibmacro{related:init}%
1542         \usebibmacro{related}}
1543        {}%
1544      \setunit{\bibpagerefpunct}\newblock
1545      \usebibmacro{pageref}%
1546      \usebibmacro{finentry}}
```

Our mvcollection driver modifies the standard collection driver in just the same way as our mvbook driver modifies the standard book.

```
1547      \DeclareBibliographyDriver{mvcollection}{%
1548      \usebibmacro{bibindex}%
1549      \usebibmacro{begentry}%
1550      \usebibmacro{editor+others}%
1551      \setunit{\printdelim{nametitledelim}}\newblock
1552      \usebibmacro{maintitle+title}%
1553      \newunit
1554      \ifboolexpr{
1555        test {\iffieldequalstr{relatedtype}{multivolume}}
1556        or
1557        ( not test {\iffieldundef{maintitle}} )
1558      }{}{%
1559        \printfield{volume}%
1560        \printfield{part}}%
1561      \newunit\newblock
1562      \usebibmacro{byeditor+others}%
1563      \newunit\newblock
1564      \printfield{volumes}%
1565      \newunit\newblock
1566      \printfield{note}%
1567      \newunit\newblock
1568      \ifboolexpr{
1569        test {\iffieldequalstr{relatedtype}{multivolume}}
1570        and
1571        test {\iffieldundef{maintitle}}
1572      }{%
1573        \printfield{volume}%
1574        \printfield{part}%
1575      }{}%
1576      \newunit\newblock
1577      \usebibmacro{series+number+edition+publisher+location+date}%
1578      \newunit\newblock
1579      \usebibmacro{chapter+pages}%
1580      \newunit
1581      \printfield{pagetotal}%
1582      \newunit\newblock
1583      \iftoggle{bbx:isbn}
1584        {\printfield{isbn}}
```

```
1585        {}%
1586      \newunit\newblock
1587      \usebibmacro{doi+eprint+url}%
1588      \newunit\newblock
1589      \usebibmacro{addendum+pubstate}%
1590      \iftoggle{bbx:related}
1591        {\usebibmacro{related:init}%
1592         \usebibmacro{related}}
1593        {}%
1594      \setunit{\bibpagerefpunct}\newblock
1595      \usebibmacro{pageref}%
1596      \usebibmacro{finentry}}
```

Our incollection driver modifies the standard one in the same way as our mvbook driver modifies the standard book. In addition, the bookeditor macro precedes maintitle instead of byeditor+others following it.

```
1597      \DeclareBibliographyDriver{incollection}{%
1598        \usebibmacro{bibindex}%
1599        \usebibmacro{begentry}%
1600        \usebibmacro{author/translator+others}%
1601        \setunit{\printdelim{nametitledelim}}\newblock
1602        \usebibmacro{title}%
1603        \setunit{\titlebyauthordelim}\newblock
1604        \usebibmacro{byauthor}%
1605        \newunit\newblock
1606        \usebibmacro{in:}%
1607        \usebibmacro{bookeditor}%
1608        \newunit\newblock
1609        \usebibmacro{maintitle+booktitle}%
1610        \newunit
1611        \iffieldundef{maintitle}
1612          {\printfield{volume}%
1613           \printfield{part}}
1614          {}%
1615        \newunit\newblock
1616        \printfield{volumes}%
1617        \newunit\newblock
1618        \printfield{note}%
1619        \newunit\newblock%
1620        \usebibmacro{series+number+edition+publisher+location+date}%
1621        \newunit\newblock
1622        \usebibmacro{chapter+pages}%
1623        \newunit\newblock
1624        \iftoggle{bbx:isbn}
1625          {\printfield{isbn}}
1626          {}%
1627        \newunit\newblock
1628        \usebibmacro{doi+eprint+url}%
1629        \newunit\newblock
1630        \usebibmacro{addendum+pubstate}%
1631        \iftoggle{bbx:related}
1632          {\usebibmacro{related:init}%
1633           \usebibmacro{related}}
1634          {}%
1635        \setunit{\bibpagerefpunct}\newblock
1636        \usebibmacro{pageref}%
1637        \usebibmacro{finentry}}
```

Our suppcollection driver is just like incollection except that the note is moved nearer the title so it can be used as a descriptor.

```
1638    \DeclareFieldFormat[suppcollection]{title}{%
1639      \def\currentfield{title}%
1640      \iffieldannotation{descriptor}{#1}{\mkbibemph{#1}}%
1641      \undef\currentfield}
1642    \DeclareBibliographyDriver{suppcollection}{%
1643      \usebibmacro{bibindex}%
1644      \usebibmacro{begentry}%
1645      \usebibmacro{author/translator+others}%
1646      \setunit{\printdelim{nametitledelim}}\newblock
1647      \usebibmacro{title}%
1648      \setunit{\titlebyauthordelim}\newblock
1649      \usebibmacro{byauthor}%
1650      \newunit\newblock
1651      \printfield{note}%
1652      \setunit{\addspace}\newblock
1653      \usebibmacro{in:}%
1654      \usebibmacro{bookeditor}%
1655      \newunit\newblock
1656      \usebibmacro{maintitle+booktitle}%
1657      \newunit
1658      \iffieldundef{maintitle}
1659        {\printfield{volume}%
1660         \printfield{part}}
1661        {}%
1662      \newunit\newblock
1663      \printfield{volumes}%
1664      \newunit\newblock%
1665      \usebibmacro{series+number+edition+publisher+location+date}%
1666      \newunit\newblock
1667      \usebibmacro{chapter+pages}%
1668      \newunit\newblock
1669      \iftoggle{bbx:isbn}
1670        {\printfield{isbn}}
1671        {}%
1672      \newunit\newblock
1673      \usebibmacro{doi+eprint+url}%
1674      \newunit\newblock
1675      \usebibmacro{addendum+pubstate}%
1676      \iftoggle{bbx:related}
1677        {\usebibmacro{related:init}%
1678         \usebibmacro{related}}
1679        {}%
1680      \setunit{\bibpagerefpunct}\newblock
1681      \usebibmacro{pageref}%
1682      \usebibmacro{finentry}}
```

Unlike the standard styles, we provide a separate driver for reference. It is just like book except that edition is given directly after the title.

```
1683    \DeclareBibliographyDriver{reference}{%
1684      \usebibmacro{bibindex}%
1685      \usebibmacro{begentry}%
1686      \usebibmacro{author/editor+others/translator+others}%
1687      \setunit{\printdelim{nametitledelim}}\newblock
1688      \usebibmacro{title}%
1689      \newunit\newblock
1690      \printfield{edition}%
1691      \setunit{\titlebyauthordelim}\newblock
1692      \usebibmacro{byauthor}%
1693      \newunit\newblock
1694      \usebibmacro{byeditor+others}%
```

```
1695    \newunit\newblock
1696    \printfield{note}%
1697    \newunit\newblock
1698    \usebibmacro{maintitle+volume}%
1699    \newunit
1700    \usebibmacro{series+number+publisher+location+date}%
1701    \newunit\newblock
1702    \usebibmacro{chapter+pages}%
1703    \newunit
1704    \printfield{pagetotal}%
1705    \newunit\newblock
1706    \iftoggle{bbx:isbn}
1707      {\printfield{isbn}}
1708      {}%
1709    \newunit\newblock
1710    \usebibmacro{doi+eprint+url}%
1711    \newunit\newblock
1712    \usebibmacro{addendum+pubstate}%
1713    \iftoggle{bbx:related}
1714      {\usebibmacro{related:init}%
1715       \usebibmacro{related}}
1716      {}%
1717    \setunit{\bibpagerefpunct}\newblock
1718    \usebibmacro{pageref}%
1719    \usebibmacro{finentry}}
```

Similarly, mvreference is just like mvbook except that edition is given directly after the title.

```
1720    \DeclareBibliographyDriver{mvreference}{%
1721    \usebibmacro{bibindex}%
1722    \usebibmacro{begentry}%
1723    \usebibmacro{author/editor+others/translator+others}%
1724    \setunit{\printdelim{nametitledelim}}\newblock
1725    \usebibmacro{maintitle+title}%
1726    \newunit
1727    \ifboolexpr{
1728      test {\iffieldequalstr{relatedtype}{multivolume}}
1729      or
1730      ( not test {\iffielddundef{maintitle}} )
1731    }{}{%
1732      \printfield{volume}%
1733      \printfield{part}}%
1734    \newunit\newblock
1735    \printfield{edition}%
1736    \setunit{\titlebyauthordelim}\newblock
1737    \usebibmacro{byauthor}%
1738    \newunit\newblock
1739    \usebibmacro{byeditor+others}%
1740    \newunit\newblock
1741    \printfield{volumes}%
1742    \newunit\newblock
1743    \printfield{note}%
1744    \newunit\newblock
1745    \ifboolexpr{
1746      test {\iffieldequalstr{relatedtype}{multivolume}}
1747      and
1748      test {\iffielddundef{maintitle}}
1749    }{%
1750      \printfield{volume}%
1751      \printfield{part}%
1752    }{}%
```

```
1753    \newunit\newblock
1754    \usebibmacro{series+number+publisher+location+date}%
1755    \newunit\newblock
1756    \usebibmacro{chapter+pages}%
1757    \newunit
1758    \printfield{pagetotal}%
1759    \newunit\newblock
1760    \iftoggle{bbx:isbn}
1761      {\printfield{isbn}}
1762      {}%
1763    \newunit\newblock
1764    \usebibmacro{doi+eprint+url}%
1765    \newunit\newblock
1766    \usebibmacro{addendum+pubstate}%
1767    \iftoggle{bbx:related}
1768      {\usebibmacro{related:init}%
1769       \usebibmacro{related}}
1770      {}%
1771    \setunit{\bibpagerefpunct}\newblock
1772    \usebibmacro{pageref}%
1773    \usebibmacro{finentry}}
```

Our inreference driver is just like inbook except bookeditor replaces bybookauthor and edition is given just before byeditor+others.

```
1774    \DeclareBibliographyDriver{inreference}{%
1775    \usebibmacro{bibindex}%
1776    \usebibmacro{begentry}%
1777    \usebibmacro{author/translator+others}%
1778    \setunit{\printdelim{nametitledelim}}\newblock
1779    \usebibmacro{title}%
1780    \setunit{\titlebyauthordelim}\newblock
1781    \usebibmacro{byauthor}%
1782    \newunit\newblock
1783    \iffieldundef{editor}{}{%
1784      \usebibmacro{in:}%
1785      \usebibmacro{bookeditor}%
1786      \newunit\newblock}%
1787    \usebibmacro{maintitle+booktitle}%
1788    \newunit
1789    \iffieldundef{maintitle}
1790      {\printfield{volume}%
1791       \printfield{part}}
1792      {}%
1793    \newunit\newblock
1794    \printfield{edition}%
1795    \newunit
1796    \usebibmacro{byeditor+others}%
1797    \newunit\newblock
1798    \printfield{volumes}%
1799    \newunit\newblock
1800    \printfield{note}%
1801    \newunit\newblock%
1802    \usebibmacro{series+number+publisher+location+date}%
1803    \newunit\newblock
1804    \usebibmacro{chapter+pages}%
1805    \newunit
1806    \printfield{pagetotal}%
1807    \newunit\newblock
1808    \iftoggle{bbx:isbn}
1809      {\printfield{isbn}}
```

```
1810        {}%
1811    \newunit\newblock
1812    \usebibmacro{doi+eprint+url}%
1813    \newunit\newblock
1814    \usebibmacro{addendum+pubstate}%
1815    \iftoggle{bbx:related}
1816      {\usebibmacro{related:init}%
1817       \usebibmacro{related}}
1818      {}%
1819    \setunit{\bibpagerefpunct}\newblock
1820    \usebibmacro{pageref}%
1821    \usebibmacro{finentry}}
```

2.1.11 Works presented at meetings

By default, editors do not appear before the title in proceedings entries.

```
1822    \ExecuteBibliographyOptions[proceedings,mvproceedings]{useeditor=false,usetranslator=false}
```

In our version of the event+venue+date macro, the venue and date are set off with commas respectively instead of parentheses.

```
1823    \renewbibmacro*{event+venue+date}{%
1824      \printfield{eventtitle}%
1825      \newunit
1826      \printfield{eventtitleaddon}%
1827      \newunit
1828      \printfield{venue}%
1829      \newunit%
1830      \printeventdate%
1831      \newunit}
```

The changes to the proceedings driver compared to the standard style are as follows:

- We support the concept of an author before the title, which is usually the organization;
- editor comes after the title, not before;
- volume/part is processed just after maintitle+title;
- note is moved to before series;
- series to date information is delegated to a separate macro;

As in the (inherited) standard style, mvproceedings is an alias for this driver, since it is unlikely that the proceedings of a single meeting will be split into long series of independently published volumes!

```
1832    \DeclareBibliographyDriver{proceedings}{%
1833      \usebibmacro{bibindex}%
1834      \usebibmacro{begentry}%
1835      \usebibmacro{author}%
1836      \newunit
1837      \usebibmacro{maintitle+title}%
1838      \newunit
1839      \iffieldundef{maintitle}
1840        {\printfield{volume}%
1841         \printfield{part}}
1842        {}%
1843      \newunit\newblock
1844      \usebibmacro{event+venue+date}%
```

```
1845    \newunit\newblock
1846    \usebibmacro{byeditor+others}%
1847    \newunit\newblock
1848    \printfield{volumes}%
1849    \newunit\newblock
1850    \printfield{note}%
1851    \newunit\newblock
1852    \printlist{organization}%
1853    \newunit
1854    \usebibmacro{series+number+edition+publisher+location+date}%
1855    \newunit\newblock
1856    \usebibmacro{chapter+pages}%
1857    \newunit
1858    \printfield{pagetotal}%
1859    \newunit\newblock
1860    \iftoggle{bbx:isbn}
1861      {\printfield{isbn}}
1862      {}%
1863    \newunit\newblock
1864    \usebibmacro{doi+eprint+url}%
1865    \newunit\newblock
1866    \usebibmacro{addendum+pubstate}%
1867    \iftoggle{bbx:related}
1868      {\usebibmacro{related:init}%
1869       \usebibmacro{related}}
1870      {}%
1871    \setunit{\bibpagerefpunct}\newblock
1872    \usebibmacro{pageref}%
1873    \usebibmacro{finentry}}
```

Our inproceedings driver modifies the standard one in the same way as our proceedings driver modifies the standard one.

```
1874    \DeclareBibliographyDriver{inproceedings}{%
1875    \usebibmacro{bibindex}%
1876    \usebibmacro{begentry}%
1877    \usebibmacro{author/translator+others}%
1878    \setunit{\printdelim{nametitledelim}}\newblock
1879    \usebibmacro{title}%
1880    \setunit{\titlebyauthordelim}\newblock
1881    \usebibmacro{byauthor}%
1882    \newunit\newblock
1883    \usebibmacro{in:}%
1884    \usebibmacro{maintitle+booktitle}%
1885    \newunit
1886    \iffieldundef{maintitle}
1887      {\printfield{volume}%
1888       \printfield{part}}
1889      {}%
1890    \newunit\newblock
1891    \usebibmacro{event+venue+date}%
1892    \newunit\newblock
1893    \usebibmacro{byeditor+others}%
1894    \newunit\newblock
1895    \printfield{volumes}%
1896    \newunit\newblock
1897    \printfield{note}%
1898    \newunit\newblock
1899    \printlist{organization}%
1900    \newunit
1901    \usebibmacro{series+number+publisher+location+date}%
```

```
1902        \newunit\newblock
1903        \usebibmacro{chapter+pages}%
1904        \newunit\newblock
1905        \iftoggle{bbx:isbn}
1906          {\printfield{isbn}}
1907          {}%
1908        \newunit\newblock
1909        \usebibmacro{doi+eprint+url}%
1910        \newunit\newblock
1911        \usebibmacro{addendum+pubstate}%
1912        \iftoggle{bbx:related}
1913          {\usebibmacro{related:init}%
1914           \usebibmacro{related}}
1915          {}%
1916      \setunit{\bibpagerefpunct}\newblock
1917      \usebibmacro{pageref}%
1918      \usebibmacro{finentry}}
```

2.1.12 GREY LITERATURE

We provide a macro for handling type+number. We provide some extra logic to insert 'No.' before the number if there is no type.

```
1919      \newbibmacro*{series+type+number}{%
1920        \ifboolexpr{
1921          test {\iffieldundef{series}}
1922          and
1923          test {\iffieldundef{type}}
1924        }{}{%
1925          \printfield{series}%
1926          \newunit
1927          \ifboolexpr{%
1928              test {\iffieldundef{type}}
1929              and
1930              not test {\iffieldundef{number}}
1931          }{%
1932            \bibcpstring{number}
1933          }{%
1934            \printfield{type}%
1935          }%
1936          \setunit*{\addspace}%
1937          \printfield{number}}}
```

Our version of the institution+location+date macro is just like the standard one except it is wrapped in parentheses, and the preceding punctuation is therefore suppressed. This is used by the report driver.

```
1938      \renewbibmacro*{institution+location+date}{%
1939        \ifboolexpr{
1940          ( test {\iffieldundef{number}}
1941            or
1942            not test {\iffieldundef{type}}
1943            or
1944            not test {\iffieldundef{series}}
1945          )
1946          and
1947          test {\iflistundef{institution}}
1948          and
1949          test {\iflistundef{location}}
```

```
1950        and
1951        test {\iffieldundef{year}}
1952        and
1953        test {\iffieldundef{yeardivision}}
1954        and
1955        test {\iffieldundef{month}}
1956      }{}{%
1957        \nopunct
1958        \printtext[publication]{%
1959          \ifboolexpr{
1960            test {\iffieldundef{series}}
1961            and
1962            test {\iffieldundef{type}}
1963          }{%
1964            \printfield{number}%
1965            \setunit*{\addcomma\space}%
1966          }{}%
1967          \printlist{location}%
1968          \iflistundef{institution}%
1969          {\setunit*{\addcomma\space}}%
1970          {\setunit*{\addcolon\space}}%
1971          \printlist{institution}%
1972          \setunit*{\addcomma\space}%
1973          \usebibmacro{date}}}}}
```

We provide a slightly more complicated version with the type included at the beginning. It is used by the thesis driver. We provide two versions: one with the type outside and one with it inside the parentheses.

```
1974    \newtoggle{blx@ox@altthesis}
1975    \newtoggle{blx@ox@plainthesis}
1976    \DeclareFieldAlias{thesis:publication}{publication}
1977    \DeclareFieldFormat{plain}{#1}
1978    \DeclareBibliographyOption{altthesis}[true]{%
1979      \settoggle{blx@ox@altthesis}{#1}
1980    }
1981    \DeclareBibliographyOption[string]{thesis}[out]{%
1982      \ifstrequal{#1}{plain}{%
1983        \toggletrue{blx@ox@altthesis}%
1984        \toggletrue{blx@ox@plainthesis}%
1985        \DeclareFieldAlias{thesis:publication}{plain}%
1986      }{%
1987        \togglefalse{blx@ox@plainthesis}%
1988        \DeclareFieldAlias{thesis:publication}{publication}%
1989        \ifstrequal{#1}{in}{%
1990          \toggletrue{blx@ox@altthesis}%
1991        }{%
1992          \togglefalse{blx@ox@altthesis}%
1993          \ifstrequal{#1}{out}{}{%
1994            \PackageError{biblatex-oxref}
1995            {Invalid option 'bookseries=#1'}
1996            {Valid values are 'in', 'out', and 'plain'.}}}}}
1997    \newbibmacro*{type+institution+location+date}{%
1998      \iftoggle{blx@ox@altthesis}{%
1999        \ifboolexpr{
2000          test {\iffieldundef{type}}
2001          and
2002          test {\iflistundef{institution}}
2003          and
2004          test {\iflistundef{location}}
2005          and
```

```
2006          test {\iffieldundef{year}}
2007          and
2008          test {\iffieldundef{yeardivision}}
2009          and
2010          test {\iffieldundef{month}}
2011        }{}{%
2012          \iftoggle{blx@ox@plainthesis}{}{\nopunct}%
2013          \printtext[thesis:publication]{%
2014            \printfield{type}%
2015            \setunit*{\addcomma\space}%
2016            \printlist{location}%
2017            \iflistundef{institution}{%
2018              \setunit*{\addcomma\space}%
2019            }{%
2020              \setunit*{\addcolon\space}}%
2021            \printlist{institution}%
2022            \setunit*{\addcomma\space}%
2023            \usebibmacro{date}}}
2024        }{%
2025          \printfield{type}%
2026          \newunit
2027          \usebibmacro{institution+location+date}}}
```

We provide an even more convoluted version that also includes series, title and number, and uses the more common publisher in place of institution. We also include some logic that means organization is used instead of publisher if no publisher is provided; otherwise it is printed before location. This is used by the manual driver.

```
2028    \newbibmacro*{type+series+number+edition+organization+publisher+location+date}{%
2029      \ifboolexpr{
2030        test {\iffieldundef{type}}
2031        and
2032        test {\iffieldundef{series}}
2033        and
2034        test {\iffieldundef{number}}
2035        and
2036        test {\iffieldundef{edition}}
2037        and
2038        test {\iflistundef{organization}}
2039        and
2040        test {\iflistundef{publisher}}
2041        and
2042        test {\iflistundef{location}}
2043        and
2044        test {\iffieldundef{year}}
2045        and
2046        test {\iffieldundef{yeardivision}}
2047        and
2048        test {\iffieldundef{month}}
2049      }{}{%
2050        \nopunct
2051        \printtext[publication]{%
2052          \usebibmacro{series+type+number}%
2053          \setunit{\addsemicolon\space}%
2054          \printfield{edition}%
2055          \setunit*{\addcomma\space}%
2056          \iflistundef{publisher}{}{%
2057            \printlist{organization}%
2058            \setunit*{\addcomma\space}}%
2059          \printlist{location}%
2060          \iflistundef{publisher}{%
```

```
2061            \iflistundef{organization}{%
2062              \setunit*{\addcomma\space}%
2063            }{%
2064              \setunit*{\addcolon\space}%
2065              \printlist{organization}}%
2066          }{%
2067            \setunit*{\addcolon\space}%
2068            \printlist{publisher}}%
2069          \setunit*{\addcomma\space}%
2070          \usebibmacro{date}}}}
```

The changes to the report driver compared to the standard style are as follows:

- support is added for volume, maintitle and series;

- type and number are moved to just before the publication information block;

- the punctuation is slightly different for the legal entry subtype.

```
2071    \newcommand*{\legreport}{legal}
2072    \DeclareBibliographyDriver{report}{%
2073      \usebibmacro{bibindex}%
2074      \usebibmacro{begentry}%
2075      \usebibmacro{author}%
2076      \setunit{\printdelim{nametitledelim}}\newblock
2077      \usebibmacro{maintitle+title}%
2078      \newunit
2079      \iffielddundef{maintitle}
2080        {\printfield{volume}%
2081         \printfield{part}}
2082        {}%
2083      \setunit{\titlebyauthordelim}\newblock
2084      \usebibmacro{byauthor}%
2085      \newunit\newblock
2086      \printfield{version}%
2087      \newunit\newblock
2088      \printfield{note}%
2089      \newunit\newblock
2090      \usebibmacro{series+type+number}%
2091      \setunit{\addspace}%
2092      \usebibmacro{institution+location+date}%
2093      \iffieldequals{entrysubtype}{\legreport}{%
2094        \setunit{\addspace}\nopunct
2095        \let\origadddot\adddot
2096        \def\adddot{}%
2097        \usebibmacro{chapter+pages}%
2098        \let\adddot\origadddot
2099      }{%
2100        \newunit\newblock
2101        \usebibmacro{chapter+pages}%
2102      }%
2103      \newunit
2104      \printfield{pagetotal}%
2105      \newunit\newblock
2106      \iftoggle{bbx:isbn}
2107        {\printfield{isrn}}
2108        {}%
2109      \newunit\newblock
2110      \usebibmacro{doi+eprint+url}%
2111      \newunit\newblock
2112      \usebibmacro{addendum+pubstate}%
2113      \iftoggle{bbx:related}
```

```
2114        {\usebibmacro{related:init}%
2115         \usebibmacro{related}}
2116        {}%
2117      \setunit{\bibpagerefpunct}\newblock
2118      \usebibmacro{pageref}%
2119      \usebibmacro{finentry}}
```

We patch the thesis driver to use our slightly more complex version.

```
2120    \xpatchbibdriver{thesis}{%
2121      \printfield{type}%
2122      \newunit
2123      \usebibmacro{institution+location+date}%
2124    }{%
2125      \usebibmacro{type+institution+location+date}%
2126    }{}{\wlog{WARNING: biblatex-oxref failed to patch thesis}}
```

We give booklet entries descriptor support.

```
2127    \DeclareFieldFormat[booklet]{title}{%
2128      \def\currentfield{title}%
2129      \iffieldannotation{descriptor}{#1}{%
2130        \mkbibquote{#1\isdot}}%
2131      \undef\currentfield}
```

With patents, the titles are italic and the patent type is not abbreviated.

```
2132    \DeclareFieldFormat[patent]{title}{\mkbibemph{#1}}
2133    \DeclareFieldFormat[patent]{type}{\ifbibstring{#1}{\biblstring{#1}}{#1}}
```

The `holder`, `origdate` and `date` fields have explicit signposting; the latter two use `origdatetype` and `datetype`, with some sensible defaults.

```
2134    \DeclareNameAlias{byholder}{default}
2135    \renewbibmacro*{byholder}{%
2136      \ifnameundef{holder}{}{%
2137        \bibstring{byholder}%
2138        \setunit{\addspace}%
2139        \printnames[byholder]{holder}}}
2140    \newbibmacro*{location+dates}{%
2141      \ifboolexpr{
2142        test {\iffieldundef{location}}
2143        and
2144        test {\iffieldundef{origyear}}
2145        and
2146        test {\iffieldundef{origmonth}}
2147        and
2148        test {\iffieldundef{year}}
2149        and
2150        test {\iffieldundef{month}}
2151      }{}{%
2152        \nopunct
2153        \printtext[publication]{%
2154          \printlist[][-\value{listtotal}]{location}%
2155          \setunit*{\addcomma\space}%
2156          \ifboolexpr{
2157            test {\iffieldundef{origyear}}
2158            and
2159            test {\iffieldundef{origmonth}}
```

```
2160        }{}{%
2161          \iffieldundef{origdatetype}{%
2162            \bibstring{filed}
2163          }{
2164            \printfield{origdatetype}}%
2165          \setunit*{\addspace}}%
2166        \usebibmacro{origdate+time}%
2167        \setunit*{\addcomma\space}%
2168        \ifboolexpr{
2169          test {\iffieldundef{year}}
2170          and
2171          test {\iffieldundef{month}}
2172        }{}{%
2173          \iffieldundef{datetype}{%
2174            \bibstring{issued}%
2175          }{
2176            \printfield{datetype}}%
2177          \setunit*{\addspace}}%
2178        \usebibmacro{date}}}}
```

The patent driver differs from the regular one by having note moved further forward, and having a publication block consisting of location, origdate and date.

```
2179   \DeclareBibliographyDriver{patent}{%
2180     \usebibmacro{bibindex}%
2181     \usebibmacro{begentry}%
2182     \usebibmacro{author}%
2183     \setunit{\printdelim{nametitledelim}}\newblock
2184     \usebibmacro{title}%
2185     \newunit
2186     \printlist{language}%
2187     \setunit{\titlebyauthordelim}\newblock
2188     \usebibmacro{byauthor}%
2189     \newunit\newblock
2190     \printfield{note}%
2191     \newunit\newblock
2192     \printfield{type}%
2193     \setunit*{\addspace}%
2194     \printfield{number}%
2195     \newunit\newblock
2196     \usebibmacro{byholder}%
2197     \newunit\newblock
2198     \usebibmacro{location+dates}%
2199     \newunit\newblock
2200     \usebibmacro{doi+eprint+url}%
2201     \newunit\newblock
2202     \usebibmacro{addendum+pubstate}%
2203     \iftoggle{bbx:related}
2204       {\usebibmacro{related:init}%
2205        \usebibmacro{related}}
2206       {}%
2207     \setunit{\bibpagerefpunct}\newblock
2208     \usebibmacro{pageref}%
2209     \usebibmacro{finentry}}
```

Direct use of the manual entry type is not encouraged, but it serves as a basis for other entry types, notably standards, and software. The main change to the manual driver compared to the standard style is that type, series, number, edition and organization are moved into the publication information block with publisher, location and date. Note that standards will put the number field at the head of the reference if there is no author.

```
2210  \DeclareBibliographyDriver{manual}{%
2211    \usebibmacro{bibindex}%
2212    \usebibmacro{begentry}%
2213    \ifboolexpr{
2214      test {\ifentrytype{standard}}
2215      and
2216      ( test {\ifnameundef{author}}
2217        or
2218        not test \ifuseauthor )
2219      and
2220      not test {\iffieldundef{number}}
2221    }{%
2222      \printfield{number}\clearfield{number}%
2223      \newunit\newblock
2224    }{}%
2225    \usebibmacro{author/editor}%
2226    \setunit{\printdelim{nametitledelim}}\newblock
2227    \ifentrytype{software}
2228      {\usebibmacro{title+version}}
2229      {\usebibmacro{title}}%
2230    \setunit{\titlebyauthordelim}\newblock
2231    \usebibmacro{byauthor}%
2232    \newunit\newblock
2233    \usebibmacro{byeditor}%
2234    \newunit
2235    \ifentrytype{software}
2236      {}
2237      {\newunit\printfield{version}}%
2238    \newunit
2239    \printfield{note}%
2240    \newunit\newblock
2241    \usebibmacro{type+series+number+edition+organization+publisher+location+date}%
2242    \newunit\newblock
2243    \usebibmacro{chapter+pages}%
2244    \newunit
2245    \printfield{pagetotal}%
2246    \newunit\newblock
2247    \iftoggle{bbx:isbn}
2248      {\printfield{isbn}}
2249      {}%
2250    \newunit\newblock
2251    \usebibmacro{doi+eprint+url}%
2252    \newunit\newblock
2253    \usebibmacro{addendum+pubstate}%
2254    \iftoggle{bbx:related}
2255      {\usebibmacro{related:init}%
2256       \usebibmacro{related}}
2257      {}%
2258    \setunit{\bibpagerefpunct}\newblock
2259    \usebibmacro{pageref}%
2260    \usebibmacro{finentry}}
2261  \DeclareBibliographyAlias{standard}{manual}
2262  \ExecuteBibliographyOptions[standard]{useeditor=false}
```

2.1.13 Audiovisual materials

The publication block for audiovisual resources is quite different from the normal, as the type, series and number come between the publisher and date. The punctuation or otherwise between elements depends on the combination present. The date and time of recording is given before the block if a number is provided (indicating a published recording) but within it otherwise.

```
2263  \newbibmacro*{publisher+type+series+number+date}{%
2264    \iffieldundef{number}{}{%
2265      \setunit{\addcomma\space}%
2266      \usebibmacro{origdate+time}%
2267    }%
2268    \ifboolexpr{%
2269      test {\iflistundef{origpublisher}}
2270      and
2271      test {\iflistundef{location}}
2272      and
2273      test {\iflistundef{publisher}}
2274      and
2275      test {\iffieldundef{type}}
2276      and
2277      test {\iffieldundef{series}}
2278      and
2279      test {\iffieldundef{number}}
2280      and
2281      test {\iffieldundef{year}}
2282      and
2283      test {\iffieldundef{yeardivision}}
2284      and
2285      test {\iffieldundef{month}}
2286      and
2287      test {\iffieldundef{origyear}}
2288      and
2289      test {\iffieldundef{origyeardivision}}
2290      and
2291      test {\iffieldundef{origmonth}}
2292      and
2293      test {\iffieldundef{hour}}
2294    }{}{%
2295      \nopunct
2296      \printtext[publication]{%
2297        \printlist{origpublisher}%
2298        \setunit*{\addsemicolon\space}%
2299        \printlist{location}%
2300        \iflistundef{publisher}%
2301          {\setunit*{\addcomma\space}}%
2302          {\setunit*{\addcolon\space}}%
2303        \printlist{publisher}%
2304        \iffieldundef{series}%
2305          {\setunit*{\addspace}}%
2306          {\setunit*{\recordseriespunct}}%
2307        \printfield{series}%
2308        \setunit*{\addcomma\space}%
2309        \printfield{type}%
2310        \iflistundef{publisher}%
2311          {\setunit*{\addcomma\space}}%
2312          {\setunit*{\addspace}}%
2313        \printfield{number}%
2314        \iffieldundef{number}{%
2315          \setunit{\addcomma\space}%
2316          \usebibmacro{origdate+time}%
2317        }{}%
2318        \setunit{\addcomma\space}%
2319        \usebibmacro{date+time}}}}
```

We provide the `endeditor` option to determine if credits should be placed before or after the publication block.

```
2320    \newtoggle{blx@ox@endeditor}
2321    \DeclareEntryOption{endeditor}[true]{%
2322      \settoggle{blx@ox@endeditor}{#1}}
2323    \newbibmacro*{pre-byeditor+others}{%
2324      \iftoggle{blx@ox@endeditor}{}{%
2325        \usebibmacro{byeditor+others}%
2326      }}
2327    \newbibmacro*{post-byeditor+others}{%
2328      \iftoggle{blx@ox@endeditor}{%
2329        \usebibmacro{byeditor+others}%
2330      }{}}
```

We provide a specialist audio driver. It borrows elements from the book and `online` drivers, and incorporates the above variations.

```
2331    \DeclareBibliographyDriver{audio}{%
2332      \usebibmacro{bibindex}%
2333      \usebibmacro{begentry}%
2334      \usebibmacro{author}%
2335      \setunit{\printdelim{nametitledelim}}\newblock
2336      \usebibmacro{title}%
2337      \newunit
2338      \usebibmacro{maintitle}%
2339      \iffieldequalstr{relatedtype}{includes}{%
2340        \iftoggle{bbx:related}{%
2341          \newunit\newblock
2342          \usebibmacro{related:init}%
2343          \usebibmacro{related}%
2344          \clearfield{related}%
2345        }{}%
2346      }{}%
2347      \setunit{\addspace}
2348      \usebibmacro{onlinetype}%
2349      \setunit{\titlebyauthordelim}\newblock
2350      \usebibmacro{byauthor}%
2351      \newunit\newblock
2352      \usebibmacro{pre-byeditor+others}%
2353      \newunit\newblock
2354      \printfield{volumes}%
2355      \newunit\newblock
2356      \printfield{note}%
2357      \newunit\newblock%
2358      \printlist{organization}%
2359      \newunit\newblock%
2360      \usebibmacro{publisher+type+series+number+date}%
2361      \setunit{\addspace}%
2362      \printfield{howpublished}%
2363      \newunit\newblock
2364      \usebibmacro{post-byeditor+others}%
2365      \newunit\newblock
2366      \iftoggle{bbx:isbn}
2367        {\printfield{isbn}}
2368        {}%
2369      \newunit\newblock
2370      \usebibmacro{doi+eprint+url}%
2371      \newunit\newblock
2372      \usebibmacro{addendum+pubstate}%
2373      \iftoggle{bbx:related}
2374        {\usebibmacro{related:init}%
2375         \usebibmacro{related}}
2376        {}%
```

```
2377     \setunit{\bibpagerefpunct}\newblock
2378     \usebibmacro{pageref}%
2379     \usebibmacro{finentry}}
```

The same driver will do very well for music, video and movie.

```
2380     \DeclareBibliographyAlias{music}{audio}
2381     \DeclareBibliographyAlias{movie}{audio}
2382     \DeclareBibliographyAlias{video}{audio}
```

In parallel with book-like entries, we provide an inaudio driver for citing tracks from an album.

```
2383     \DeclareBibliographyDriver{inaudio}{%
2384       \usebibmacro{bibindex}%
2385       \usebibmacro{begentry}%
2386       \usebibmacro{author}%
2387       \setunit{\printdelim{nametitledelim}}\newblock
2388       \usebibmacro{title}%
2389       \setunit{\titlebyauthordelim}\newblock
2390       \usebibmacro{byauthor}%
2391       \newunit\newblock
2392       \usebibmacro{in:}%
2393       \usebibmacro{bybookauthor}%
2394       \newunit\newblock
2395       \usebibmacro{maintitle+booktitle}%
2396       \iffieldequalstr{relatedtype}{includes}{%
2397         \iftoggle{bbx:related}{%
2398           \newunit\newblock
2399           \usebibmacro{related:init}%
2400           \usebibmacro{related}%
2401           \clearfield{related}%
2402         }{}%
2403       }{}%
2404       \setunit{\addspace}
2405       \usebibmacro{onlinetype}%
2406       \newunit\newblock
2407       \usebibmacro{pre-byeditor+others}%
2408       \newunit\newblock
2409       \printfield{volumes}%
2410       \newunit\newblock
2411       \printfield{note}%
2412       \newunit\newblock%
2413       \printlist{organization}%
2414       \newunit\newblock%
2415       \usebibmacro{publisher+type+series+number+date}%
2416       \setunit{\addspace}%
2417       \printfield{howpublished}%
2418       \newunit\newblock
2419       \usebibmacro{post-byeditor+others}%
2420       \newunit\newblock
2421       \iftoggle{bbx:isbn}
2422         {\printfield{isbn}}
2423         {}%
2424       \newunit\newblock
2425       \usebibmacro{doi+eprint+url}%
2426       \newunit\newblock
2427       \usebibmacro{addendum+pubstate}%
2428       \iftoggle{bbx:related}
2429         {\usebibmacro{related:init}%
2430          \usebibmacro{related}}
2431         {}%
```

```
2432        \setunit{\bibpagerefpunct}\newblock
2433        \usebibmacro{pageref}%
2434        \usebibmacro{finentry}}
```

The same driver will do very well for inmusic, invideo and inmovie. The latter two are for completeness but probably not useful.

```
2435        \DeclareBibliographyAlias{inmusic}{inaudio}
2436        \DeclareBibliographyAlias{inmovie}{inaudio}
2437        \DeclareBibliographyAlias{invideo}{inaudio}
```

We set up appropriate inheritance rules.

```
2438        \DeclareDataInheritance{audio,music,movie,video}{inaudio,inmusic,inmovie,invideo}{%
2439          \inherit{title}{booktitle}
2440          \inherit{subtitle}{booksubtitle}
2441          \inherit{titleaddon}{booktitleaddon}
2442          \noinherit{shorttitle}
2443          \noinherit{sorttitle}
2444          \noinherit{indextitle}
2445          \noinherit{indexsorttitle}
2446        }
```

Titles for videos do not have a consistent format, so we define some entrysubtype-based variation. We also allow the use of descriptors; note that the title is transformed into a descriptor by means of an annotation, rather than using a dedicated field. This greatly simplifies the code used elsewhere.

```
2447        \DeclareFieldFormat[audio,music]{title}{%
2448          \def\currentfield{title}%
2449          \iffieldannotation{descriptor}{#1}{%
2450            \iffieldequalstr{entrysubtype}{podcast}{%
2451              \mkbibquote{#1\isdot}%
2452            }{%
2453              \mkbibemph{#1}}}%
2454          \undef\currentfield}
2455        \DeclareFieldFormat[movie,video]{title}{%
2456          \def\currentfield{title}%
2457          \iffieldannotation{descriptor}{#1}{%
2458            \ifboolexpr{
2459              test {\iffieldequalstr{entrysubtype}{episode}}
2460              or
2461              test {\iffieldequalstr{entrysubtype}{clip}}
2462              or
2463              test {\iffieldequalstr{entrysubtype}{webcast}}
2464            }{%
2465              \mkbibquote{#1\isdot}%
2466            }{%
2467              \mkbibemph{#1}}}%
2468          \undef\currentfield}
2469        \DeclareFieldFormat[inaudio,inmusic,inmovie,invideo]{title}{%
2470          \def\currentfield{title}%
2471          \iffieldannotation{descriptor}{#1}{%
2472            \mkbibquote{#1\isdot}%
2473          }%
2474          \undef\currentfield}
2475        \DeclareFieldFormat[inaudio,inmusic]{booktitle}{%
2476          \def\currentfield{booktitle}%
2477          \iffieldannotation{descriptor}{#1}{%
2478            \iffieldequalstr{entrysubtype}{podcast}{%
```

```
2479            \mkbibquote{#1\isdot}%
2480          }{%
2481            \mkbibemph{#1}}}%
2482        \undef\currentfield}
2483      \DeclareFieldFormat[inmovie,invideo]{booktitle}{%
2484        \def\currentfield{booktitle}%
2485        \iffieldannotation{descriptor}{#1}{%
2486          \ifboolexpr{
2487            test {\iffieldequalstr{entrysubtype}{episode}}
2488            or
2489            test {\iffieldequalstr{entrysubtype}{clip}}
2490            or
2491            test {\iffieldequalstr{entrysubtype}{webcast}}
2492          }{%
2493            \mkbibquote{#1\isdot}%
2494          }{%
2495            \mkbibemph{#1}}}%
2496        \undef\currentfield}
2497
```

The `performance` driver is similar to the `audio` driver, but instead of a publication block, it displays a set of event-related fields. With a bit of generosity, it can also work for artworks and images.

```
2498      \DeclareBibliographyDriver{performance}{%
2499        \usebibmacro{bibindex}%
2500        \usebibmacro{begentry}%
2501        \usebibmacro{author}%
2502        \setunit{\printdelim{nametitledelim}}\newblock
2503        \usebibmacro{title}%
2504        \newunit
2505        \usebibmacro{maintitle}%
2506        \iffieldequalstr{relatedtype}{includes}{%
2507          \iftoggle{bbx:related}{%
2508            \newunit\newblock
2509            \usebibmacro{related:init}%
2510            \usebibmacro{related}%
2511            \clearfield{related}%
2512          }{}%
2513        }{}%
2514        \setunit{\addspace}
2515        \usebibmacro{onlinetype}%
2516        \setunit{\titlebyauthordelim}\newblock
2517        \usebibmacro{byauthor}%
2518        \newunit\newblock
2519        \usebibmacro{pre-byeditor+others}%
2520        \setunit{\addspace}%
2521        \printfield{howpublished}%
2522        \newunit\newblock
2523        \printfield{type}%
2524        \newunit\newblock
2525        \printfield{note}%
2526        \ifboolexpr{
2527          test {\iffieldundef{origyear}}
2528          and
2529          test {\iffieldundef{origmonth}}
2530        }{}{%
2531          \setunit{\addspace}\newblock
2532          \printtext[publication]{\usebibmacro{origdate+time}}}
2533        \newunit\newblock
2534        \usebibmacro{event+venue+location+date}%
2535        \newunit\newblock
```

```
2536        \usebibmacro{post-byeditor+others}%
2537        \newunit\newblock
2538        \printlist{organization}%
2539        \newunit\newblock
2540        \iftoggle{bbx:isbn}
2541          {\printfield{isbn}}
2542          {}%
2543        \newunit\newblock
2544        \usebibmacro{doi+eprint+url}%
2545        \newunit\newblock
2546        \usebibmacro{addendum+pubstate}%
2547        \iftoggle{bbx:related}
2548          {\usebibmacro{related:init}%
2549           \usebibmacro{related}}
2550          {}%
2551        \setunit{\bibpagerefpunct}\newblock
2552        \usebibmacro{pageref}%
2553        \usebibmacro{finentry}}
2554      \DeclareBibliographyAlias{image}{performance}
2555      \DeclareBibliographyAlias{artwork}{performance}
```

Here is the macro used for printing the event location and date for performances and exhibitions.

```
2556      \newbibmacro*{event+venue+location+date}{%
2557        \printfield{eventtitle}%
2558        \newunit
2559        \printfield{eventtitleaddon}%
2560        \newunit
2561        \printlist{institution}%
2562        \newunit
2563        \printfield{venue}%
2564        \newunit
2565        \printlist{location}%
2566        \newunit%
2567        \ifboolexpr{
2568          test {\iffieldundef{year}}
2569          and
2570          test {\iffieldundef{month}}
2571        }{\printeventdate}{\usebibmacro{date+time}}}
2572
```

2.1.14 DIGITAL MEDIA

Website articles and social media

The titles of web pages and similar intrinsically online resources are written in roman text within quotes.

```
2573      \DeclareFieldFormat[online,image]{title}{%
2574        \def\currentfield{title}%
2575        \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
2576        \undef\currentfield}
2577
```

We provide an onlinetype macro for clarifying the type of online material. It is triggered by appropriate values of entrysubtype.

```
2578      \newbibmacro*{onlinetype}{%
2579        \ifboolexpr{
```

```
2580        test {\iffieldundef{url}}
2581        or
2582        test {\iffieldundef{entrysubtype}}
2583      }{}{%
2584        \ifbibxstring{\thefield{entrysubtype}}{%
2585          \printtext[brackets]{\bibstring{\thefield{entrysubtype}}}%
2586        }{}}}
```

The changes to the online driver compared to the standard style are as follows:

- We support the use of maintitle for, say, the title of the wesbite in which the web page is located. This comes after title.

- We insert the aforementioned onlinetype macro after maintitle.

- The date is wrapped in parentheses if present.

- We support displaying a publisher after the date; this is a legacy feature based on examples that are now deprecated.

```
2587    \DeclareBibliographyDriver{online}{%
2588      \usebibmacro{bibindex}%
2589      \usebibmacro{begentry}%
2590      \usebibmacro{author/editor+others/translator+others}%
2591      \setunit{\printdelim{nametitledelim}}\newblock
2592      \usebibmacro{title}%
2593      \newunit
2594      \usebibmacro{maintitle}
2595      \setunit{\addspace}%
2596      \usebibmacro{onlinetype}%
2597      \setunit{\titlebyauthordelim}\newblock
2598      \usebibmacro{byauthor}%
2599      \newunit\newblock
2600      \usebibmacro{byeditor+others}%
2601      \newunit\newblock
2602      \printfield{version}%
2603      \newunit
2604      \printfield{note}%
2605      \newunit\newblock
2606      \printlist{organization}%
2607      \iffieldundef{year}{}{%
2608        \setunit{\addspace}\newblock
2609        \printtext[parens]{\usebibmacro{date+time}}%
2610      }%
2611      \newunit\newblock
2612      \printlist{publisher}%
2613      \newunit\newblock
2614      \iftoggle{bbx:eprint}
2615        {\usebibmacro{eprint}}
2616        {}%
2617      \newunit\newblock
2618      \usebibmacro{url+urldate}%
2619      \newunit\newblock
2620      \usebibmacro{addendum+pubstate}%
2621      \iftoggle{bbx:related}
2622        {\usebibmacro{related:init}%
2623         \usebibmacro{related}}
2624        {}%
2625      \setunit{\bibpagerefpunct}\newblock
2626      \usebibmacro{pageref}%
2627      \usebibmacro{finentry}}
```

Software

The version for software goes between the title and titleaddon.

```
2628  \newbibmacro*{title+version}{%
2629    \ifboolexpr{
2630      test {\iffieldundef{title}}
2631      and
2632      test {\iffieldundef{subtitle}}
2633    }
2634    {}
2635    {\printtext[title]{%
2636        \printfield[titlecase]{title}%
2637        \setunit{\subtitlepunct}%
2638        \printfield[titlecase]{subtitle}}%
2639      \setunit{\addspace}}%
2640    \printfield{version}%
2641    \setunit{\addspace}%
2642    \printfield{titleaddon}%
2643  }
2644  \DeclareFieldFormat[software]{version}{\mkbibparens{\bibstring{version}~#1}}
```

The url date string is different for software: 'downloaded' rather than 'accessed'.

```
2645  \DeclareFieldFormat[software]{urldate}{\bibstring{urldown}\space#1}
```

The software driver is a variant of the manual driver.

```
2646  \DeclareBibliographyAlias{software}{manual}
```

Datasets

The main change to the dataset driver compared to the standard style is that type, series, number, edition and organization are moved into the publication information block with publisher, location and date.

```
2647  \DeclareBibliographyDriver{dataset}{%
2648    \usebibmacro{bibindex}%
2649    \usebibmacro{begentry}%
2650    \usebibmacro{author/editor+others/translator+others}%
2651    \setunit{\printdelim{nametitledelim}}\newblock
2652    \usebibmacro{title}%
2653    \newunit
2654    \printlist{language}%
2655    \setunit{\titlebyauthordelim}\newblock
2656    \usebibmacro{byauthor}%
2657    \newunit\newblock
2658    \usebibmacro{byeditor+others}%
2659    \newunit\newblock
2660    \printfield{type}%
2661    \newunit
2662    \printfield{version}%
2663    \newunit\newblock
2664    \printfield{note}%
2665    \newunit\newblock
2666    \usebibmacro{type+series+number+edition+organization+publisher+location+date}%
2667    \newunit\newblock
2668    \usebibmacro{doi+eprint+url}%
2669    \newunit\newblock
2670    \usebibmacro{addendum+pubstate}%
```

```
2671     \iftoggle{bbx:related}
2672       {\usebibmacro{related:init}%
2673        \usebibmacro{related}}
2674       {}%
2675     \setunit{\bibpagerefpunct}\newblock
2676     \usebibmacro{pageref}%
2677     \usebibmacro{finentry}}
```

2.1.15 Legal references

Legal references are a law unto themselves, and thus require extensive fiddly coding. This entire
section is adapted from oscola by Paul Stanley.

Entry options

```
2678     \newtoggle{bbx:scotstyle}
2679     \DeclareEntryOption{scottish-style}[true]{%
2680       \settoggle{bbx:scotstyle}{#1}}
2681     \newboolean{bbx@year-essential}\setboolean{bbx@year-essential}{false}
2682     \DeclareEntryOption{year-essential}[true]{%
2683         \setboolean{bbx@year-essential}{#1}}
2684     \newboolean{bbx@paryear-essential}\setboolean{bbx@paryear-essential}{false}
2685     \DeclareEntryOption{paryear-essential}[true]{%
2686         \setboolean{bbx@paryear-essential}{#1}}
2687     \newtoggle{blx@ox@nopostnotedelim}
2688     \newtoggle{bbx:altcourt}
2689     \DeclareBiblatexOption{global,type,entry}{court-plain}[true]{%
2690       \settoggle{bbx:altcourt}{#1}}
2691     \newtoggle{bbx@ecliuse}
2692     \newtoggle{bbx@eclionly}
2693     \DeclareBibliographyOption[string]{ecli}[yes]{%
2694       \ifstrequal{#1}{no}{%
2695         \global\togglefalse{bbx@ecliuse}%
2696         \global\togglefalse{bbx@eclionly}%
2697       }{%
2698         \global\toggletrue{bbx@ecliuse}%
2699         \ifstrequal{#1}{only}{%
2700           \global\toggletrue{bbx@eclionly}%
2701         }{}}}
```

Field formats

```
2702     \DeclareFieldFormat{casenotetitle}{\mkbibquote{\mkbibemph{#1}}}
2703     \DeclareFieldFormat[jurisdiction,legislation,legal]{journaltitle}{#1}
2704     \DeclareFieldFormat[jurisdiction]{volume}{#1}
2705     \DeclareFieldFormat[jurisdiction]{titleaddon}{\mkbibparens{#1}}
2706     \DeclareFieldFormat{romanvol}{\RN{#1}}
2707     \DeclareListFormat[jurisdiction]{listb}{}
2708     \protected\def\mkusbibordinal#1{%
2709       \begingroup
2710       \@tempcnta0#1\relax\number\@tempcnta
2711       \@whilenum\@tempcnta>100\do{\advance\@tempcnta-100\relax}%
2712       \ifnum\@tempcnta>20
2713         \@whilenum\@tempcnta>9\do{\advance\@tempcnta-10\relax}%
2714       \fi
2715       \ifcase\@tempcnta th\or st\or d\or d\else th\fi
2716       \endgroup}%
2717     \DeclareFieldFormat{usseries}{\ifinteger{#1}{\mkusbibordinal{#1}}{#1}}
```

```
2718    \DeclareFieldFormat{verba}{#1}
2719
2720    \DeclareListFormat{echrinst}{%
2721      \ifboolexpr{%
2722        test {\ifnumequal{\value{listtotal}}{1}}
2723        or
2724        test {\ifnumequal{\value{listcount}}{\value{listtotal}}}
2725      }{%
2726        \ifboolexpr{
2727          test {\ifdefstring{\Commission}{#1}}
2728          or
2729          test {\ifdefstring{\commission}{#1}}%
2730        }{%
2731          \bibstring{commissiondecision}%
2732        }{#1}%
2733      }{%
2734        \setcounter{blx@tmpcnt}{\value{listcount}}%
2735        \addtocounter{blx@tmpcnt}{1}%
2736        \ifnumequal{\value{blx@tmpcnt}}{\value{listtotal}}{%
2737          #1\space\bibstring{and}\addspace
2738        }{%
2739          #1\addcomma\space}}}%
2740
2741    \newcommand*{\commission}{commission}
2742    \newcommand*{\Commission}{Commission}
2743    \DeclareListFormat{ecthr}{%
2744      \ifboolexpr{
2745        test {\ifdefstring{\Commission}{#1}}
2746        or
2747        test {\ifdefstring{\commission}{#1}}
2748      }{\bibstring[\mkbibparens]{commissiondecision}\toggletrue{blx@ox@nopostnotedelim}}{}}
2749
2750    \newcommand*{\pcijrep}{PCIJ Rep}
2751    \DeclareFieldFormat{international}{%
2752      \iffieldequals{journaltitle}{\pcijrep}{%
2753        \bibcplstring{jourser}\space #1%
2754      }{#1}}
2755
2756    \DeclareListFormat{checkcontains}{%
2757      \bbx@check{#1}}
2758    \newtoggle{bbx@institutiontoggle}
2759    \newcommand\iflistcontains[2]{%
2760      \global\togglefalse{bbx@institutiontoggle}%
2761      \def\bbx@check##1{%
2762        \ifdefstring{#2}{##1}{\global\toggletrue{bbx@institutiontoggle}}{}}%
2763      \printlist[checkcontains]{#1}%
2764      \iftoggle{bbx@institutiontoggle}}
2765
2766    \DeclareFieldFormat{draftleg}{%
2767      \StrBefore{#1}{ Bill}}
2768
2769    \DeclareListFormat{billprinting}{%
2770      \ifstrequal{#1}{HC}{%
2771        \mkbibbrackets{\strfield{number}}%
2772        \toggletrue{blx@ox@nopostnotedelim}%
2773      }{%
2774        \strfield{number}%
2775        \togglefalse{blx@ox@nopostnotedelim}}}
2776
2777    \newcommand*{\treatypartysep}{\allowbreak ---\allowbreak}
2778    \DeclareListFormat{treaty}{%
2779      \ifmoreitems{}{%
```

```
2780        \ifnumequal{\value{listcount}}{1}{%
2781          \bibopenparen
2782        }{}%
2783        \ifnumgreater{\value{liststop}}{\value{listcount}}{%
2784          #1\treatypartysep
2785        }{%
2786          #1\bibcloseparen}}}
2787
2788    \def\siganddate#1{%
2789      \def\bbx@tempa{#1}%
2790      \expandafter\bbx@signeddatei#1/relax}
2791    \def\bbx@signeddatei#1=#2/relax{%
2792      \def\bbx@tempa{#2-}%
2793      \bibstring{#1}\space\expandafter\makebbx@datei\bbx@tempa}
2794    \def\makebbx@datei#1-#2-#3-{%
2795      \makebbx@dateii{#1}{#2}{#3}}
2796    \def\makebbx@dateii#1#2#3{%
2797      \blx@imc@stripzeros{#3}~\mkbibmonth{#2}%
2798      \space
2799      #1}
2800    \DeclareListFormat{treatydates}{%
2801      \ifnumequal{\value{listcount}}{1}{%
2802        \siganddate{#1}%
2803      }{%
2804        \addcomma\space\siganddate{#1}}}
2805
```

Pagination formats

We define an alternative to \mkpageprefix that takes a pagination key directly.

```
2806    \newrobustcmd*{\mkrawpageprefix}[1][none]{%
2807      \begingroup
2808      \def\blx@tempa{\blx@mkpageprefix@i}%
2809      \ifstrequal{#1}{none}{}{%
2810        \ifbibstring{#1}{%
2811          \def\blx@tempa{\blx@mkpageprefix{#1}}%
2812        }{%
2813          \blx@warning@entry{Unknown pagination type '#1'}}}%
2814      \@ifnextchar[%]
2815        {\blx@tempa}
2816        {\blx@tempa[\@firstofone]}}
2817
2818    \newcommand*\paragraphmarkings{[]}
2819    \DeclareFieldFormat[jurisdiction,legislation,legal]{postnote}{%
2820      \iffieldundef{pagination}{%
2821        \ifboolexpr{
2822          test {\ifkeyword{eu}}
2823          or
2824          test {\ifkeyword{echr}}
2825        }{%
2826          \mkcomprange[{\mkrawpageprefix[paragraph]}]{#1}%
2827        }{%
2828          \mkcomprange{#1}}%
2829      }{%
2830        \iffieldequals{pagination}{\paragraphmarkings}{%
2831          \mkcomprange[\mkbibbrackets]{#1}%
2832        }{%
2833          \mkcomprange[{\mkpageprefix[pagination]}]{#1}}}}
```

Shorthands

With legal references, the introduction of shorthands is less verbose.

```
2834  \renewbibmacro*{shorthandintro}{%
2835    \iffieldundef{shorthandintro}
2836      {\iffieldundef{shorthand}
2837        {}
2838        {\setunit{\addspace}%
2839         \printtext[parens]{%
2840           \ifboolexpr{
2841             test {\ifentrytype{jurisdiction}}
2842             or
2843             test {\ifentrytype{legal}}
2844             or
2845             test {\ifentrytype{legislation}}
2846           }{}{%
2847             \bibstring{citedas}\space}%
2848           \printfield{shorthand}}}}
2849      {\setunit{\addspace}%
2850       \printtext[parens]{\printfield{shorthandintro}}}}
2851
```

Common macros

```
2852  \newbibmacro*{issue/volume}{%
2853    \iffieldundef{volume}%
2854      {\iffieldundef{issue}%
2855        {}%
2856        {\printfield{issue}}}%
2857      {\printfield[default]{volume}}}
2858  \newcommand*{\subtypenewsp}{newspaper}
2859  \newbibmacro*{year+vol+report}[1][default]{%
2860    \iffieldequals{entrysubtype}{\subtypenewsp}{%
2861      \setunit{\addcomma\space}%
2862    }{%
2863      \usebibmacro{journaldate}%
2864      \setunit{\addspace}%
2865      \printfield[parens]{origyear}%
2866      \setunit{\addspace}%
2867      \printfield{volume}%
2868      \setunit{\addspace}}%
2869    \printfield{journaltitle}%
2870    \setunit*{\addspace}%
2871    \iffieldundef{series}{}{%
2872      \setunit{\addspace}%
2873      \printfield[#1]{series}%
2874      \setunit{\addspace}}%
2875    \iffieldequals{entrysubtype}{\subtypenewsp}{%
2876      \setunit{\addcomma\space}%
2877      \printdate%
2878    }{}}
2879  \newbibmacro*{journaldate}[1][]{%
2880    \ifboolexpr{
2881      test {\iffieldundef{#1volume}}
2882      or
2883      bool {bbx@#1year-essential}
2884    }{%
2885      \ifboolexpr{
2886        test {\ifkeyword{sc}}
2887        or
```

```
2888          test {\iftoggle{bbx:scotstyle}}
2889        }{%
2890          \setunit{\addcomma\space}%
2891          \printfield{#1year}%
2892        }{%
2893          \printfield[brackets]{#1year}}%
2894      }{%
2895          \printfield[parens]{#1year}}}
2896    \newcommand*{\casenote}{casenote}
2897    \newcommand{\casenotetext}{\bibstring{casenote}}
2898    \newbibmacro{journaltitle}{%
2899      \iffieldequals{entrysubtype}{\casenote}{%
2900        \iffieldundef{crossref}{%
2901          \usebibmacro{title}%
2902        }{%
2903          \iffieldundef{note}{%
2904            \restorefield{note}{\casenotetext}%
2905          }{}%
2906          \ifboolexpr{
2907            test {\iffootnote}
2908            and test {\iftoggle{bbx@samefootnote}}
2909            and test {\iffieldequals{crossref}{\blx@lastkey@foot}}%
2910          }{}{\printfield[casenotetitle]{title}}}%
2911      }{%
2912        \usebibmacro{title}}}
2913    \newbibmacro*{unreported}[1][default]{%
2914      \iffieldundef{verba}{%
2915        \ifboolexpr{
2916          test {\iflistundef{institution}}
2917          and
2918          test {\iffieldundef{date}}
2919          and
2920          test {\iffieldundef{year}}
2921        }{}{%
2922          \ifboolexpr{
2923            test {\iffieldundef{date}}
2924            and
2925            test {\iffieldundef{year}}
2926          }{%
2927            \mkbibparens{\printlist[jurisdiction]{institution}}%
2928          }{%
2929            \toggletrue{blx@ox@nopostnotedelim}%
2930            \iflistundef{institution}{%
2931              \mkbibparens{\usebibmacro{date}}%
2932            }{%
2933              \printtext[parens]{%
2934                \printlist[#1]{institution}%
2935                \setunit{\addcomma\space}
2936                \usebibmacro{date}}}}}%
2937      }{%
2938        \iftoggle{bbx@ecliuse}{}{%
2939          \printfield{verba}}}}
2940    \newbibmacro{court-note}{%
2941      \iffieldundef{note}%
2942        {}%
2943        {\printfield{note}%
2944         \toggletrue{blx@ox@nopostnotedelim}}}
2945    \newbibmacro*{jurisdictionpages}{%
2946      \let\origadddot\adddot
2947      \def\adddot{}%
2948      \iffieldequals{entrysubtype}{\subtypenewsp}{}{%
2949        \setunit{\addspace}%
```

```
2950        \printfield{pages}}%
2951      \let\adddot\origadddot
2952    }
2953    \newbibmacro{pcitenote}{%
2954      \iffieldundef{parreporter}{}{%
2955        \setunit{\addcomma\space}%
2956        \iffieldundef{postnote}{}{%
2957          \printfield{postnote}%
2958          \clearfield{postnote}%
2959          \setunit{\addsemicolon\space}}}}
2960    \newbibmacro*{courtid}{%
2961      \iffieldundef{number}{%
2962        \ifboolexpr{
2963          test {\iflistundef{institution}}
2964          and
2965          test {\iffieldundef{location}}%
2966        }{%
2967          \togglefalse{blx@ox@nopostnotedelim}%
2968        }{%
2969          \ifboolexpr{%
2970            test {\iffieldundef{journaltitle}}
2971            or
2972            not togl {bbx:altcourt}
2973          }{%
2974            \printtext[parens]{%
2975              \printfield{location}%
2976              \setunit{\addspace}%
2977              \printlist{institution}%
2978              \usebibmacro{unrep:date}}%
2979            \toggletrue{blx@ox@nopostnotedelim}
2980          }{%
2981            \setunit{\addcomma\space}%
2982            \printfield{location}%
2983            \setunit*{\addspace}%
2984            \printlist{institution}}}%
2985      }{%
2986        \togglefalse{blx@ox@nopostnotedelim}}}
2987    \newbibmacro*{unrep:date}{%
2988      \ifboolexpr{
2989        test {\iffieldundef{journaltitle}}%
2990        and
2991        test {\iffieldundef{number}}%
2992        and
2993        test {\iffieldundef{neutralcite}}%
2994      }{%
2995        \setunit{\addcomma\space}%
2996        \usebibmacro{date}%
2997      }{}}
2998
```

Legal cases

There are different formats depending on the jurisdiction.

```
2999      \DeclareBibliographyDriver{jurisdiction}{%
3000        \usebibmacro{bibindex}%
3001        \usebibmacro{begentry}%
3002        \usebibmacro{juriscitation}%
3003        \usebibmacro{doi+eprint+url}%
3004        \setunit{\addspace}%\newblock
```

```
3005        \usebibmacro{addendum+pubstate}%
3006        \setunit{\addspace}%\newblock
3007        \iftoggle{bbx:related}
3008          {\usebibmacro{related:init}%
3009           \usebibmacro{related}}
3010          {}%
3011        \setunit{\bibpagerefpunct}\newblock
3012        \usebibmacro{pageref}%
3013        \usebibmacro{finentry}}
3014      \newtoggle{bbx@juriscitedone}
3015      \newbibmacro{juriscitation}{%
3016        \togglefalse{bbx@juriscitedone}%
3017        \renewcommand{\do}[1]{%
3018          \ifkeyword{##1}{%
3019            \toggletrue{bbx@juriscitedone}\usebibmacro{##1juriscitation}%
3020            \listbreak
3021          }{}}%
3022        \docsvlist{eu,echr,int,ca,us}%
3023        \iftoggle{bbx@juriscitedone}{}{\usebibmacro{enjuriscitation}}%
3024      }
```

Here is the format for EU cases.

```
3025      \newtoggle{bbx@commissiondecision}
3026      \newbibmacro*{eujuriscitation}{%
3027        \ifboolexpr{
3028          test {\iflistcontains{institution}{\commission}}
3029          or
3030          test {\iflistcontains{institution}{\Commission}}
3031        }{%
3032          \toggletrue{bbx@commissiondecision}%
3033        }{%
3034          \togglefalse{bbx@commissiondecision}}%
3035        \iftoggle{bbx@commissiondecision}{}{%
3036          \usebibmacro{eucasenumber}}%
3037        \usebibmacro{title}%
3038        \setunit{\addspace}%
3039        \iftoggle{bbx@commissiondecision}{%
3040          \usebibmacro{eucommissiondecision}}{}%
3041        \setunit{\addspace}%
3042        \usebibmacro{eu:reportinfo}%
3043        \iftoggle{bbx@commissiondecision}{%
3044          \setunit{\addcomma\space}%
3045        }{%
3046          \setunit{\addspace}}%
3047        \usebibmacro{altreportdetails}%
3048        \usebibmacro{court-note}%
3049      }
3050      \newcommand*\oxrefand{ and }
3051      \newbibmacro{eucasetype}{%
3052        \iffieldundef{type}{%
3053          \ifboolexpr{
3054            test {\IfSubStr{\thefield{number}}{,}}
3055            or
3056            test {\IfSubStr{\thefield{number}}{--}}
3057            or
3058            test {\IfSubStr{\thefield{number}}{\oxrefand}}
3059          }{%
3060            \bibstring{eujoinedcases}%
3061          }{%
3062            \bibstring{eucase}}%
3063        }{%
```

```
3064        \printfield{type}}%
3065      }
3066    \newbibmacro{eucasenumber}{%
3067      \usebibmacro{eucasetype}%
3068      \setunit{\addnbspace}%
3069      \printfield{number}%
3070      \setunit{\addspace}}
3071    \newbibmacro{eucommissiondecision}{%
3072      \iffieldundef{userb}{%
3073        \iffieldundef{number}{}{%
3074          \printtext[parens]{%
3075            \usebibmacro{eucasetype}%
3076            \setunit{\addnbspace}%
3077            \printfield{number}}}%
3078      }{%
3079        \printtext[parens]{%
3080          \printfield{userb}}%
3081        \setunit{\addspace}%
3082        \iffieldundef{number}{}{%
3083          \iffieldundef{type}{%
3084            \setunit{\addspace\bibstring{commissiondecision}\addspace}%
3085          }{%
3086            \setunit{\addspace\printfield{type}\addspace}}%
3087          \printfield{number}}%
3088      }%
3089      }
3090    \newbibmacro*{eu:reportinfo}{%
3091      \iftoggle{bbx@eclionly}{%
3092        \iffieldundef{verba}{%
3093          \usebibmacro{eu:osreport}%
3094        }{%
3095          \printfield{verba}}%
3096      }{%
3097        \usebibmacro{eu:osreport}}}
3098    \newbibmacro*{eu:osreport}{%
3099      \iftoggle{bbx@ecliuse}{%
3100        \iffieldundef{verba}{}{%
3101          \printfield{verba}%
3102          \setunit{\addcomma\space}}%
3103      }{}%
3104      \iffieldundef{journaltitle}{%
3105        \usebibmacro{unreported}%
3106      }{%
3107        \usebibmacro{eu:year+vol+report}}}
3108    \newcommand*\officialjournaltitle{OJ}
3109    \newcommand*\ecrreporttitle{ECR}
3110    \newbibmacro*{eu:year+vol+report}{%
3111      \iffieldequals{journaltitle}{\ecrreporttitle}{%
3112        \printfield[brackets]{year}%
3113        \setunit{\addspace}%
3114        \printfield{journaltitle}%
3115        \setunit{\addspace}%
3116        \printfield{volume}%
3117        \setunit*{\printtext{--\allowbreak}}%
3118        \printfield{pages}%
3119      }{%
3120        \iffieldequals{journaltitle}{\officialjournaltitle}{%
3121          \printfield[brackets]{year}%
3122          \setunit{\addspace}%
3123          \printfield{journaltitle}%
3124          \setunit{\addspace}%
3125          \printfield[default]{series}%
```

```
3126        \usebibmacro{issue/volume}%
3127        \setunit{\printtext{\slash}}%
3128        \printfield{pages}%
3129      }{%
3130        \usebibmacro{year+vol+report}}}}
3131
```

Here is the format for European Human Rights cases.

```
3132    \newbibmacro*{echrjuriscitation}{%
3133      \usebibmacro{title}%
3134      \setunit{\addspace}\newblock
3135      \iffieldundef{number}{}{%
3136        \printtext[parens]{%
3137          \def\adddot{}%
3138          \bibstring{application}\space
3139          \bibstring{number}\space
3140          \printfield{number}}%
3141        \setunit{\addspace}\newblock}%
3142      \iffieldundef{journaltitle}{%
3143        \usebibmacro{unreported}[echrinst]%
3144      }{%
3145        \usebibmacro{echr:year+vol+report}
3146        \setunit{\addspace}\newblock
3147        \usebibmacro{echr:courtid}}%
3148      \setunit{\addspace}%
3149      \usebibmacro{court-note}%
3150      \newblock
3151      \setunit{\addspace}}
3152    \newcommand*{\seriesa}{Series A}
3153    \newcommand*{\echrreports}{ECHR}
3154    \newbibmacro*{echr:year+vol+report}{%
3155      \iffieldequals{journaltitle}{\seriesa}{%
3156        \usebibmacro{seriesareport}%
3157      }{%
3158        \iffieldequals{journaltitle}{\echrreports}{%
3159          \usebibmacro{echrreports}%
3160        }{%
3161          \usebibmacro{year+vol+report}%
3162          \setunit{\addspace}%
3163      \printfield{pages}}}}
3164    \newbibmacro*{seriesareport}{%
3165      \printfield[parens]{year}%
3166      \setunit{\addspace}%
3167      \printfield{journaltitle}%
3168      \setunit{\addspace}%
3169      \printtext{\def\adddot{}\bibstring{number}\addspace}%
3170      \printfield{pages}}
3171    \newbibmacro*{echrreports}{%
3172      \printfield{journaltitle}%
3173      \setunit{\addspace}%
3174      \printfield{year}%
3175      \iffieldundef{volume}{}{%
3176        \printtext{--}\printfield[romanvol]{volume}}
3177      \setunit{\addspace}%
3178      \printfield{pages}}
3179    \newcommand*{\decisionsandreports}{DR}
3180    \newcommand*{\collectionofdecisions}{CD}
3181    \newbibmacro*{echr:courtid}{%
3182      \ifboolexpr{
3183        test {\iffieldequals{journaltitle}{\decisionsandreports}}
```

```
3184        or
3185        test {\iffieldequals{journaltitle}{\collectionofdecisions}}%
3186      }{}{%
3187        \printlist[ecthr]{institution}}}
3188
```

Here is the format for international cases.

```
3189    \newbibmacro*{intjuriscitation}{%
3190      \iflistundef{institution}{%
3191        \setunit{}\printtext{}%
3192      }{%
3193        \printlist{institution}%
3194        \setunit{\addcomma\space}}%
3195      \usebibmacro{int:title}%
3196      \setunit{\addspace}\newblock
3197      \iffieldundef{journaltitle}{%
3198        \printfield{number}%
3199        \setunit{\addspace}\newblock
3200        \printtext[parens]{\printdate}%
3201      }{%
3202        \usebibmacro{year+vol+report}[international]%
3203      }%
3204      \setunit{\addspace}%
3205      \usebibmacro{int:jurisdictionpages}%
3206      \setunit{\addspace}\newblock
3207      \usebibmacro{court-note}%
3208    }
3209    \newbibmacro*{int:title}{%
3210      \ifboolexpr{
3211        test {\iffieldundef{title}}
3212        and
3213        test {\iffieldundef{subtitle}}
3214      }{}{%
3215        \printtext[title]{%
3216          \printfield[titlecase]{title}%
3217          \setunit{\addspace}%
3218          \printfield[parens]{subtitle}}}%
3219      \setunit{\addspace}%
3220      \printfield{titleaddon}%
3221    }
3222    \newbibmacro*{int:jurisdictionpages}{%
3223      \let\origaddot\adddot
3224      \def\adddot{}%
3225      \iffieldequals{journaltitle}{\pcijrep}{%
3226        \printtext{\bibcpstring{number}\addspace}%
3227        \iffieldundef{pages}{%
3228          \printfield{number}%
3229        }{%
3230          \printfield{pages}}%
3231      }{%
3232        \printfield{pages}}%
3233      \let\addot\origadddot
3234    }
3235
```

Here is the format for Canadian cases.

```
3236    \newbibmacro{cajuriscitation}{%
3237      \usebibmacro{title}%
3238      \setunit{\cacasetitlepunct}\newblock
```

```
3239        \printfield{number}%
3240        \setunit{\addcomma\space}%
3241        \iffieldundef{journaltitle}{}{%
3242          \usebibmacro{can:year+vol+report}}%
3243        \usebibmacro{jurisdictionpages}%
3244        \usebibmacro{pcitenote}%
3245        \usebibmacro{altreportdetails}%
3246        \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}%
3247        \newunit\newblock
3248        \usebibmacro{courtid}%
3249        \newunit%
3250        \usebibmacro{court-note}%
3251        \newblock%
3252        \newunit}
3253      \newbibmacro*{can:year+vol+report}{%
3254        \iffieldundef{number}{%
3255          \setunit{\addspace}%
3256        }{%
3257          \ifboolexpr{
3258            test {\iffieldundef{volume}}
3259            or
3260            bool {bbx@year-essential}%
3261          }{}{%
3262            \clearfield{year}}}%
3263        \iffieldequals{entrysubtype}{\subtypenewsp}{}{%
3264          \iffieldundef{year}{}{%
3265            \usebibmacro{journaldate}%
3266            \setunit{\addspace}}}
3267        \printfield{volume}%
3268        \setunit{\addspace}%
3269        \printfield{journaltitle}%
3270        \setunit*{\addspace}%
3271        \iffieldundef{series}{}{%
3272          \setunit{\addspace}%
3273          \printtext[parens]{\printfield[usseries]{series}}%
3274          \setunit{\addspace}}%
3275        \iffieldequals{entrysubtype}{\subtypenewsp}{%
3276          \setunit{\addcomma\space}%
3277          \usebibmacro{newspaperdate}%
3278        }{}}
```

Here is the format for American cases.

```
3279      \newbibmacro{usjuriscitation}{%
3280        \usebibmacro{title}%
3281        \setunit{\uscasetitlepunct}\newblock%
3282        \iffieldundef{journaltitle}{%
3283          \printfield{number}%
3284          \setunit{\addcomma\space}%
3285          \printfield[default]{eprint}%
3286          \clearfield{eprint}%
3287        }{
3288          \usebibmacro{us:vol+report}}%
3289        \setunit{\addspace}%
3290        \usebibmacro{jurisdictionpages}%
3291        \usebibmacro{us:postnote}%
3292        \usebibmacro{altreportdetails}%
3293        \setunit{\addspace}\newblock
3294        \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}%
3295        \setunit{\addspace}%
3296        \usebibmacro{us:courtid+date}%
3297        \setunit{\addspace}%
```

```
3298        \usebibmacro{court-note}%
3299        \newblock
3300        \setunit{\addspace}}
3301    \newbibmacro{us:vol+report}{%
3302        \printfield{volume}%
3303        \setunit{\addspace}%
3304        \printfield{journaltitle}%
3305        \iffieldundef{series}{}{%
3306          \setunit{\addspace}%
3307          \printfield[usseries]{series}}}
3308    \newbibmacro{us:postnote}{%
3309        \iffieldundef{postnote}{}{%
3310          \setunit{\addcomma\space}%
3311          \printfield{postnote}%
3312          \clearfield{postnote}%
3313        }}
3314    \newbibmacro{us:courtid+date}{%
3315        \ifboolexpr{
3316          test {\iflistundef{institution}}
3317          and
3318          test {\iflistundef{location}}
3319          and
3320          test {\iffieldundef{year}}
3321        }{}{%
3322          \printtext[parens]{%
3323            \printlist{location}%
3324            \setunit*{\addspace}%
3325            \printlist{institution}%
3326            \setunit{\addspace}%
3327            \printfield{year}%
3328            \nopunct}}}
3329
```

Here is the format for English cases.

```
3330    \newbibmacro{enjuriscitation}{%
3331      \usebibmacro{title}%
3332      \setunit{\addspace}\newblock
3333      \printfield{neutralcite}%
3334      \setunit*{\addcomma\space}%
3335      \printfield{number}%
3336      \setunit*{\addcomma\space}%
3337      \iffieldundef{journaltitle}{}{%
3338        \usebibmacro{year+vol+report}}%
3339      \usebibmacro{jurisdictionpages}%
3340      \usebibmacro{pcitenote}%
3341      \usebibmacro{altreportdetails}%
3342      \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}% additionalreports
3343      \setunit{\addspace}\newblock
3344      \usebibmacro{courtid}%
3345      \setunit{\addspace}%
3346      \usebibmacro{court-note}}
3347    \newbibmacro{altreportdetails}{%
3348      \restorefield{prenote}{\postnotesecond}%
3349      \iffieldundef{parreporter}{}{%
3350        \usebibmacro{journaldate}[par]%
3351        \setunit{\addspace}\newblock
3352        \usebibmacro{altreportvolume}%
3353        \setunit{\addspace}\newblock
3354        \usebibmacro{altjournaltitle}%
3355        \setunit{\addspace}\newblock
```

```
3356        \usebibmacro{altseries}%
3357        \setunit{\addspace}\newblock
3358        \usebibmacro{altjurisdictionpages}%
3359        \iffieldundef{prenote}{}{%
3360          \setunit{\addcomma\space}%
3361          \printfield[postnote]{prenote}}}}
3362     \newbibmacro*{altreportvolume}{%
3363       \iffieldundef{parvolume}{}{%
3364         \printfield{parvolume}}}
3365     \newbibmacro*{altjournaltitle}{%
3366       \iffieldundef{parreporter}{}{
3367         \printfield{parreporter}}}
3368     \newbibmacro*{altseries}{%
3369       \iffieldundef{parseries}{}{%
3370         \printfield{parseries}}}
3371     \newbibmacro*{altjurisdictionpages}{%
3372       \iffieldundef{parpages}{}{%
3373         \printfield{parpages}}}%
3374
```

Legislation

Legislation tends to have a more consistent format, though European entries need special handling.

```
3375     \newcommand*{\subtypecourtrules}{procedure-rule}
3376     \DeclareBibliographyDriver{legislation}{%
3377       \usebibmacro{bibindex}%
3378       \usebibmacro{begentry}%
3379       \iffieldequals{entrysubtype}{\subtypecourtrules}{%
3380         \usebibmacro{courtrules}%
3381       }{%
3382         \ifkeyword{draft}{%
3383           \usebibmacro{legislation:bill}%
3384         }{%
3385           \ifkeyword{eu}{%
3386             \usebibmacro{eulegislation}%
3387           }{%
3388             \printfield[default]{title}%
3389             \setunit{\addspace}%
3390             \printfield[default]{year}%
3391             \setunit*{\addspace}%
3392             \usebibmacro{legnumber}%
3393             \setunit{\addspace}\newblock
3394             \usebibmacro{legsupp}}}}%
3395       \setunit{\addcomma\space}%
3396       \printfield{note}%
3397       \setunit{\bibpagerefpunct}\newblock
3398       \usebibmacro{pageref}%
3399       \usebibmacro{finentry}}
3400     \newbibmacro*{courtrules}{%
3401       \restorefield{prenote}{\postnotesecond}%
3402       \iffieldequalstr{shorttitle}{PD}{%
3403         \printfield{postnote}%
3404         \clearfield{postnote}%
3405         \setunit{\addspace}%
3406       }{}%
3407       \iffieldundef{shorttitle}{%
3408         \printfield[default]{title}%
3409       }{%
```

```
3410        \printfield[default]{shorttitle}}%
3411      \setunit{\addspace}\newblock
3412      \iffieldundef{postnote}{%
3413        \toggletrue{blx@ox@nopostnotedelim}%
3414      }{%
3415        \iffieldequalstr{shorttitle}{CPR}{%
3416          \printfield{postnote}%
3417          \setunit{\addspace}%
3418        }{%
3419          \printtext{%
3420            \bibstring{order}\space
3421            \printfield{postnote}%
3422            \setunit{\addcomma\space}}}}%
3423      \restorefield{postnote}{\postnotesecond}%
3424      \usebibmacro{postnote}%
3425      \clearfield{postnote}%
3426      \setunit{\addspace}\newblock}
3427    \newcommand*{\subtypeprimarylegislation}{primary}
3428    \newbibmacro*{legislation:bill}{%
3429      \printfield[draftleg]{title}%
3430      \setunit{\addspace}%
3431      \printlist{institution}%
3432      \setunit*{\addspace}%
3433      \iffieldequals{entrysubtype}{\subtypeprimarylegislation}{%
3434        \bibcpstring{bill}%
3435        \setunit{\addspace}%
3436        \printtext[parens]{\usebibmacro{sessionyear}}%
3437        \setunit{\addspace}%
3438        \iffieldundef{number}{}{%
3439          \printlist[billprinting]{institution}}%
3440      }{%
3441        \printtext[parens]{%
3442          \bibstring{draft}\space
3443          \printdate}}%
3444      \setunit{\addspace}}
3445    \newbibmacro*{sessionyear}{%
3446      \iffieldundef{year}{}{%
3447        \printfield{year}%
3448        \iffieldundef{endyear}{}{%
3449          \bibdaterangesep
3450          \blx@ox@compyear{\thefield{year}}{\thefield{endyear}}}}}
3451    \newbibmacro{eulegislation}{%
3452      \printfield[default]{title}%
3453      \setunit{\addspace}\newblock%
3454      \usebibmacro{eulegref}}
3455    \newcommand*{\ojspecedtitle}{OJ Spec Ed}
3456    \newbibmacro*{eulegref}{%
3457      \iffieldequals{journaltitle}{\officialjournaltitle}{%
3458        \printfield[brackets]{year}%
3459        \setunit{\addspace}%
3460        \printfield{journaltitle}%
3461        \setunit{\addspace}%
3462        \iffieldundef{series}{%
3463          \printtext{L}%
3464        }{%
3465          \printfield[default]{series}}%
3466        \usebibmacro{issue/volume}%
3467        \setunit*{\addslash}%
3468        \printfield{pages}%
3469        \togglefalse{blx@ox@nopostnotedelim}%
3470      }{%
3471        \usebibmacro{year+vol+report}%
```

```
3472        \setunit*{\addspace}%
3473        \printfield{pages}}}
3474    \newbibmacro*{legnumber}{%
3475      \iffieldequals{entrysubtype}{\subtypeprimarylegislation}{%
3476        \ifboolexpr{(
3477            test {\iffieldundef{number}}
3478            or
3479            not test {\iffieldundef{title}} )
3480          and not (
3481            test {\ifkeyword{cy}}
3482            or
3483            test {\ifkeyword{sc}}
3484            or
3485            test {\ifkeyword{ni}} )
3486        }{}{%
3487          \printtext[parens]{\printfield{number}}%
3488          \toggletrue{blx@ox@nopostnotedelim}}%
3489      }{%
3490        \iffieldundef{number}{}{%
3491          \setunit{\addcomma\addspace}%
3492          \printfield{number}%
3493          \togglefalse{blx@ox@nopostnotedelim}}}}
```

This adds additional material for Welsh statutory instruments.

```
3494    \newbibmacro*{legsupp}{%
3495      \ifkeyword{cy}
3496        {\iffieldundef{userb}
3497          {}
3498          {\printtext{\mkbibparens{\printfield{userb}}}\toggletrue{blx@ox@nopostnotedelim}}}
3499        {}}
3500
```

Treaties, explanatory notes and Hansard

```
3501    \newcommand*{\explanatorynote}{explanatory note}
3502    \newcommand*{\parliamentarytype}{parliamentary}
3503    \newcommand*{\treatysubtype}{piltreaty}
3504    \DeclareBibliographyDriver{legal}{%
3505      \usebibmacro{bibindex}%
3506      \usebibmacro{begentry}%
3507      \iffieldequals{entrysubtype}{\explanatorynote}{%
3508        \printfield[default]{title}%
3509        \setunit{\addspace}\newblock
3510      }{%
3511        \iffieldequals{entrysubtype}{\parliamentarytype}{%
3512          \usebibmacro{legal:parliamentary}%
3513        }{%
3514          \usebibmacro{treatycitation}}}%
3515      \setunit{\addcomma\space}\newblock
3516      \printfield[default]{note}
3517      \setunit{\addspace}\newblock
3518      \iftoggle{bbx:related}
3519        {\usebibmacro{related:init}%
3520         \usebibmacro{related}}
3521        {}%
3522      \setunit{\bibpagerefpunct}%
3523      \usebibmacro{pageref}%
3524      \usebibmacro{finentry}}
3525    \newbibmacro{legal:parliamentary}{%
```

```
3526        \printfield[default]{title}%
3527        \newunit\newblock
3528        \printfield{type}%
3529        \setunit{\addspace}%
3530        \iffieldundef{series}{}{%
3531          \printtext[parens]{%
3532            \biblstring{jourser}\space
3533            \printfield{series}}}%
3534        \setunit{\addspace}%
3535        \printfield{volume}%
3536        \setunit{\addcomma\space}%
3537        \usebibmacro{hansard-ref}%
3538        \setunit{\addspace}%
3539        \iffieldundef{year}{}{%
3540          \printtext[parens]{\usebibmacro{date}}}%
3541        \togglefalse{blx@ox@nopostnotedelim}}
3542    \newbibmacro*{hansard-ref}{%
3543        \iffieldundef{postnote}{%
3544          \iffieldundef{pages}{}{%
3545            \printfield{pages}}%
3546        }{}}%
3547    \newbibmacro{treatycitation}{%
3548        \printfield[default]{title}%
3549        \setunit{\addspace}\newblock%
3550        \printlist[treaty]{institution}
3551        \setunit{\addspace}\newblock
3552        \usebibmacro{treatyinfo}%
3553        \setunit{\addspace}\newblock
3554        \usebibmacro{treaty:year+vol+report}}
3555    \newbibmacro{treatyinfo}{%
3556        \iflistundef{lista}{% execution
3557          \iffieldundef{year}{}{%
3558            \iffieldundef{volume}{}{%
3559              \printtext[parens]{\printdate}}}%
3560        }{%
3561          \printtext[parens]{\printlist[treatydates]{lista}}}}}
3562    \newbibmacro{treaty:year+vol+report}{%
3563        \iffieldequals{journaltitle}{\officialjournaltitle}{%
3564          \usebibmacro{eulegref}%
3565        }{%
3566          \usebibmacro{treaty:date}%
3567          \setunit{\addspace}%
3568          \printfield[default]{volume}%
3569          \setunit{\addspace}%
3570          \printfield{journaltitle}%
3571          \setunit*{\addspace}%
3572          \iffieldundef{series}{%
3573            \printfield{type}%
3574            \setunit*{\addspace}%
3575          }{%
3576            \printfield{series}%
3577            \iffieldundef{type}{%
3578              \setunit{\addspace}%
3579              \bibcpstring{number}%
3580              \setunit{\addspace}%
3581            }{%
3582              \setunit{\addcomma\space}%
3583            }}
3584          \printfield{number}
3585          \setunit*{\addspace}%
3586          \printfield{pages}}}%
3587    \newbibmacro*{treaty:date}{%
```

```
3588        \ifboolexpr{
3589          test {\iffieldundef{volume}}
3590          or
3591          bool {bbx@year-essential}
3592        }{%
3593          \ifboolexpr{
3594            test {\ifkeyword{sc}}
3595            or
3596            test {\iftoggle{bbx:scotstyle}}
3597          }{%
3598            \printfield{year}%
3599          }{%
3600            \printfield[brackets]{year}%
3601        }}{}}
3602
```

We don't really deal with commentaries as distinct from books.

```
3603      \DeclareBibliographyAlias{commentary}{book}
```

2.1.16 Manuscripts

In the spirit of compatibility, this code is adapted from biblatex-manuscripts-philology by Maïeul Rouquette.

Here are the additional punctuation commands.

```
3604      \newcommand{\locationlibrarypunct}{\addcomma\addspace}
3605      \newcommand{\collectionshelfmarkpunct}{\addspace}
3606      \newcommand{\datingpagespunct}{\addcomma\addspace}
3607      \newcommand{\librarycollectionpunct}{\addcomma\addspace}
3608      \newcommand{\pagetotalpagespunct}{\addcomma\addspace}
3609      \newcommand{\columnslayerpunct}{\addsemicolon\addspace}%
```

Here are the configurable macros for the two sides of a folio.

```
3610      \def\recto{r}
3611      \def\verso{v}
3612      \NumCheckSetup{\def\recto{}\def\verso{}}
```

Here are some special field formats for the manuscript driver. Note that the title is transformed into a descriptor by means of an annotation, rather than using a dedicated field. This greatly simplifies the code used elsewhere.

```
3613      \DeclareFieldFormat[manuscript,unpublished]{title}{%
3614        \def\currentfield{title}%
3615        \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
3616        \undef\currentfield}
3617      \DeclareFieldFormat{columns+layer}{\mkbibparens{#1}}
3618      \DeclareFieldFormat{columns}{\mkbibparens{#1}}
3619      \DeclareFieldFormat{layer}{\mkbibparens{#1}}
3620      \DeclareFieldFormat{dating}{#1\isdot}%
3621      \DeclareFieldFormat{support}{\ifbibstring{#1}{\bibstring{#1}}{#1}}
```

Here are the unique bibmacros used by the manuscripts driver. We hide the date if there is no author or title to prevent it appearing as the first element in the reference. Similarly, we hide the (vague) dating field if the (exact) date is displayed.

```
3622    \newbibmacro{manuscript:date}{%
3623      \ifboolexpr{
3624        test {\ifnameundef{author}}
3625        and
3626        test {\iffieldundef{title}}
3627        and
3628        test {\iffieldundef{label}}
3629      }{}{\usebibmacro{date}}}
3630    \newbibmacro{dating}{%
3631      \ifboolexpr{(
3632          test {\ifnameundef{author}}
3633          and
3634          test {\iffieldundef{title}}
3635          and
3636          test {\iffieldundef{label}}
3637        ) or
3638        test {\iffieldundef{year}}
3639      }{%
3640        \printfield{dating}%
3641      }{}}
```

We follow the structure of the biblatex-manuscripts-philology approach to allow special formatting to be applied to the collection and shelfmark, but we do not actually apply any.

```
3642    \newbibmacro{location+library+collection+shelfmark}{%
3643      \printfield{library}%
3644      \setunit{\locationlibrarypunct}%
3645      \printlist{location}%
3646      \setunit{\librarycollectionpunct}%
3647      \usebibmacro{collection+shelfmark}}
3648    \newbibmacro{collection+shelfmark}{%
3649      \ifboolexpr{
3650        test {\iffieldundef{collection}}
3651        and
3652        test {\iffieldundef{shelfmark}}
3653      }{}{%
3654        \printtext[collection+shelfmark]{%
3655          \printfield{collection}%
3656          \setunit*{\collectionshelfmarkpunct}%
3657          \printfield{shelfmark}}}}
```

Again, following biblatex-manuscripts-philology, we allow different formatting to be applied to columns and layers according to whether they occur adjacently or not, as they might be separated by a page specification.

```
3658    \newbibmacro{manuscript:pages}{%
3659      \printfield{pagetotal}%
3660      \setunit{\addspace}%
3661      \iffieldundef{pages}{%
3662        \usebibmacro{manuscript:columns+layer}%
3663      }{%
3664        \usebibmacro{manuscript:columns}%
3665        \setunit{\pagetotalpagespunct}%
3666        \printfield{pages}%
3667        \setunit{\addspace}%
3668        \usebibmacro{manuscript:layer}}}
3669    \newbibmacro{manuscript:columns}{%
3670      \iffieldundef{columns}{}{%
3671        \printtext[columns]{\bibstring{\strfield{columns}column}}%
3672      }%
```

```
3673   \newbibmacro{manuscript:layer}{%
3674     \iffieldundef{layer}{}{%
3675       \printtext[layer]{\bibstring{\strfield{layer}layer}}}%
3676   }%
3677   \newbibmacro{manuscript:columns+layer}{%
3678     \ifboolexpr{
3679       test {\iffieldundef{columns}}
3680       or
3681       test{\iffieldundef{layer}}
3682     }{%
3683       \usebibmacro{manuscript:columns}%
3684       \usebibmacro{manuscript:layer}%
3685     }{%
3686       \printtext[columns+layer]{%
3687         \bibstring{\strfield{columns}column}%
3688         \setunit*{\columnslayerpunct}%
3689         \bibstring{\strfield{layer}layer}}}}%
```

Putting it all together, here is the manuscript driver.

```
3690   \DeclareBibliographyDriver{manuscript}{%
3691     \usebibmacro{bibindex}%
3692     \usebibmacro{begentry}%
3693     \usebibmacro{author}%
3694     \setunit{\printdelim{nametitledelim}}\newblock
3695     \usebibmacro{title}%
3696     \setunit{\titlebyauthordelim}\newblock
3697     \usebibmacro{byauthor}%
3698     \newunit\newblock
3699     \printfield{howpublished}%
3700     \newunit\newblock
3701     \printfield{note}%
3702     \newunit\newblock
3703     \usebibmacro{manuscript:date}%
3704     \newunit\newblock
3705     \usebibmacro{location+library+collection+shelfmark}%
3706     \newunit
3707     \printfield{support}%
3708     \newunit
3709     \usebibmacro{dating}%
3710     \setunit{\datingpagespunct}
3711     \usebibmacro{manuscript:pages}
3712     \newunit\newblock%
3713     \iftoggle{bbx:url}{%
3714       \usebibmacro{url+urldate}%
3715     }{}%
3716     \iftoggle{bbx:related}{%
3717       \usebibmacro{related:init}%
3718       \usebibmacro{related}%
3719     }{}%
3720     \setunit{\bibpagerefpunct}\newblock
3721     \usebibmacro{pageref}%
3722     \usebibmacro{finentry}}
```

We provide an alternative bibmacro for doing much the same but with the regular biblatex fields.

```
3723   \newbibmacro*{library+location+series+number}{%
3724     \printfield{library}%
3725     \setunit{\locationlibrarypunct}%
3726     \printlist{location}%
3727     \setunit{\librarycollectionpunct}%
```

```
3728    \ifboolexpr{
3729      test {\iffieldundef{series}}
3730      and
3731      test {\iffieldundef{number}}
3732    }{}{%
3733      \printtext[collection+shelfmark]{%
3734        \printfield{series}%
3735        \setunit*{\collectionshelfmarkpunct}%
3736        \printfield{number}}}}
```

Lastly, we adapt the unpublished driver to allow it to do a similar thing but with the regular biblatex fields. The presence of the library field is what triggers 'manuscript mode'.

```
3737    \newtoggle{blx@ox@ms}
3738    \DeclareBibliographyDriver{unpublished}{%
3739      \usebibmacro{bibindex}%
3740      \usebibmacro{begentry}%
3741      \iffieldundef{library}{\togglefalse{blx@ox@ms}}{\toggletrue{blx@ox@ms}}%
3742      \usebibmacro{author}%
3743      \setunit{\printdelim{nametitledelim}}\newblock
3744      \usebibmacro{title}%
3745      \setunit{\titlebyauthordelim}\newblock
3746      \usebibmacro{byauthor}%
3747      \newunit\newblock
3748      \printfield{note}%
3749      \newunit\newblock
3750      \printfield{howpublished}%
3751      \newunit\newblock
3752      \iftoggle{blx@ox@ms}{%
3753        \usebibmacro{manuscript:date}%
3754        \newunit\newblock
3755        \usebibmacro{library+location+series+number}%
3756        \newunit
3757        \printfield{support}%
3758        \newunit
3759        \usebibmacro{dating}%
3760        \setunit{\datingpagespunct}
3761        \usebibmacro{manuscript:pages}
3762      }{%
3763        \usebibmacro{location+date}%
3764      }%
3765      \newunit\newblock
3766      \iftoggle{bbx:url}
3767        {\usebibmacro{url+urldate}}
3768        {}%
3769      \newunit\newblock
3770      \usebibmacro{addendum+pubstate}%
3771      \iftoggle{bbx:related}
3772        {\usebibmacro{related:init}%
3773         \usebibmacro{related}}
3774        {}%
3775      \setunit{\bibpagerefpunct}\newblock
3776      \usebibmacro{pageref}%
3777      \usebibmacro{finentry}}
```

2.1.17 Letters

The driver for letters is similar to the one for other unpublished materials.

```
3778  \DeclareBibliographyDriver{letter}{%
3779    \usebibmacro{bibindex}%
3780    \usebibmacro{begentry}%
3781    \iffieldundef{library}{\togglefalse{blx@ox@ms}}{\toggletrue{blx@ox@ms}}%
3782    \usebibmacro{author}%
3783    \setunit{\printdelim{nametitledelim}}\newblock
3784    \usebibmacro{title}%
3785    \setunit{\titlebyauthordelim}\newblock
3786    \usebibmacro{byauthor}%
3787    \newunit\newblock
3788    \printfield{note}%
3789    \iffieldundef{howpublished}{}{\nopunct\printfield{howpublished}}%
3790    \newunit\newblock
3791    \iftoggle{blx@ox@ms}{%
3792      \usebibmacro{manuscript:date}%
3793      \newunit\newblock
3794      \usebibmacro{library+location+series+number}%
3795      \newunit
3796      \printfield{support}%
3797      \newunit
3798      \usebibmacro{dating}%
3799      \setunit{\datingpagespunct}
3800      \usebibmacro{manuscript:pages}
3801    }{%
3802      \usebibmacro{location+date}%
3803    }%
3804    \newunit\newblock
3805    \iftoggle{bbx:url}
3806      {\usebibmacro{url+urldate}}
3807      {}%
3808    \newunit\newblock
3809    \usebibmacro{addendum+pubstate}%
3810    \iftoggle{bbx:related}
3811      {\usebibmacro{related:init}%
3812       \usebibmacro{related}}
3813      {}%
3814    \setunit{\bibpagerefpunct}\newblock
3815    \usebibmacro{pageref}%
3816    \usebibmacro{finentry}}
3817  \DeclareFieldFormat[letter]{title}{%
3818    \def\currentfield{title}%
3819    \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
3820    \undef\currentfield}
3821  \DeclareFieldFormat[letter]{date}{%
3822    \iffieldundef{url}{#1}{\mkbibparens{#1}}}
```

2.1.18 Related entries

We make the punctuation before related items configurable in remaining drivers inherited from the standard style, and move the pageref macro to the end.

```
3823  \xpatchbibdriver{booklet}{%
3824    \setunit{\bibpagerefpunct}\newblock
3825    \usebibmacro{pageref}%
3826    \newunit\newblock
3827    \iftoggle{bbx:related}
3828      {\usebibmacro{related:init}%
3829       \usebibmacro{related}}
3830      {}%
3831  }{%
```

```
3832    \iftoggle{bbx:related}
3833      {\usebibmacro{related:init}%
3834       \usebibmacro{related}}
3835      {}%
3836    \setunit{\bibpagerefpunct}\newblock
3837    \usebibmacro{pageref}%
3838  }{}{\wlog{WARNING: biblatex-oxref failed to patch booklet}}
```

```
3839    \xpatchbibdriver{misc}{%
3840    \setunit{\bibpagerefpunct}\newblock
3841    \usebibmacro{pageref}%
3842    \newunit\newblock
3843    \iftoggle{bbx:related}
3844      {\usebibmacro{related:init}%
3845       \usebibmacro{related}}
3846      {}%
3847  }{%
3848    \iftoggle{bbx:related}
3849      {\usebibmacro{related:init}%
3850       \usebibmacro{related}}
3851      {}%
3852    \setunit{\bibpagerefpunct}\newblock
3853    \usebibmacro{pageref}%
3854  }{}{\wlog{WARNING: biblatex-oxref failed to patch misc}}
```

We provide an option for setting the relatedtype punctuation.

```
3855    \DeclareDelimFormat{begrelateddelimamendedby}{\addcomma\space}
3856    \DeclareDelimFormat{begrelateddelimequals}{\addspace}
3857    \DeclareDelimFormat{begrelateddelimin}{\addcomma\space}
3858    \DeclareDelimFormat{begrelateddelimincludes}{\addcomma\space}
3859    \DeclareDelimFormat{begrelateddelimreprintfrom}{\addperiod\space}
3860    \DeclareDelimFormat{begrelateddelimreviewof}{\newunitpunct}
3861    \DeclareDelimFormat{begrelateddelimtranslationof}{\addspace}
3862    \DeclareDelimFormat{begrelateddelimmultivolume}{\newunitpunct}
3863    \DeclareDelimFormat{relateddelimmultivolume}{\newunitpunct}
3864    \newtoggle{blx@ox@success}
3865    \DeclareBiblatexOption{global,type}[string]{relationpunct}[semicolon]{%
3866      \bgroup\blx@blxinit
3867      \ifcsdef{add#1}{\global\toggletrue{blx@ox@success}}{%
3868        \global\togglefalse{blx@ox@success}%
3869        \PackageError{biblatex-oxref}{%
3870          Invalid option 'relationpunct=#1'%
3871        }{%
3872          Valid values are 'dot', 'comma', 'semicolon', 'colon',\MessageBreak
3873          'period', 'exclam', 'question', and 'space'.}}%
3874      \egroup
3875      \iftoggle{blx@ox@success}{\ifstrequal{#1}{space}{%
3876        \DeclareDelimFormat{begrelateddelim}{\addspace}%
3877      }{%
3878        \DeclareDelimFormat{begrelateddelim}{\csuse{add#1}\space}}%
3879      }{}}
3880    \DeclareEntryOption[string]{relationpunct}[semicolon]{%
3881      \bgroup\blx@blxinit
3882      \ifcsdef{add#1}{\global\toggletrue{blx@ox@success}}{%
3883        \global\togglefalse{blx@ox@success}%
3884        \PackageError{biblatex-oxref}{%
3885          Invalid option 'relationpunct=#1'%
3886        }{%
3887          Valid values are 'dot', 'comma', 'semicolon', 'colon',\MessageBreak
```

```
3888          'period', 'exclam', 'question', and 'space'.}}%
3889        \egroup
3890        \iftoggle{blx@ox@success}{\ifstrequal{#1}{space}{%
3891          \DeclareDelimFormat{begrelateddelim}{\addspace}%
3892          \DeclareDelimFormat{begrelateddelimamendedby}{\addspace}
3893          \DeclareDelimFormat{begrelateddelimequals}{\addspace}%
3894          \DeclareDelimFormat{begrelateddelimin}{\addspace}%
3895          \DeclareDelimFormat{begrelateddelimincludes}{\addspace}%
3896          \DeclareDelimFormat{begrelateddelimreprintfrom}{\addspace}%
3897          \DeclareDelimFormat{begrelateddelimreviewof}{\addspace}%
3898          \DeclareDelimFormat{begrelateddelimtranslationof}{\addspace}%
3899          \DeclareDelimFormat{begrelateddelimmultivolume}{\addspace}%
3900        }{%
3901          \DeclareDelimFormat{begrelateddelim}{\csuse{add#1}\space}%
3902          \DeclareDelimFormat{begrelateddelimamendedby}{\csuse{add#1}\space}
3903          \DeclareDelimFormat{begrelateddelimequals}{\csuse{add#1}\space}%
3904          \DeclareDelimFormat{begrelateddelimin}{\csuse{add#1}\space}%
3905          \DeclareDelimFormat{begrelateddelimincludes}{\csuse{add#1}\space}%
3906          \DeclareDelimFormat{begrelateddelimreprintfrom}{\csuse{add#1}\space}%
3907          \DeclareDelimFormat{begrelateddelimreviewof}{\csuse{add#1}\space}%
3908          \DeclareDelimFormat{begrelateddelimtranslationof}{\csuse{add#1}\space}%
3909          \DeclareDelimFormat{begrelateddelimmultivolume}{\csuse{add#1}\space}}%
3910        }{}}
3911      \ExecuteBibliographyOptions{relationpunct}
3912      \newcounter{blx@ox@relitem}
3913      \xapptobibmacro{begrelated}{%
3914        \setcounter{blx@ox@relitem}{0}%
3915      }{}{\wlog{WARNING: biblatex-oxref failed to append to begrelated}}
```

We provide an option to prevent a related item beginning with "in".

```
3916      \newtoggle{blx@ox@norelin}
3917      \DeclareBiblatexOption{global,type,entry}{norelatedin}[true]{%
3918        \settoggle{blx@ox@norelin}{#1}}
3919      \xapptobibmacro{begrelatedloop}{%
3920        \iftoggle{blx@ox@norelin}{%
3921          \renewbibmacro*{in:}{%
3922            \ifboolexpr{
3923              test {\iffieldequalstr{entrysubtype}{yearbook}}
3924              or (
3925                test {\ifnameundef{author}}
3926                and
3927                test {\ifnameundef{translator}}
3928                and
3929                test {\iffieldundef{title}}
3930            )}{}{%
3931              \bibstring{in}%
3932              \printunit{\intitlepunct}%
3933            }}}{}%
3934      }{}{\wlog{WARNING: biblatex-oxref failed to append to begrelatedloop}}
3935
```

Translations

Where the related item is the translation, the related string is (by default, in English at least) prefaced with the language.

```
3936      \newbibmacro*{rellanguage}{%
3937        \def\do##1{%
3938          \entrydata{##1}{%
```

```
3939            \printlist{language}}}%
3940          \docsvfield{related}%
3941        }
3942      \DeclareFieldFormat{relatedstring:translationof}{%
3943        \iffieldundef{relatedstring}{%
3944          \blx@ox@langbibstring{\usebibmacro{rellanguage}}{original}%
3945          \printunit{\addcomma\space}
3946        }{%
3947          \thefield{relatedstring}\printunit{\relatedpunct}}}
3948
3949      \DeclareFieldFormat{related:translationof}{%
3950        \mkbibbrackets{#1}}
```

Co-publications

This relation simply prints what would go in the publication block.

```
3951      \newbibmacro*{related:copub}[1]{%
3952        \entrydata*{#1}{%
3953          \usebibmacro{publisher+location+date}%
3954          \setunit{\relateddelim}}}
```

Reprints

The standard styles define a special driver for the reprintfrom relation. For oxref, the standard
generic driver is sufficient, so this code reverts the specialization.

```
3955      \renewbibmacro*{related:reprintfrom}[1]{%
3956        \entrydata*{#1}{%
3957          \nopunct
3958          \usedriver{%
3959            \ifnameundef{savedauthor}{%
3960              \ifnameundef{savededitor}{}{%
3961                \ifnamesequal{editor}{savededitor}{%
3962                  \clearname{editor}%
3963                }{}}%
3964            }{%
3965              \ifnamesequal{author}{savedauthor}{%
3966                \clearname{author}%
3967              }{}}%
3968            \iffieldundef{savedtitle}{}{%
3969              \iffieldsequal{savedtitle}{title}{%
3970                \clearfield{title}%
3971              }{}}%
3972            \renewbibmacro*{related:init}{}%
3973            \DeclareNameAlias{sortname}{default}%
3974            \ifbibmacroundef{date+extradate}{}{%
3975              \renewbibmacro*{date+extradate}{}%
3976              \renewbibmacro*{date}{\printdate}}%
3977            \renewbibmacro*{pageref}{}%
3978          }{%
3979            \thefield{entrytype}}}}
```

Articles that span issues

If an article spans several issues of a journal, we print the second reference after the first, omitting
any information in common.

```
3980    \newbibmacro*{related:serialarticle}[1]{%
3981      \entrydata*{#1}{%
3982        \iffieldundef{savedjournaltitle}{}{%
3983          \iffieldsequal{journaltitle}{savedjournaltitle}{%
3984            \clearfield{journaltitle}%
3985          }{}}%
3986        \iffieldundef{savedjournalsubtitle}{}{%
3987          \iffieldsequal{journalsubtitle}{savedjournalsubtitle}{%
3988            \clearfield{journalsubtitle}%
3989          }{}}%
3990        \iffieldundef{savedseries}{}{%
3991          \iffieldsequal{series}{savedseries}{%
3992            \clearfield{series}%
3993          }{}}%
3994        \iffieldundef{savedyear}{\clearfield{year}}{
3995          \iffieldsequal{year}{savedyear}{%
3996            \clearfield{year}%
3997          }{}}%
3998        \usebibmacro{journal+issuetitle}%
3999        \newunit
4000        \usebibmacro{note+pages}%
4001        \newunit\newblock
4002        \usebibmacro{doi+eprint+url}%
4003        \newunit\newblock
4004        \usebibmacro{addendum+pubstate}}}
```

Reviews

We ensure that the field formatting for review entries matches that for article entries.

```
4005    \DeclareFieldFormat[review]{title}{\mkbibquote{#1\isdot}}
4006    \DeclareFieldFormat[review]{volume}{#1}% volume of a journal
4007    \DeclareFieldFormat[review]{number}{#1}% number of a journal
4008    \DeclareFieldFormat[review]{series}{% series of a journal
4009      \ifinteger{#1}
4010      {\mkbibordseries{#1}~\bibstring{jourser}}
4011      {\ifbibstring{#1}{\bibstring{#1}}{#1}}}
```

We take advantage of the Biber-specific mechanism of relating items in order to handle reviews. Compared to the default code, this is simpler in that we don't check for repeated authors/editors (it would be a rather biased review!), we directly set the author format, and we don't nullify the date+extradate macro.

```
4012    \newbibmacro*{related:reviewof}[1]{%
4013      \entrydata*{#1}{%
4014        \usedriver{%
4015          \renewbibmacro*{related:init}{}%
4016          \DeclareNameAlias{author}{given-family}%
4017          \renewbibmacro*{pageref}{}%
4018        }{\thefield{entrytype}}%
4019      }%
4020    }
```

Since a review is a special kind of journal article, the review driver is based on the article one, the difference being that the related macro comes just before journal+issuetitle. Oxford style links the two with 'in'.

```
4021  \DeclareBibliographyDriver{review}{%
4022    \usebibmacro{bibindex}%
4023    \usebibmacro{begentry}%
4024    \usebibmacro{author/translator+others}%
4025    \setunit{\printdelim{nametitledelim}}\newblock
4026    \usebibmacro{title}%
4027    \setunit{\titlebyauthordelim}\newblock
4028    \usebibmacro{byauthor}%
4029    \newunit\newblock
4030    \usebibmacro{bytranslator+others}%
4031    \newunit\newblock
4032    \printfield{version}%
4033    \newunit\newblock
4034    \iftoggle{bbx:related}{%
4035      \usebibmacro{related:init}%
4036      \usebibmacro{related}%
4037    }{}%
4038    \newunit\newblock
4039    \usebibmacro{in:}%
4040    \setunit{\addspace}%
4041    \usebibmacro{journal+issuetitle}%
4042    \newunit
4043    \usebibmacro{byeditor+others}%
4044    \iffieldundef{note}%
4045      {\newunit}%
4046      {\setunit{\addsemicolon\addspace}}%
4047    \usebibmacro{note+pages}%
4048    \newunit\newblock
4049    \iftoggle{bbx:isbn}
4050      {\printfield{issn}}
4051      {}%
4052    \newunit\newblock
4053    \usebibmacro{doi+eprint+url}%
4054    \newunit\newblock
4055    \usebibmacro{addendum+pubstate}%
4056    \setunit{\bibpagerefpunct}\newblock
4057    \usebibmacro{pageref}%
4058    \usebibmacro{finentry}}
4059
```

Multiple volumes

Standard biblatex provides the `multivolume` relation for different volumes of the same work that have slightly different publication details, but it doesn't quite work for Oxford style. This works better.

```
4060  \DeclareFieldFormat{related:multivolume}{#1}
4061  \renewbibmacro*{related:multivolume}[1]{%
4062    \entrydata*{#1}{%
4063      \printtext{%
4064        \printfield{volume}%
4065        \printfield{part}%
4066        \iffieldsequal{savedtitle}{title}{}{%
4067          \setunit{\addcolon\space}%
4068          \usebibmacro{title}}%
4069      }%
4070      \setunit*{\addspace}%
4071      \iffieldsequal{savedseries}{series}{\clearfield{series}}{}%
4072      \iffieldsequal{savednumber}{number}{\clearfield{number}}{}%
4073      \iffieldsequal{savededition}{edition}{\clearfield{edition}}{}%
```

```
4074        \ifboolexpr{
4075          test {\iflistsequal{savedpublisher}{publisher}}
4076          and
4077          test {\iflistsequal{savedlocation}{location}}
4078        }{\clearlist{publisher}\clearlist{location}}{}%
4079          \iffieldsequal{saveddate}{date}{\clearfield{date}}{}%
4080          \usebibmacro{series+number+edition+publisher+location+date}%
4081        }}
4082
```

Related editions

This macro is based on the 'bytranslator' one, but more general. Note that \mkrelatedstringtext was introduced in biblatex v3.16, so we backport it if an earlier version is used.

```
4083    \providecommand*{\mkrelatedstringtext}[1]{{{\mainlang #1}}}
4084    \newbibmacro*{related:editedas}[1]{%
4085      \entrydata{#1}{%
4086        \renewbibmacro*{name:hook}[1]{%
4087          \ifnumequal{\value{listcount}}{1}
4088            {\mkrelatedstringtext{\lbx@initnamehook{#1}}}
4089            {}}%
4090        \printfield{edition}%
4091        \setunit{\addspace}%
4092        \usebibmacro{byeditor+others}%
4093        \setunit*{\addcomma\space\bibstring[\mkrelatedstringtext]{astitle}\space}%
4094        \usebibmacro{maintitle+title}%
4095        \setunit{\addspace}%
4096        \printfield{note}%
4097        \newunit\newblock
4098        \printfield{volumes}%
4099        \newunit
4100        \usebibmacro{series+number+publisher+location+date}}}
4101    \renewbibmacro*{related:bytranslator}[1]{%
4102      \entrydata{#1}{%
4103        \renewbibmacro*{name:hook}[1]{%
4104          \ifnumequal{\value{listcount}}{1}
4105            {\mkrelatedstringtext{\lbx@initnamehook{#1}}}
4106            {}}%
4107        \printnames[bytranslator]{translator}%
4108        \setunit*{\addspace\bibstring[\mkrelatedstringtext]{astitle}\space}%
4109        \usebibmacro{maintitle+title}%
4110        \setunit{\addspace}%
4111        \printfield{note}%
4112        \newunit\newblock
4113        \printfield{volumes}%
4114        \newunit
4115        \usebibmacro{series+number+publisher+location+date}}}
4116
```

Joint releases

We provide support for CDs (for example) which contain more than one work.

```
4117    \newbibmacro*{related:includes}[1]{%
4118      \stepcounter{blx@ox@relitem}%
4119      \ifnumequal{\value{blx@ox@relitem}}{\value{bbx:relatedtotal}}%
4120        {\bibstring{and}\addspace}{}%
4121      \entrydata{#1}{%
```

```
4122        \ifbibmacroundef{date+extradate}{}{%
4123          \renewbibmacro*{date+extradate}{}}%
4124        \usebibmacro{author}%
4125        \setunit{\printdelim{nametitledelim}}\newblock
4126        \usebibmacro{title}}}
```

Subitems

We provide support for items in items in items. The outer two layers should be taken care of with an incollection entry or equivalent. The innermost item should be a misc entry. While we're at it, we provide descriptor support for misc entries.

```
4127    \DeclareFieldFormat[misc]{title}{%
4128      \def\currentfield{title}%
4129      \iffieldannotation{descriptor}{#1}{%
4130        \iffieldequalstr{relatedtype}{in}{%
4131          \mkbibquote{#1\isdot}%
4132        }{%
4133          \mkbibemph{#1}%
4134        }}%
4135      \undef\currentfield}
4136    \newbibmacro*{related:in}[1]{%
4137      \entrydata*{#1}{%
4138        \usedriver
4139          {\ifnameundef{savedauthor}
4140            {\ifnameundef{savededitor}
4141                {}
4142                {\ifnamesequal{editor}{savededitor}
4143                    {\clearname{editor}}
4144                    {}}}
4145            {\ifnamesequal{author}{savedauthor}
4146              {\clearname{author}}
4147              {}}%
4148          \renewbibmacro*{related:init}{}%
4149          \DeclareNameAlias{sortname}{default}%
4150          \ifbibmacroundef{date+extradate}
4151            {}
4152            {\renewbibmacro*{date+extradate}{}%
4153            \renewbibmacro*{date}{\printdate}}%
4154          \renewbibmacro*{pageref}{}}
4155        {\thefield{entrytype}}%
4156      \ifboolexpr{
4157        test {\iffieldundef{pages}}
4158        or
4159        test {\iffieldundef{savedpages}}
4160      }{%
4161        \newunit\newblock
4162      }{%
4163        \setunit{\addspace}%
4164        \bibstring{thiscite}%
4165        \printunit{\addspace}%
4166      }%
4167    }%
4168    \usebibmacro{chapter+pages}%
4169  }
4170
```

2.1.19 Source maps

We use the source mapping capabilities of Biber to fix the following issues.

```
4171   \DeclareStyleSourcemap{%
4172     \maps[datatype=bibtex]{%
```

Sort order

proceedings and mvproceedings entries allow an organization to be printed in the author position.

```
4173       \map{
4174         \pertype{proceedings}
4175         \pertype{mvproceedings}
4176         \step[notfield=author,
4177           fieldsource=organization,
4178           fieldtarget=author]
4179       }
```

Descriptors

This map provides a helpful descriptor field that can simplify the provision of descriptors, being notes that can act as titles.

```
4180       \map[overwrite=false]{
4181         \step[fieldsource=descriptor, final]
4182         \step[notfield=title,
4183           fieldset=title+an,
4184           fieldvalue={=descriptor}]
4185         \step[notfield=title,
4186           fieldsource=descriptor,
4187           fieldtarget=title]
4188         \step[fieldsource=descriptor,
4189           fieldtarget=note]
4190       }
```

Pseudonyms and inferred authorship

These help ensure compatibility with biblatex-realauthor.

```
4191       \map[overwrite=false]{
4192         \step[fieldsource=realauthor, final]
4193         \step[notfield=author,
4194           fieldset=author+an,
4195           fieldvalue={=inferred}]
4196         \step[notfield=author,
4197           fieldsource=realauthor,
4198           fieldtarget=author]
4199         \step[fieldsource=realauthor,
4200           fieldtarget=authoraddon]
4201       }
4202       \map[overwrite=false]{
4203         \step[fieldsource=realeditor, final]
4204         \step[notfield=editor,
4205           fieldset=editor+an,
4206           fieldvalue={=inferred}]
4207         \step[notfield=editor,
4208           fieldsource=realeditor,
4209           fieldtarget=editor]
4210         \step[fieldsource=realeditor,
4211           fieldtarget=editoraddon]
```

```
4212          }
```

Editors as joint authors

This map provides a more portable interface for declaring a translator or revisor to be a joint author.

```
4213          \map[overwrite=false]{
4214            \step[fieldsource=editor+an,
4215              match=\regexp{=jointauthor},
4216              final]
4217            \step[fieldsource=editor,
4218              fieldtarget=jointauthor]
4219            \step[fieldsource=editortype,
4220              fieldtarget=jointauthortype]
4221          }
4222          \map[overwrite=false]{
4223            \step[fieldsource=translator+an,
4224              match=\regexp{=jointauthor},
4225              final]
4226            \step[fieldsource=translator,
4227              fieldtarget=jointauthor]
4228            \step[fieldset=jointauthortype,
4229              fieldvalue={=translator}]
4230          }
```

Standards

The purpose of this map is to move the number to the head of the reference in the absence of an author, and try to fix the sorting accordingly.

```
4231          \map[overwrite=false]{
4232            \pertype{standard}
4233            \step[notfield=author,
4234                  fieldsource=number,
4235                  final]
4236            \step[fieldset=sortkey,
4237                  origfieldval]
4238          }
```

Audiovisual materials

For audiovisual materials, origdatetype defaults to 'recorded'.

```
4239          \map[overwrite=false]{
4240            \pertype{audio}
4241            \pertype{music}
4242            \pertype{movie}
4243            \pertype{video}
4244            \pertype{inaudio}
4245            \pertype{inmusic}
4246            \pertype{inmovie}
4247            \pertype{invideo}
4248            \step[fieldset=origdatetype,fieldvalue={recorded}]
4249          }
```

Legal references

These help ensure compatibility with oscola.

```
4250        \map[overwrite=false]{
4251          \pertype{jurisdiction}
4252          \step[fieldsource=reporter,
4253                fieldtarget=journaltitle]
4254          \step[fieldsource=court,
4255                fieldtarget=institution]
4256          \step[fieldsource=additionalreports,
4257                fieldtarget=listb]
4258          \step[fieldsource=ecli,
4259                fieldtarget=verba]
4260        }%
4261        \map[overwrite=false]{
4262          \pertype{legal}
4263          \step[fieldsource=reporter,
4264                fieldtarget=journaltitle]
4265        }
4266        \map[overwrite=true]{
4267            \pertype{legal}
4268          \step[fieldsource=parties,
4269                fieldtarget=institution]
4270          \step[fieldsource=execution,
4271                fieldtarget=lista]
4272          }
```

This is how oscola removes dots from entries.

```
4273        \map[overwrite=true]{
4274          \pertype{jurisdiction}
4275          \pertype{legislation}
4276          \pertype{legal}
4277          \step[fieldsource=title,
4278                match=\regexp{(\d)\.(\d)},
4279                replace=\regexp{$1.$2}]
4280          \step[fieldsource=title,
4281                match=\regexp{(\D)\.(\d)},
4282                replace=\regexp{$1 $2}]
4283          \step[fieldsource=title,
4284                match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4285                replace=\regexp{$1}]
4286          \step [fieldsource=title,
4287                match=\regexp{([^\d{])\.(?![}])},
4288                replace=\regexp{$1}]
4289          \step[fieldsource=shorttitle,
4290                match=\regexp{(\d)\.(\d)},
4291                replace=\regexp{$1.$2}]
4292          \step[fieldsource=shorttitle,
4293                match=\regexp{(\D)\.(\d)},
4294                replace=\regexp{$1 $2}]
4295          \step[fieldsource=shorttitle,
4296                match=\regexp{(?:\A|[^{])\K\.([^\d])},
4297                replace=\regexp{$1}]
4298          \step [fieldsource=shorttitle,
4299                match=\regexp{([^\d{])\.(?![}])},
4300                replace=\regexp{$1}]
4301          \step[fieldsource=parreporter,
4302                match=\regexp{(\d)\.(\d)},
4303                replace=\regexp{$1.$2}]
4304          \step[fieldsource=parreporter,
```

```
4305        match=\regexp{(\D)\.(\d)},
4306        replace=\regexp{$1 $2}]
4307   \step[fieldsource=parreporter,
4308        match=\regexp{(?:\A|[^{])\K\.([^\d])},
4309        replace=\regexp{$1}]
4310   \step [fieldsource=parreporter,
4311        match=\regexp{([^\d{])\.(?![}])},
4312        replace=\regexp{$1}]
4313   \step[fieldsource=journaltitle,
4314        match=\regexp{(\d)\.(\d)},
4315        replace=\regexp{$1.$2}]
4316   \step[fieldsource=journaltitle,
4317        match=\regexp{(\D)\.(\d)},
4318        replace=\regexp{$1 $2}]
4319   \step[fieldsource=journaltitle,
4320        match=\regexp{(?:\A|[^{])\K\.([^\d])},
4321        replace=\regexp{$1}]
4322   \step [fieldsource=journaltitle,
4323        match=\regexp{([^\d{])\.(?![}])},
4324        replace=\regexp{$1}]
4325   \step[fieldsource=institution,
4326        match=\regexp{(\d)\.(\d)},
4327        replace=\regexp{$1.$2}]
4328   \step[fieldsource=institution,
4329        match=\regexp{(\D)\.(\d)},
4330        replace=\regexp{$1 $2}]
4331   \step[fieldsource=institution,
4332        match=\regexp{(?:\A|[^{])\K\.([^\d])},
4333        replace=\regexp{$1}]
4334   \step[fieldsource=institution,
4335        match=\regexp{([^\d{])\.(?![}])},
4336        replace=\regexp{$1}]
4337   \step[fieldsource=publisher,
4338        match=\regexp{(\d)\.(\d)},
4339        replace=\regexp{$1.$2}]
4340   \step[fieldsource=publisher,
4341        match=\regexp{(\D)\.(\d)},
4342        replace=\regexp{$1 $2}]
4343   \step[fieldsource=publisher,
4344        match=\regexp{(?:\A|[^{])\K\.([^\d])},
4345        replace=\regexp{$1}]
4346   \step [fieldsource=publisher,
4347        match=\regexp{([^\d{])\.(?![}])},
4348        replace=\regexp{$1}]
4349   \step[fieldsource=location,
4350        match=\regexp{(\d)\.(\d)},
4351        replace=\regexp{$1.$2}]
4352   \step[fieldsource=location,
4353        match=\regexp{(\D)\.(\d)},
4354        replace=\regexp{$1 $2}]
4355   \step[fieldsource=location,
4356        match=\regexp{(?:\A|[^{])\K\.([^\d])},
4357        replace=\regexp{$1}]
4358   \step [fieldsource=location,
4359        match=\regexp{([^\d{])\.(?![}])},
4360        replace=\regexp{$1}]
4361   \step[fieldsource=series,
4362        match=\regexp{(\d)\.(\d)},
4363        replace=\regexp{$1.$2}]
4364   \step[fieldsource=series,
4365        match=\regexp{(\D)\.(\d)},
4366        replace=\regexp{$1 $2}]
```

```
4367        \step[fieldsource=series,
4368              match=\regexp{(?:\A|[^{])\K\.([^\d])},
4369              replace=\regexp{$1}]
4370        \step [fieldsource=series,
4371              match=\regexp{([^\d{])\.(?![}])},
4372              replace=\regexp{$1}]
4373        \step[fieldsource=indextitle,
4374              match=\regexp{(\d)\.(\d)},
4375              replace=\regexp{$1.$2}]
4376        \step[fieldsource=indextitle,
4377              match=\regexp{(\D)\.(\d)},
4378              replace=\regexp{$1 $2}]
4379        \step[fieldsource=indextitle,
4380              match=\regexp{(?:\A|[^{])\K\.([^\d])},
4381              replace=\regexp{$1}]
4382        \step [fieldsource=indextitle,
4383              match=\regexp{([^\d{])\.(?![}])},
4384              replace=\regexp{$1}]
4385      }
```

If casenumber is given, it is converted to number or, if the number is already set, userb.

```
4386        \map[overwrite=false]{
4387          \step[fieldsource=casenumber, final]
4388          \step[notfield=number, fieldsource=casenumber, fieldtarget=number]
4389          \step[fieldsource=casenumber, fieldtarget=userb]
4390        }
4391      }%
4392    }
4393
```

2.1.20 Sorting schemes

We adjust the sort order to take into account some other fields that might end up at the front (library, collection, series). The 'nty' scheme is used by oxnotes.

```
4394    \DeclareSortingTemplate{nty}{
4395      \sort{
4396        \field{presort}
4397      }
4398      \sort[final]{
4399        \field{sortkey}
4400      }
4401      \sort{
4402        \field{sortname}
4403        \field{author}
4404        \field{editor}
4405        \field{translator}
4406        \field{sorttitle}
4407        \field{title}
4408        \field{library}
4409      }
4410      \sort{
4411        \field{sorttitle}
4412        \field{title}
4413      }
4414      \sort{
4415        \field{sortyear}
4416        \field{year}
4417      }
```

```
4418        \sort{
4419          \field{volume}
4420          \literal{0}
4421        }
4422        \sort{
4423          \field{location}
4424        }
4425        \sort{
4426          \field{collection}
4427          \field{series}
4428        }
4429      }
```

The 'nyt' scheme is used by oxyear.

```
4430      \DeclareSortingTemplate{nyt}{
4431        \sort{
4432          \field{presort}
4433        }
4434        \sort[final]{
4435          \field{sortkey}
4436        }
4437        \sort{
4438          \field{sortname}
4439          \field{author}
4440          \field{editor}
4441          \field{translator}
4442          \field{sorttitle}
4443          \field{title}
4444          \field{library}
4445        }
4446        \sort{
4447          \field{sortyear}
4448          \field{labelyear}
4449          \field{year}
4450        }
4451        \sort{
4452          \field{sorttitle}
4453          \field{title}
4454        }
4455        \sort{
4456          \field{volume}
4457          \literal{0}
4458        }
4459        \sort{
4460          \field{location}
4461        }
4462        \sort{
4463          \field{collection}
4464          \field{series}
4465        }
4466      }
```

The 'anyt' scheme is used by oxalph.

```
4467      \DeclareSortingTemplate{anyt}{
4468        \sort{
4469          \field{presort}
4470        }
4471        \sort{
4472          \field{labelalpha}
```

```
4473        }
4474     \sort[final]{
4475        \field{sortkey}
4476     }
4477     \sort{
4478        \field{sortname}
4479        \field{author}
4480        \field{editor}
4481        \field{translator}
4482        \field{sorttitle}
4483        \field{title}
4484        \field{library}
4485     }
4486     \sort{
4487        \field{sortyear}
4488        \field{labelyear}
4489        \field{year}
4490     }
4491     \sort{
4492        \field{sorttitle}
4493        \field{title}
4494     }
4495     \sort{
4496        \field{volume}
4497        \literal{0}
4498     }
4499     \sort{
4500        \field{location}
4501     }
4502     \sort{
4503        \field{collection}
4504        \field{series}
4505     }
4506   }
```

The following entry types never put editors first.

```
4507     \ExecuteBibliographyOptions
4508        [proceedings,report,artwork,audio,image,music,movie,performance,video,%
4509        manuscript,unpublished,review]{useeditor=false}
```

2.2   Notes style: oxnotes.bbx

2.2.1   Preliminaries

First we load the common oxref features.

```
20       \RequireBibliographyStyle{oxref}
```

2.2.2   Names

We apply our special name format to names likely to appear at the start of an entry.

```
21       \DeclareNameAlias{author}{bib-family-given/cite-given-family}
22       \DeclareNameAlias[related:reviewof]{author}{given-family}
23       \DeclareNameAlias{editor}{bib-family-given/cite-given-family}
24       \DeclareNameAlias[related:reviewof]{editor}{given-family}
```

We ensure the printing of the anon localization string matches.

```
25    \xpatchbibmacro{author}{%
26      \iftoggle{blx@ox@abbranon}{\bibcpsstring{anon}}{\bibcplstring{anon}}%
27    }{%
28      \iftoggle{blx@ox@abbranon}{%
29        \iftoggle{blx@ox@scnames}{\bibcpsstring[\textsc]{anon}}{\bibcpsstring{anon}}%
30      }{%
31        \iftoggle{blx@ox@scnames}{\bibcplstring[\textsc]{anon}}{\bibcplstring{anon}}%
32      }%
33    }{}{\wlog{WARNING: biblatex-oxref (oxnotes) failed to patch author}}
```

2.2.3 Multivolume dates

For the very particular use case of breaking down multivolume works into their constituent volumes, we remove the overall date, assuming that the individual volume dates will be used instead.

```
34    \xpretobibmacro{series+number+edition+publisher+location+date}{%
35      \iffieldequalstr{relatedtype}{multivolume}{%
36        \clearfield{year}\clearfield{month}\clearfield{day}%
37      }{}}{}{}
```

2.2.4 Source maps

```
38    \DeclareStyleSourcemap{%
39      \maps[datatype=bibtex]{%
```

Sort order

For entry types that print the `maintitle` and `volume` before the `title`, we need to make sure this is reflected in the sort order.

```
40        \map{
41          \pertype{mvbook}
42          \pertype{mvcollection}
43          \pertype{mvreference}
44          \pertype{proceedings}
45          \pertype{mvproceedings}
46          \pertype{report}
47          \step[fieldsource=maintitle]%
48          \step[fieldset=sorttitle, origfieldval]%
49          \step[fieldsource=volume]%
50          \step[fieldset=sorttitle, append, origfieldval]%
51          \step[fieldsource=title]%
52          \step[fieldset=sorttitle, append, origfieldval]%
53        }%
54      }%
55    }
```

2.3 Numeric style: oxnum.bbx

2.3.1 Preliminaries

First we load the common oxref features.

```
20    \RequireBibliographyStyle{oxref}
```

2.3.2 NAMES

We apply our special name format to names likely to appear at the start of an entry.

```
21    \DeclareNameAlias{author}{bib-family-given/cite-given-family}
22    \DeclareNameAlias[related:reviewof]{author}{given-family}
23    \DeclareNameAlias{editor}{bib-family-given/cite-given-family}
24    \DeclareNameAlias[related:reviewof]{editor}{given-family}
```

We ensure the printing of the anon localization string matches.

```
25    \xpatchbibmacro{author}{%
26      \iftoggle{blx@ox@abbranon}{\bibcpsstring{anon}}{\bibcplstring{anon}}%
27    }{%
28      \iftoggle{blx@ox@abbranon}{%
29        \iftoggle{blx@ox@scnames}{\bibcpsstring[\textsc]{anon}}{\bibcpsstring{anon}}%
30      }{%
31        \iftoggle{blx@ox@scnames}{\bibcplstring[\textsc]{anon}}{\bibcplstring{anon}}%
32      }%
33    }{}{\wlog{WARNING: biblatex-oxref (oxnum) failed to patch author}}
```

2.3.3 MULTIVOLUME DATES

For the very particular use case of breaking down multivolume works into their constituent volumes, we remove the overall date, assuming that the individual volume dates will be used instead.

```
34    \xpretobibmacro{series+number+edition+publisher+location+date}{%
35      \iffieldequalstr{relatedtype}{multivolume}{%
36        \clearfield{year}\clearfield{month}\clearfield{day}%
37      }{}}{}{}
```

2.3.4 LABEL NUMBERS

This next code is extracted from the standard numeric style.

```
38    \ExecuteBibliographyOptions{labelnumber}
39
40    \providebool{bbx:subentry}
41
42    \DeclareBibliographyOption{subentry}[true]{%
43      \setbool{bbx:subentry}{#1}}
44
45    \DeclareFieldFormat{bibentrysetcount}{\mkbibparens{\mknumalph{#1}}}
46    \DeclareFieldFormat{labelnumberwidth}{\mkbibbrackets{#1}}
47    \DeclareFieldFormat{shorthandwidth}{\mkbibbrackets{#1}}
48
49    \defbibenvironment{bibliography}
50      {\list
51        {\printtext[labelnumberwidth]{%
52          \printfield{labelprefix}%
53          \printfield{labelnumber}}}
54        {\setlength{\labelwidth}{\labelnumberwidth}%
55          \setlength{\leftmargin}{\labelwidth}%
56          \setlength{\labelsep}{\biblabelsep}%
57          \addtolength{\leftmargin}{\labelsep}%
58          \setlength{\itemsep}{\bibitemsep}%
59          \setlength{\parsep}{\bibparsep}}%
60          \renewcommand*{\makelabel}[1]{\hss##1}}
```

```
61        {\endlist}
62        {\item}
63
64    \defbibenvironment{shorthand}
65      {\list
66         {\printfield[shorthandwidth]{shorthand}}
67         {\setlength{\labelwidth}{\shorthandwidth}%
68          \setlength{\leftmargin}{\labelwidth}%
69          \setlength{\labelsep}{\biblabelsep}%
70          \addtolength{\leftmargin}{\labelsep}%
71          \setlength{\itemsep}{\bibitemsep}%
72          \setlength{\parsep}{\bibparsep}%
73          \renewcommand*{\makelabel}[1]{\hss##1}}}
74      {\endlist}
75      {\item}
76
77    \DeclareBibliographyDriver{set}{%
78      \entryset
79        {\ifbool{bbx:subentry}
80           {\printfield[bibentrysetcount]{entrysetcount}%
81            \printunit*{\addnbspace}}
82           {}}
83        {}%
84      \newunit\newblock
85      \usebibmacro{setpageref}%
86      \finentry}
```

2.4   Author–year style: oxyear.bbx

2.4.1   Preliminaries

First we load the common oxref features.

```
20    \RequireBibliographyStyle{oxref}
```

Here we set some defaults different to the standard ones. The author can still override them.

```
21    \ExecuteBibliographyOptions{giveninits,labeldateparts,sorting=nyt,pagetracker,maxcitenames=2}
```

2.4.2   Date merging option

We provide the mergedate option from the authoryear style. In case it isn't clear from the standard documentation, the purpose of this option is twofold: it determines whether the date printed at the head of the reference is the same as or different from labeldate as used in the citations, and to what extent the date information at the head of the reference is repeated later on. The OGS and NHR consistently use a variant that is between the basic and compact options, in that the year is always moved to the head of the reference (matching labeldate) but the month and day are never moved; this is implemented as the year value.

```
22    \DeclareBiblatexOption{global,type,entry}{mergedate}[true]{%
23      \ifcsdef{bbx@opt@mergedate@#1}
24        {\csuse{bbx@opt@mergedate@#1}}
25        {\PackageError{biblatex-oxref}
26           {Invalid option 'mergedate=#1'}
27           {Valid values are 'maximum', 'compact', 'basic', 'minimum',\MessageBreak
28            'year', 'true' (=year), and 'false'.}}}
```

The various values affect the definition of the following macro, used at the head of the reference, for which we coin the `datelabel` field format.

```
29    \providebibmacro*{date+extradate}{}
30    \DeclareFieldFormat{datelabel}{\mkbibparens{#1}}
31    \DeclareFieldFormat{labeldate}{%
32      \iflabeldateisdate{%
33        \def\currentfield{date}%
34      }{%
35        \iflabeldateisanydate{%
36          \def\currentfield{\thefield{labeldatesource}date}%
37        }{%
38          \def\currentfield{\thefield{labeldatesource}}}}%
39      \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
40      \undef\currentfield}
```

On a related note, the `labeldate` uses the `origdate` if provided in preference to `date`, and falls back to `pubstate` if provided.

```
41    \DeclareLabeldate{%
42      \field{origdate}
43      \field{date}
44      \field{year}
45      \field{eventdate}
46      \field{pubstate}
47      \literal{nodate}
48    }
```

The `extradate` string should be printed bare.

```
49    \DeclareFieldFormat{extradate}{%
50      \iffieldundef{\thefield{labeldatesource}}{%
51        \iffieldnums{\thefield{labeldatesource}year}{}{~}%
52      }{%
53        \iffieldnums{\thefield{labeldatesource}}{}{~}%
54      }%
55      \mkbibemph{\mknumalph{#1}}}%
56
```

We provide tests similar to `\labeldateisdate` to tell if the `labeldate` is (*a*) any type of date, and (*b*) neither a date nor `pubstate`.

```
57    \def\iflabeldateisanydate{%
58      \ifboolexpr{%
59        togl {blx@labeldateparts}
60        and not test {\iffieldundef{labeldatesource}}
61        and (
62          test {\iffieldequalstr{labeldatesource}{year}}
63          or not test {\iffieldundef{\thefield{labeldatesource}year}}
64        )}}
65    \def\iflabeldateispubstate{%
66      \ifboolexpr{%
67        not test {\iffieldundef{labeldatesource}}
68        and test {\iffieldequalstr{labeldatesource}{pubstate}}}}
```

We also provide a wrapper around `\printlabeldateextra` that does nothing if the label date is the 'nodate' literal *and* `sortyear` is defined. Sadly `sortyear` is consumed before we get to this point, so we need a proxy toggle.

```
69    \newtoggle{blx@ox@nonodate}
70    \DeclareBiblatexOption{global,type,entry}{nonodate}[true]{%
71      \settoggle{blx@ox@nonodate}{#1}}
72    \newbibmacro*{labeldate}{%
73      \ifboolexpr{
74        test {\iffieldequalstr{labeldatesource}{nodate}}
75        and
76        togl {blx@ox@nonodate}
77      }{}{\printtext[datelabel]{\printlabeldateextra}}}
78
```

Here we provide the various possible definitions. The authoryear implementation does it by clearing, changing or restoring the normal definitions of the date and issue+date macros. This is not so great for us as our versions of those macros are quite complex (too much to keep repeating). There are additional complications that arise from us using origdate in preference to date for the label year, and from our option that requires us to print some dates without years. Conceptually it is more straightforward to clear the data fields instead.

- true is the same as year (see below).

```
79    \def\bbx@opt@mergedate@true{\bbx@opt@mergedate@year}
```

- maximum merges the issue and the whole date with the date label. Therefore, we clear year, month, and day from the date used for the label, as well as the issue field.

```
80     \def\bbx@opt@mergedate@maximum{%
81       \renewbibmacro*{date+extradate}{%
82         \iffieldundef{labelyear}{}{%
83           \iflabeldateisdate{%
84             \printtext[datelabel]{%
85               \printfield{issue}\clearfield{issue}%
86               \setunit*{\addspace}%
87               \printdateextra}%
88             \clearfield{year}\clearfield{yeardivision}\clearfield{month}\clearfield{day}%
89           }{%
90             \iflabeldateisanydate{%
91               \printtext[datelabel]{%
92                 \csuse{print\thefield{labeldatesource}dateextra}}%
93               \clearfield{\thefield{labeldatesource}year}%
94               \clearfield{\thefield{labeldatesource}yeardivision}%
95               \clearfield{\thefield{labeldatesource}month}%
96               \clearfield{\thefield{labeldatesource}day}%
97             }{%
98               \usebibmacro{labeldate}%
99               \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}}}}}}}
```

- compact merges the whole date (but not issue) with date label. Therefore, we clear year, month, and day from the date used for the label, but leave the issue field alone.

```
100     \def\bbx@opt@mergedate@compact{%
101       \renewbibmacro*{date+extradate}{%
102         \iffieldundef{labelyear}{}{%
103           \iflabeldateisdate{%
104             \printtext[datelabel]{\printdateextra}%
105             \clearfield{year}\clearfield{yeardivision}\clearfield{month}\clearfield{day}%
106           }{%
107             \iflabeldateisanydate{%
```

```
108        \printtext[datelabel]{%
109          \csuse{print\thefield{labeldatesource}dateextra}}%
110        \clearfield{\thefield{labeldatesource}year}%
111        \clearfield{\thefield{labeldatesource}yeardivision}%
112        \clearfield{\thefield{labeldatesource}month}%
113        \clearfield{\thefield{labeldatesource}day}%
114      }{%
115        \usebibmacro{labeldate}%
116        \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}}}}}}}
```

- year always merges the year, and only the year, with the label date. Other date and time componenents are displayed later in the reference. Therefore we clear the year from the date used for the label, but leave the month and day alone.

```
117    \def\bbx@opt@mergedate@year{%
118      \renewbibmacro*{date+extradate}{%
119        \iffieldundef{labelyear}{}{%
120          \usebibmacro{labeldate}%
121          \iflabeldateisdate{%
122            \clearfield{year}
123          }{%
124            \iflabeldateisanydate{%
125              \clearfield{\thefield{labeldatesource}year}%
126            }{%
127              \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
128          }}}}}
```

- basic will merge a year-only date with the date label, but will otherwise display the label year at the head of the reference and the full date later. Therefore we clear the year if and only if there is no month component *and* (if this is the regular date) no issue.

```
129    \def\bbx@opt@mergedate@basic{%
130      \renewbibmacro*{date+extradate}{%
131        \iffieldundef{labelyear}{}{%
132          \usebibmacro{labeldate}%
133          \iflabeldateisdate{%
134            \ifboolexpr{
135              test {\ifdateshavedifferentprecision{label}{}}
136              or
137              not test {\iffieldundef{issue}}
138            }{}{%
139              \clearfield{year}}%
140          }{%
141            \iflabeldateisanydate{%
142              \ifdateshavedifferentprecision{label}{\thefield{labeldatesource}}{}{%
143                \clearfield{\thefield{labeldatesource}year}}%
144            }{%
145              \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
146          }}}}}
```

- minimum will only merge the date with the label date if the two are identical, that is, a bare year with no month or disambiguating suffix. Therefore we clear the year if and only if there is no month component, no extradate, *and* (if this is the regular date) no issue.

```
147    \def\bbx@opt@mergedate@minimum{%
148      \renewbibmacro*{date+extradate}{%
149        \iffieldundef{labelyear}{}{%
```

```
150          \usebibmacro{labeldate}%
151          \iflabeldateisdate{%
152            \ifboolexpr{
153              test {\ifdateshavedifferentprecision{label}{}}
154              or
155              not test {\iffieldundef{extradate}}
156              or
157              not test {\iffieldundef{issue}}
158            }{}{%
159              \clearfield{year}}%
160          }{%
161            \iflabeldateisanydate{%
162              \ifboolexpr{
163                test {\ifdateshavedifferentprecision{label}{\thefield{labeldatesource}}}
164                or
165                not test {\iffieldundef{extradate}}
166              }{}{%
167                \clearfield{\thefield{labeldatesource}year}}%
168            }{%
169              \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
170            }}}}}
```

- `false` suppresses any merging. We only clear the label date source if it is a non-date field other than `pubstate`.

```
171    \def\bbx@opt@mergedate@false{%
172      \renewbibmacro*{date+extradate}{%
173        \iffieldundef{labelyear}{}{%
174          \usebibmacro{labeldate}%
175          \iflabeldateisanydate{}{%
176            \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
177          }}}}
```

We set the default to be `true/year`.

```
178      \ExecuteBibliographyOptions{mergedate}
```

The problem with moving years but leaving months and days behind is that the regular date range macros in `biblatex.sty` do nothing at all if no year is printed. We therefore need to patch the macros with extra routines for printing year-free date ranges: the rather extravagently named `\mknoyeardaterangefull` and `\mknoyeardaterangetrunc`.

```
179    \newrobustcmd*{\mknoyeardaterangefull}[2]{%
180      \iffieldundef{#2month}{}{%
181        \printtext[{#2date}]{%
182          \datecircaprint
183          \iffieldundef{#2yeardivision}{%
184            \csuse{mkbibdate#1}{}{#2month}{#2day}%
185            \blx@printtime{#2}{}%
186          }{%
187            \csuse{mkbibyeardivisiondate#1}{}{#2yeardivision}}%
188          \dateuncertainprint
189          \iffieldundef{#2endmonth}{}{%
190            \iffieldequalstr{#2endmonth}{}{%
191              \mbox{\bibdaterangesep}%
192            }{%
193              \bibdaterangesep
194              \enddatecircaprint
195              \iffieldundef{#2yeardivision}{%
```

```
196            \csuse{mkbibdate#1}{}{#2endmonth}{#2endday}%
197            \blx@printtime{#2}{end}%
198          }{%
199            \csuse{mkbibyeardivisiondate#1}{}{#2endyeardivision}}%
200          \enddateuncertainprint}}}}}
```

There is a potential problem for \mknoyeardaterangetrunc, in that if the year and endyear are missing, it cannot tell if they are the same, so if the months are the same but the years are different, the range would be erroneously compressed. However, the only reason the year should be missing is that it is in the label, so we test labelyear instead.

```
201    \newrobustcmd*{\mknoyeardaterangetrunc}[2]{%
202      \iffieldundef{#2month}{}{%
203        \printtext[{#2date}]{%
204          \datecircaprint
205          \iffieldundef{#2yeardivision}{%
206            \ifboolexpr{
207              test {\ifdateyearsequal{label}{labelend}}
208              and
209              test {\iffieldsequal{#2month}{#2endmonth}}
210            }{%
211              \csuse{mkbibdate#1}{}{}{#2day}%
212            }{%
213              \csuse{mkbibdate#1}{}{#2month}{#2day}}%
214          }{%
215            \csuse{mkbibyeardivisiondate#1}{}{#2yeardivision}}%
216          \dateuncertainprint
217          \iffieldundef{#2endmonth}{}{%
218            \iffieldequalstr{#2endmonth}{}{%
219              \mbox{\bibdaterangesep}%
220            }{%
221              \bibdaterangesep
222              \enddatecircaprint
223              \iffieldundef{#2yeardivision}{%
224                \csuse{mkbibdate#1}{}{#2endmonth}{#2endday}%
225              }{%
226                \csuse{mkbibyeardivisiondate#1}{}{#2endyeardivision}}%
227              \enddateuncertainprint}}}}}
```

Now we patch the four date range commands. The extra commands, which print disambiguating labels as well, should only print those labels if the year is present, so they can use the same non-year date range functions as the non-extra commands.

```
228    \xpatchcmd{\mkdaterangefull}{%
229      \iffieldundef{#2year} {\blx@nounit}%
230    }{%
231      \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
232    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch mkdaterangefull}}
233    \xpatchcmd{\mkdaterangetrunc@i}{%
234      \iffieldundef{#2year} {\blx@nounit}%
235    }{%
236      \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
237    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch mkdaterangetrunc@i}}
238    \xpatchcmd{\mkdaterangefullextra}{%
239      \iffieldundef{#2year} {\blx@nounit}%
240    }{%
241      \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
242    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch mkdaterangefullextra}}
243    \xpatchcmd{\mkdaterangetruncextra@i}{%
244      \iffieldundef{#2year} {\blx@nounit}%
```

```
245    }{%
246      \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
247    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch mkdaterangetruncextra@i}}
248
```

2.4.3 BIBLIOGRAPHY FORMATTING

We let biblatex measure shorthands so we can use \shorthandwidth later.

```
249    \DeclareFieldFormat{shorthandwidth}{#1}
```

We enhance the family-given name format to handle the pseudo and inferred annotations.

```
250    \xpretonameformat{family-given}{%
251      \iffieldannotation{inferred}{\ifnumequal{\value{listcount}}{1}{\bibopenbracket}{}}{}%
252      \ifitemannotation{inferred}{\bibopenbracket}{}%
253    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to prepend to family-given}}
254    \xpatchnameformat{family-given}{%
255      \usebibmacro{name:andothers}%
256    }{%
257      \ifitemannotation{pseudo}{%
258        \addspace\printtext[parens]{\bibsstring{pseudo}}%
259      }{}%
260      \ifitemannotation{inferred}{\bibclosebracket}{}%
261      \usebibmacro{name:andothers}%
262      \iffieldannotation{inferred}{%
263        \ifboolexpr{
264          test {\ifnumequal{\value{listcount}}{\value{maxnames}}}
265          or
266          test {\ifnumequal{\value{listcount}}{\value{listtotal}}}
267          or (
268            test {\ifnumequal{\value{listcount}}{\value{minnames}}}
269            and
270            test {\ifnumgreater{\value{listtotal}}{\value{maxnames}}} )
271        }{\bibclosebracket}{}%
272      }{}%
273    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch family-given}}
274    \DeclareNameAlias{shortauthor}{family-given}
275    \DeclareNameAlias{shorteditor}{family-given}
```

Names at the head of the reference are family-given, but names elsewhere are given-family.

```
276    \DeclareNameAlias{sortname}{family-given}
277    \DeclareNameAlias{author}{family-given}
278    \DeclareNameAlias{editor}{family-given}
279    \DeclareNameAlias{translator}{family-given}
```

The bibliography formatting is just like authoryear except we do not eliminate item separation by default.

```
280    \defbibenvironment{bibliography}
281      {\list
282        {}
283        {\setlength{\leftmargin}{\bibhang}%
284         \setlength{\itemindent}{-\leftmargin}%
285         \setlength{\itemsep}{\bibitemsep}%
286         \setlength{\parsep}{\bibparsep}}}
287      {\endlist}
288      {\item}
```

The shorthand formatting is just like authoryear.

```
289   \defbibenvironment{shorthand}
290     {\list
291        {\printfield[shorthandwidth]{shorthand}}
292        {\setlength{\labelwidth}{\shorthandwidth}%
293         \setlength{\leftmargin}{\labelwidth}%
294         \setlength{\labelsep}{\biblabelsep}%
295         \addtolength{\leftmargin}{\labelsep}%
296         \setlength{\itemsep}{\bibitemsep}%
297         \setlength{\parsep}{\bibparsep}%
298         \renewcommand*{\makelabel}[1]{##1\hss}}}
299     {\endlist}
300     {\item}
```

2.4.4 Name and date formatting

We set up hashing just as in authoryear.

```
301   \InitializeBibliographyStyle{\global\undef\bbx@lasthash}
```

We ensure related entries do not interfere with the hashing.

```
302   \xapptobibmacro{begrelated}{%
303     \booltrue{bbx@inset}}%
304   {}{\wlog{WARNING: biblatex-oxref (oxyear) failed to append to begrelated}}
305   \xapptobibmacro{endrelated}{%
306     \usebibmacro*{bbx:savehash}}%
307   {}{\wlog{WARNING: biblatex-oxref (oxyear) failed to append to endrelated}}
```

We patch the author macro so that the date label information appears at the end (as in authoryear).

```
308   \xpatchbibmacro{author}{%
309     \iffieldundef{authortype}%
310   }{%
311     \usebibmacro{date+extradate}%
312     \setunit*{\addspace}%
313     \iffieldundef{authortype}%
314   }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch author (authortype)}}%
315   \xpatchbibmacro{author}{%
316     \global\undef\bbx@lasthash
317   }{%
318     \global\undef\bbx@lasthash
319     \usebibmacro{labeltitle}%
320     \setunit*{\addspace}%
321     \usebibmacro{date+extradate}%
322   }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch author (lasthash)}}%
```

We patch it further so that, where an author name has a corresponding (different) short author name, the short name is given first and the long name given in parentheses. Note that this only affects cases where authoraddon has not been provided.

```
323   \xpatchbibmacro{namepairs}{%
324     \printnames[by#1]%
325   }{%
326     \printnames[#1]%
327   }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch namepairs}}
328   \xpatchbibmacro{author+altauthor}{%
329     \printnames{author}%
```

```
330    }{%
331      \ifboolexpr{%
332        ( not test {\ifnameundef{shortauthor}} )
333        and
334        test {\ifnumequal{\value{shortauthor}}{\value{author}}}
335      }{%
336        \usebibmacro{namepairs}{author}{shortauthor}%
337      }{%
338        \printnames{author}%
339      }%
340    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch author+altauthor}}%
```

We apply the same patches to bbx:editor, but also move the editor string to after the date label.

```
341    \xpatchbibmacro{bbx:editor}{%
342      \usebibmacro{#1}%
343    }{%
344      \usebibmacro{date+extradate}%
345      \setunit*{\addspace}%
346      \usebibmacro{#1}%
347    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch bbx:editor}}%
348    \xpatchbibmacro{bbx:editor}{%
349      \global\undef\bbx@lasthash
350    }{%
351      \global\undef\bbx@lasthash
352      \usebibmacro{labeltitle}%
353      \setunit*{\addspace}%
354      \usebibmacro{date+extradate}%
355    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch bbx:editor (lasthash)}}%
356    \xpatchbibmacro{editor+alteditor}{%
357      \printnames[byeditor]%
358    }{%
359      \printnames[editor]%
360    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch editor+alteditor}}
361    \xpatchbibmacro{editor+alteditor}{%
362      \printnames{editor}%
363    }{%
364      \ifboolexpr{%
365        ( not test {\ifnameundef{shorteditor}} )
366        and
367        test {\ifnumequal{\value{shorteditor}}{\value{editor}}}
368      }{%
369        \usebibmacro{namepairs}{editor}{shorteditor}%
370      }{%
371        \printnames{editor}%
372      }%
373    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch editor+alteditor (shorteditor)}}%
```

We apply the same patches to bbx:translator as we do for bbx:editor, except for the shortening one.

```
374    \xpatchbibmacro{bbx:translator}{%
375      \global\undef\bbx@lasthash
376    }{%
377      \global\undef\bbx@lasthash
378      \usebibmacro{labeltitle}%
379      \setunit*{\addspace}%
380      \usebibmacro{date+extradate}%
381    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch bbx:translator (lasthash)}}%
382    \xpatchbibmacro{bbx:translator}{%
383      \usebibmacro{#1}%
```

```
384    }{%
385      \usebibmacro{date+extradate}%
386      \setunit*{\addspace}%
387      \usebibmacro{#1}%
388    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch bbx:translator}}%
```

The `labeltitle` macro differs from the one from `authoryear` in that it also includes the subtitle.
We record the fact that we have cleared the title.

```
389    \newtoggle{blx@ox@clearedtitle}
390    \newbibmacro*{labeltitle}{%
391      \iffieldundef{label}{%
392        \iffieldundef{shorttitle}{%
393          \ifboolexpr{
394            test {\iffieldundef{title}}
395            and
396            test {\iffieldundef{subtitle}}
397          }{%
398            \printfield{library}%
399            \clearfield{library}%
400          }{%
401            \printtext[title]{%
402              \printfield[titlecase]{title}%
403              \setunit{\subtitlepunct}%
404              \printfield[titlecase]{subtitle}}%
405            \clearfield{title}%
406            \clearfield{subtitle}%
407            \toggletrue{blx@ox@clearedtitle}%
408            \setunit{\addspace}%
409          }%
410        }{%
411          \printtext[title]{\printfield[titlecase]{shorttitle}}%
412        }%
413      }{%
414        \printfield{label}%
415      }%
416    }
```

If the labeltitle pulls the title from a maintitle+title macro, we flick a switch to make the driver
use maintitle+volume instead.

```
417    \xpretobibmacro{maintitle+title}{%
418      \iftoggle{blx@ox@clearedtitle}{%
419        \usebibmacro{maintitle+volume}%
420        \clearfield{maintitle}%
421        \clearfield{volume}%
422      }{}%
423    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to prepend to maintitle+title}}
424    \DeclareFieldFormat[mvbook,mvcollection,mvreference,proceedings,mvproceedings]{maintitle+volume}{#1}
```

The date of `online` entries is printed in parentheses; as the year is moved after the author, this
can lead to empty parentheses unless a month is printed, so we change the test accordingly.

```
425    \xpatchbibdriver{online}{%
426      \iffieldundef{year}%
427    }{%
428      \ifboolexpr{
429        test {\iffieldundef{yeardivision}}
430        and
431        test {\iffieldundef{month}}
```

```
432        }%
433     }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch online}}
```

We ensure the label title in citations matches the formatting used for the equivalent information in the bibliography entry.

```
434     \DeclareFieldFormat[bookinbook]{citetitle}{%
435       \ifboolexpr{
436         test {\iffieldequalstr{entrysubtype}{poem}}
437         or
438         test {\iffieldequalstr{entrysubtype}{play}}
439       }{%
440         \mkbibemph{#1}%
441       }{%
442         \mkbibquote{#1\isdot}}}
443     \DeclareFieldFormat[suppperiodical,inaudio,inmusic,inmovie,invideo,online,%
444         image,manuscript,unpublished]{citetitle}{%
445       \def\currentfield{title}%
446       \ifboolexpr{
447         test {\iffieldannotation{descriptor}}
448         or (
449           test {\iffieldundef{shorttitle}}
450           and
451           test {\iffieldundef{title}}
452         )
453       }{#1}{\mkbibquote{#1\isdot}}%
454       \undef\currentfield}
455     \DeclareFieldFormat[suppperiodical,inaudio,inmusic,inmovie,invideo,online,%
456         image,manuscript,unpublished]{citetitle}{%
457       \def\currentfield{title}%
458       \ifboolexpr{
459         test {\iffieldannotation{descriptor}}
460         or (
461           test {\iffieldundef{shorttitle}}
462           and
463           test {\iffieldundef{title}}
464         )
465       }{#1}{\mkbibquote{#1\isdot}}%
466       \undef\currentfield}
467     \DeclareFieldFormat[audio,music]{citetitle}{%
468       \def\currentfield{title}%
469       \ifboolexpr{
470         test {\iffieldannotation{descriptor}}
471         or (
472           test {\iffieldundef{shorttitle}}
473           and
474           test {\iffieldundef{title}}
475         )
476       }{#1}{%
477         \iffieldequalstr{entrysubtype}{podcast}{%
478           \mkbibquote{#1\isdot}%
479         }{%
480           \mkbibemph{#1}}}%
481       \undef\currentfield}
482     \DeclareFieldFormat[movie,video]{citetitle}{%
483       \def\currentfield{title}%
484       \ifboolexpr{
485         test {\iffieldannotation{descriptor}}
486         or (
487           test {\iffieldundef{shorttitle}}
488           and
```

```
489        test {\iffieldundef{title}}
490      )
491    }{#1}{%
492      \ifboolexpr{
493        test {\iffieldequalstr{entrysubtype}{episode}}
494        or
495        test {\iffieldequalstr{entrysubtype}{clip}}
496        or
497        test {\iffieldequalstr{entrysubtype}{webcast}}
498      }{%
499        \mkbibquote{#1\isdot}%
500      }{%
501        \mkbibemph{#1}}}%
502    \undef\currentfield}
503  \DeclareFieldFormat[legislation,legal]{citetitle}{#1}
504  \DeclareFieldFormat[misc]%
505      {citetitle}{%
506    \def\currentfield{title}%
507    \ifboolexpr{
508      test {\iffieldannotation{descriptor}}
509      or (
510        test {\iffieldundef{shorttitle}}
511        and
512        test {\iffieldundef{title}}
513      )
514    }{#1}{%
515      \iffieldequalstr{relatedtype}{in}{%
516        \mkbibquote{#1\isdot}%
517      }{%
518        \mkbibemph{#1}%
519      }}%
520    \undef\currentfield}
521
```

2.4.5   Journal division formatting

Oxyear uses a colon to demarcate page numbers in journal articles.

```
522  \renewcommand*{\bibpagespunct}{%
523    \ifboolexpr{
524      test {\ifentrytype{article}}
525      or
526      test {\ifentrytype{suppperiodical}}
527      or
528      test {\ifentrytype{review}}
529    }{%
530      \addcolon\space
531    }{%
532      \addcomma\space
533    }%
534  }
```

2.4.6   Manuscripts

Since we clear the title, we need a more sophisticated test for whether to suppress the date.

```
535  \renewbibmacro{manuscript:date}{%
536    \ifboolexpr{
537      test {\ifnameundef{author}}
```

```
538          and
539          not togl {blx@ox@clearedtitle}
540          and
541          test {\iffieldundef{label}}
542        }{}{\usebibmacro{date}}}
```

We include the library field as a fallback title.

```
543      \DeclareLabeltitle{%
544        \field{shorttitle}
545        \field{title}
546        \field{maintitle}
547        \field{library}
548      }
```

2.4.7 Source maps

We use the source mapping capabilities of Biber to fix the following issues.

```
549      \DeclareStyleSourcemap{%
550        \maps[datatype=bibtex]{%
```

Suppressing a 'nodate' label

Unless already set, the nonodate option is inserted if sortyear is used. We accomplish this with source maps; the first one works where options (not including nonodate) have been set, the second where no options have been set.

```
551          \map[overwrite=true]{
552            \step[notmatch=\regexp{nonodate}, fieldsource=options, final]
553            \step[fieldsource=sortyear, final]
554            \step[fieldset=options, append, fieldvalue={,nonodate}]
555          }
556          \map[overwrite=true]{
557            \step[notfield=options, final]
558            \step[fieldsource=sortyear, final]
559            \step[fieldset=options, fieldvalue={nonodate}]
560          }
```

Standards

The purpose of this map is to change the number into a label in the absence of an author, so that the citations come out right and the date is positioned correctly.

```
561          \map[overwrite=false]{
562            \pertype{standard}
563            \step[notfield=author,
564                  fieldsource=number,
565                  fieldtarget=label]
566          }
567      }}
568
```

2.5 Alphabetic style: oxalph.bbx

2.5.1 Preliminaries

This style is based on oxyear.

```
20    \RequireBibliographyStyle{oxyear}
```

2.5.2 Suppressing labelextra

Since the label codes do all the disambiguation, it is not necessary for the date at the head of the reference to have a disambiguation component.

```
21    \xpatchcmd{\bbx@opt@mergedate@maximum}{%
22      \printdateextra
23    }{%
24      \printdate
25    }{}{\wlog{WARNING: biblatex-oxref (oxalph) failed to patch bbx@opt@mergedate@maximum
   ↪  (print)}}
26    \xpatchcmd{\bbx@opt@mergedate@maximum}{%
27      \csuse{print\thefield{labeldatesource}dateextra}%
28    }{%
29      \csuse{print\thefield{labeldatesource}date}%
30    }{}{\wlog{WARNING: biblatex-oxref (oxalph) failed to patch bbx@opt@mergedate@maximum
   ↪  (label)}}
31    \xpatchcmd{\bbx@opt@mergedate@compact}{%
32      \csuse{print\thefield{labeldatesource}dateextra}%
33    }{%
34      \csuse{print\thefield{labeldatesource}date}%
35    }{}{\wlog{WARNING: biblatex-oxref (oxalph) failed to patch bbx@opt@mergedate@compact}}
36    \xpatchbibmacro{labeldate}{%
37      \printlabeldateextra
38    }{%
39      \printlabeldate
40    }{}{\wlog{WARNING: biblatex-oxref (oxalph) failed to patch labeldate}}
41    \ExecuteBibliographyOptions{mergedate}
42
```

2.5.3 Label codes: printing

This next code is extracted from the standard alphabetic style, and among other things ensures the citation labels are printed in the bibliography.

```
43    \ExecuteBibliographyOptions{labelalpha,sorting=anyt}
44
45    \DeclareFieldFormat{labelalphawidth}{\mkbibbrackets{#1}}
46    \DeclareFieldFormat{shorthandwidth}{\mkbibbrackets{#1}}
47
48    \defbibenvironment{bibliography}
49      {\list
50        {\printtext[labelalphawidth]{%
51            \printfield{labelprefix}%
52    \printfield{labelalpha}%
53            \printfield{extraalpha}}}
54        {\setlength{\labelwidth}{\labelalphawidth}%
55         \setlength{\leftmargin}{\labelwidth}%
56         \setlength{\labelsep}{\biblabelsep}%
57         \addtolength{\leftmargin}{\labelsep}%
58         \setlength{\itemsep}{\bibitemsep}%
```

```
59          \setlength{\parsep}{\bibparsep}}%
60          \renewcommand*{\makelabel}[1]{##1\hss}}
61       {\endlist}
62       {\item}
63
64    \defbibenvironment{shorthand}
65       {\list
66          {\printfield[shorthandwidth]{shorthand}}
67          {\setlength{\labelwidth}{\shorthandwidth}%
68           \setlength{\leftmargin}{\labelwidth}%
69           \setlength{\labelsep}{\biblabelsep}%
70           \addtolength{\leftmargin}{\labelsep}%
71           \setlength{\itemsep}{\bibitemsep}%
72           \setlength{\parsep}{\bibparsep}%
73           \renewcommand*{\makelabel}[1]{##1\hss}}}
74       {\endlist}
75       {\item}
```

2.5.4 Label codes: generating

The standard labels are generated from the labelname and year. We widen the net a bit, so that if
there is no labelname, we fall back to the shortlabeltitle or labeltitle; also we use labelyear
in place of year. The shortlabeltitle is generated from all the capital letters in the title and
subtitle, with the help of a source map.

```
76    \DeclareStyleSourcemap{%
77     \maps[datatype=bibtex]{%
78       \map[overwrite=false]{%
79         \step[fieldsource=title, final]
80         \step[fieldset=shortlabeltitle, origfieldval]
81         \step[fieldsource=subtitle]
82         \step[fieldset=shortlabeltitle, origfieldval, append=true]
83         \step[fieldsource=shortlabeltitle,
84               match=\regexp{[^\p{Lu}]},
85               replace=\regexp{}]
86    }}}
87    \DeclareLabelalphaTemplate{%
88     \labelelement{
89       \field[final]{shorthand}
90       \field{label}
91       \field[strwidth=3,strside=left,ifnames=1]{labelname}
92       \field[strwidth=1,strside=left]{labelname}
93       \field[strwidth=3,strside=left]{shortlabeltitle}
94       \field[strwidth=4,strside=left]{labeltitle}
95     }
96     \labelelement{
97       \field[strwidth=2,strside=right]{labelyear}
98     }
99    }
```

<div style="text-align: right">

3

</div>

Citation styles

3.1 Notes style: oxnotes.cbx

The standard verbose style is a close match for what we need.

```
20    \RequireCitationStyle{verbose}
```

Variants are also provided that load the respective variant of verbose at this point.

The main difference is that the citepages option from these styles needs to be separate by default, and the \postnotedelim before the bibliography string thiscite ('at') is replaced by a simple space.

```
21    \newbibmacro*{cite:postnote:pages}{%
22      \setunit{\addspace}%
23      \bibstring{thiscite}%
24      \setunit{\addspace}%
25      \printfield{postnote}}
26    \ExecuteBibliographyOptions{citepages=separate}
```

3.2 Numeric style: oxnum.cbx

The standard numeric style works, needing only a little configuration.

```
20    \RequireCitationStyle{numeric-comp}
```

Compressed citations are delimited with a semicolon, just like non-compressed citations.

```
21    \renewcommand*{\multicitedelim}{\addsemicolon\space}
22    \renewcommand*{\compcitedelim}{\addsemicolon\space}
```

The page reference postnote is given after a colon.

```
23    \renewcommand*{\postnotedelim}{\addcolon\space}
```

3.3 Author–year style: oxyear.cbx

The standard authoryear-comp style is a close match for what we need.

```
20    \RequireCitationStyle{authoryear-comp}
```

This sets uniquename to full, but that conflicts with giveninits set by the bibliography style, so
we set it to init instead. If left alone, biblatex would do this anyway, but if we do it explicitly,
we avoid the warning message.

```
21    \ExecuteBibliographyOptions{uniquename=init}
```

We provide a slightly different labeldate macro that obeys the nonodate option.

```
22    \renewbibmacro*{cite:labeldate+extradate}{%
23      \ifboolexpr{
24        test {\iffieldundef{labelyear}}
25        or
26        ( test {\iffieldequalstr{labeldatesource}{nodate}}
27          and
28          togl {blx@ox@nonodate} )
29      }{}{\printtext[bibhyperref]{\printlabeldateextra}}}
```

We insert anonymous author handling into cite.

```
30    \xpatchbibmacro{cite}{%
31      \printnames{labelname}%
32    }{%
33      \ifboolexpr{
34        test {\iffieldequalstr{labelnamesource}{author}}
35        and
36        togl {blx@ox@autoanon}
37        and
38        test {\iffieldequals{rawauthor}{\oxrefanon}}
39      }{%
40        \iftoggle{blx@ox@abbranon}{\bibcpsstring{anon}}{\bibcplstring{anon}}%
41      }{%
42        \printnames{labelname}%
43      }%
44    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch cite}}
```

The name and year are usually separated by a space, but if the date is replaced by a word (e.g.
'forthcoming', 'n.d.'), they are separated by a comma.

```
45    \DeclareDelimFormat{nameyeardelim}{%
46      \iflabeldateisanydate
47        {\addspace}%
48        {\addcomma\space}}
49    \DeclareDelimFormat{nonameyeardelim}{%
50      \iflabeldateisanydate
51        {\addspace}%
52        {\addcomma\space}}
```

Compressed citations are delimited with a semicolon, just like non-compressed citations.

```
53    \renewcommand*{\multicitedelim}{\addsemicolon\space}
54    \renewcommand*{\compcitedelim}{\addsemicolon\space}
```

The page reference postnote is given after a colon.

```
55    \renewcommand*{\postnotedelim}{\addcolon\space}
```

3.4 Alphabetic style: oxalph.cbx

The standard `alphabetic` style works, needing only a little configuration.

```
20    \RequireCitationStyle{alphabetic}
```

Compressed citations are delimited with a semicolon, just like non-compressed citations.

```
21    \renewcommand*{\multicitedelim}{\addsemicolon\space}
22    \renewcommand*{\compcitedelim}{\addsemicolon\space}
```

The page reference postnote is given after a colon.

```
23    \renewcommand*{\postnotedelim}{\addcolon\space}
```

3.5 Common citation fixes

This code is appended to all the citation style files.

Just in case someone loaded this without loading `oxref.bbx`, we ensure the necessary definitions are in place.

```
1    \RequirePackage{etoolbox}
2    \RequirePackage{xpatch}
3    \providetoggle{blx@ox@autoanon}
4    \providetoggle{blx@ox@abbranon}
```

We fix the `textcite` macro so if the anon option is set to long or short, a value of 'Anonymous' is replaced by the bibliography string anon.

```
5    \xpatchbibmacro{textcite}{%
6      \printnames{labelname}%
7    }{%
8      \ifboolexpr{
9        test {\iffieldequalstr{labelnamesource}{author}}
10       and
11       togl {blx@ox@autoanon}
12       and
13       test {\iffieldequals{rawauthor}{\oxrefanon}}
14     }{%
15       \iftoggle{blx@ox@abbranon}{\bibcpsstring{anon}}{\bibcplstring{anon}}%
16     }{%
17       \printnames{labelname}%
18     }%
19   }{}{\wlog{WARNING: biblatex-oxref failed to patch textcite}}
```

Data model adjustments

4.1 oxnotes.dbx, oxyear.dbx, oxnum.dbx, and oxalph.dbx

We provide an additional name part for handling titles.

```
20    \DeclareDatamodelConstant[type=list]{nameparts}{prefix,family,suffix,given,title}
```

The `datetype` and `origdatetype` fields are used for prefixing the date with a description.

```
21    \DeclareDatamodelFields[type=field,datatype=literal]{datetype,origdatetype}
```

We add the `inaudio` entry type and friends.

```
22    \DeclareDatamodelEntrytypes{inaudio,inmusic,inmovie,invideo}
```

The `authoraddon` and `editoraddon` fields are used for handling pseudonyms. The `serieseditor` field is used for the editor of a book series, as opposed to the editor of the particular cited work.

```
23    \DeclareDatamodelFields[type=list,datatype=name]{authoraddon,editoraddon,serieseditor}
```

The `jointauthor` and `jointauthortype` fields are used for internally for handling editors/translators who can be considered joint authors.

```
24    \DeclareDatamodelFields[type=list,datatype=name]{jointauthor}
25    \DeclareDatamodelFields[type=field,datatype=literal]{jointauthortype}
```

The `rawauthor` field is used internally for checking whether an the name given in the `author` field is a keyword meaning 'anonymous'.

```
26    \DeclareDatamodelFields[type=field,datatype=literal]{rawauthor}
27    \DeclareDatamodelEntryfields{datetype,origdatetype,authoraddon,editoraddon,%
28      serieseditor,jointauthor,jointauthortype,rawauthor}
```

We provide a `shortlabeltitle` field to contain our custom reduction of the `labeltitle`.

```
29    \DeclareDatamodelFields[type=field,datatype=literal]{shortlabeltitle}
```

This data model is borrowed from biblatex-manuscripts-philology.

```
30    \DeclareDatamodelEntrytypes{manuscript}
31    \DeclareDatamodelFields[type=field,datatype=literal]{catalog,dating,%
32      shortlibrary,columns, collection,shortcollection,usualtitle,shelfmark,%
33      sortshelfmark,support,columns,layer}
34    \DeclareDatamodelFields[type=list,datatype=name]{scribe,owner}
35    \DeclareDatamodelFields[type=list,datatype=literal]{origin}
36    \DeclareDatamodelEntryfields[manuscript]{catalog,dating,shortlibrary,%
37      shortcollection,columns,languages,collection,usualtitle,shelfmark,%
38      sortshelfmark,support,columns,origin,scribe,owner}
```

This data model helps with legal citations.

```
39    \DeclareDatamodelFields[type=field,datatype=date]{pardate}
40    \DeclareDatamodelFields[type=field,datatype=literal]{%
41      parreporter,parseries,neutralcite}
42    \DeclareDatamodelFields[type=field,datatype=integer]{parvolume}
43    \DeclareDatamodelFields[type=field,datatype=range]{parpages}
44    \DeclareDatamodelEntryfields[jurisdiction]{neutralcite,pardate,%
45      parreporter,parseries,parvolume,parpages}
```

Localization modules

5.1 English: english-oxref.lbx

Here we set some language-specific punctuation and date formatting. In particular, we set `\blx@ox@langbibstring` to use its first argument.

```
20    \InheritBibliographyExtras{english}
21    \DeclareBibliographyExtras{%
22      \def\finalandcomma{\addcomma}%
23      \def\blx@ox@langbibstring#1#2{#1\addspace\bibstring{#2}}%
24    }
25    \UndeclareBibliographyExtras{%
26      \def\blx@ox@langbibstring#1#2{\bibstring{#2}}%
27    }
```

We load the standard set of localization strings, then add our adjustments.

```
28    \DeclareBibliographyStrings{%
29      inherit          = {english},
```

These are new strings defined by oxref:

- Roles expressed as functions

```
30      director        = {{director}{dir\adddot}},
31      directors       = {{directors}{dirs\adddot}},
32      performer       = {{}{}},
33      performers      = {{}{}},
34      reader          = {{reader}{reader}},
35      readers         = {{readers}{readers}},
36      conductor       = {{conductor}{cond\adddot}},
37      conductors      = {{conductors}{cond\adddot}},
38      serieseditor    = {{series editor}{ser\adddotspace ed\adddot}},
39      serieseditors   = {{series editors}{ser\adddotspace eds\adddot}},
40      holder          = {{holder}{holder}},
41      holders         = {{holders}{holders}},
42      editorcm        = {{editor and compiler}{ed\adddotspace and comp\adddot}},
43      editorcms       = {{editors and compilers}{eds\adddotspace and comp\adddot}},
```

- Roles expressed as actions

```
44      byperformer      = {{}{}},
45      bydirector       = {{directed by}{dir\adddot}},
46      byreader         = {{read by}{read by}},
47      byconductor      = {{conducted by}{cond\adddot}},
48      byserieseditor   = {{edited by}{ed\adddot}},
49      byholder         = {{held by}{held by}},
50      byeditorcm       = {{edited and compiled by}{ed\adddotspace and comp\adddot}},
```

- Publication details

```
51      facsimile        = {{facsimile edition}{facs\adddotspace edn\adddot}},
52      revised          = {{revised edition}{rev\adddotspace edn\adddot}},
53      revisedenlarged  = {{revised and enlarged edition}{rev\adddotspace and enl\addotspace
    ↪  edn\adddot}},
54      revisedreprint   = {{revised reprint}{rev\adddotspace repr\adddot}},
55      suppto           = {{Supplement to}{Supplement to}},
56      equals           = {{=}{=}},
57      original         = {{original}{orig\adddot}},
58      amendedby        = {{as amended by}{as amended by}},
```

- Publication state

```
59      inpressin        = {{to be published in}{to be published in}},
```

- Pagination

```
60      book             = {{book}{bk\adddot}},
61      books            = {{books}{bks\adddot}},
62      canto            = {{canto}{canto}},
63      cantos           = {{cantos}{cantos}},
64      stanza           = {{stanza}{stanza}},
65      stanzas          = {{stanzas}{stanzas}},
66      act              = {{Act}{Act}},
67      acts             = {{Acts}{Acts}},
68      scene            = {{Scene}{Scene}},
69      scenes           = {{Scenes}{Scenes}},
70      folio            = {{folio}{fo\adddot}},
71      folios           = {{folios}{fos\adddot}},
72      article          = {{article}{art\adddot}},
73      articles         = {{articles}{arts\adddot}},
74      clause           = {{clause}{cl\adddot}},
75      clauses          = {{clauses}{cls\adddot}},
76      regulation       = {{regulation}{reg\adddot}},
77      regulations      = {{regulations}{regs\adddot}},
78      rule             = {{rule}{r\adddot}},
79      rules            = {{rules}{rr\adddot}},
80      booktotal        = {{book}{bk\adddot}},
81      booktotals       = {{books}{bks\adddot}},
82      cantototal       = {{canto}{canto}},
83      cantototals      = {{cantos}{cantos}},
84      stanzatotal      = {{stanza}{stanza}},
85      stanzatotals     = {{stanzas}{stanzas}},
86      acttotal         = {{Act}{Act}},
87      acttotals        = {{Acts}{Acts}},
88      scenetotal       = {{Scene}{Scene}},
89      scenetotals      = {{Scenes}{Scenes}},
90      foliototal       = {{folio}{fo\adddot}},
91      foliototals      = {{folios}{fos\adddot}},
92      articletotal     = {{article}{art\adddot}},
```

```
93      articletotals     = {{articles}{arts\adddot}},
94      clausetotal       = {{clause}{cl\adddot}},
95      clausetotals      = {{clauses}{cls\adddot}},
96      regulationtotal   = {{regulation}{reg\adddot}},
97      regulationtotals  = {{regulations}{regs\adddot}},
98      ruletotal         = {{rule}{r\adddot}},
99      ruletotals        = {{rules}{rr\adddot}},
```

- Types

```
100     facebook          = {{Facebook post}{Facebook post}},
101     tweet             = {{Twitter post}{Twitter post}},
102     podcast           = {{podcast}{podcast}},
103     clip              = {{video}{video}},
104     webcast           = {{webcast}{webcast}},
105     poster            = {{poster}{poster}},
```

- Miscellaneous

```
106     nolocation        = {{no place}{n\adddot p\adddot}},
107     modified          = {{last modified}{last modified}},
108     recorded          = {{recorded}{recorded}},
109     uploaded          = {{uploaded}{uploaded}},
110     filed             = {{filed}{filed}},
111     issued            = {{issued}{issued}},
```

- Labels

```
112     anon              = {{Anonymous}{Anon\adddot}},
113     pseudo            = {{Pseudo-}{Ps\adddot-}},
114     urldown           = {{downloaded}{downloaded}},
```

- Country names, patents, and patent requests,

```
115     countryjp         = {{Japan}{JP}},
116     patentjp          = {{Japanese patent}{Japanese pat.\adddot}},
117     patreqjp          = {{Japanese patent request}{Japanese pat.\adddot req.\adddot}},
```

- These are borrowed from other styles.

```
118     1column           = {{one column}{1\addnbspace col\adddot}},
119     2column           = {{two columns}{2\addnbspace col\adddot}},
120     inflayer          = {{inferior layer}{inf\adddotspace lay\adddot}},
121     suplayer          = {{superior layer}{sup\adddotspace lay\adddot}},
122     paper             = {{paper}{pap\adddot}},
123     papyrus           = {{papyrus}{papy\adddot}},
124     parchment         = {{parchment}{parch\adddot}},
125     eucase            = {{Case}{Case}},
126     eujoinedcases     = {{Joined Cases}{Joined Cases}},
127     commissiondecision = {{Commission Decision}{Commission Decision}},
128     application       = {{Application}{App\adddot}},
129     order             = {{Order}{Ord\adddot}},
130     bill              = {{Bill}{Bill}},
131     draft             = {{draft}{draft}},
132     opened            = {{opened for signature}{opened for signature}},
133     signed            = {{signed}{signed}},
```

```
134        adopted           = {{adopted}{adopted}},
135        inforce           = {{entered into force}{entered into force}},
```

The rest of these strings are the standard ones, overridden to match the examples in the *Oxford Guide to Style* and *New Hart's Rules*. Many of these are guesses extrapolated from what is given.

The roles expressed as functions do not need adjusting. The roles expressed as actions do not typically end in 'by' when abbreviated; the 'with' parts go first when abbreviated if there is more than one editorial role (at least, that is one way of interpreting the examples).

```
136    byeditor         = {{edited by}{ed\adddot}},
137    bycompiler       = {{compiled by}{comp\adddot}},
138    byfounder        = {{founded by}{found\adddot}},
139    bycontinuator    = {{continued by}{cont\adddot}},
140    byredactor       = {{redacted by}{red\adddot}},
141    byreviser        = {{revised by}{rev\adddot}},
142    byreviewer       = {{reviewed by}{rev\adddot}},
143    bycollaborator   = {{in collaboration with}{in collab\adddotspace with}},
144    bytranslator     = {{translated \lbx@lfromlang\ by}{trans\adddot\ \lbx@sfromlang}},
145    bycommentator    = {{commented by}{comm\adddot}},
146    byannotator      = {{annotated by}{annot\adddot}},
147    byeditortr       = {{edited and translated \lbx@lfromlang\ by}%
148                       {ed\adddotspace and trans\adddot\ \lbx@sfromlang}},
149    byeditorco       = {{edited and commented by}%
150                       {ed\adddotspace and comm\adddot}},
151    byeditoran       = {{edited and annotated by}%
152                       {ed\adddotspace and annot\adddot}},
153    byeditorin       = {{edited, with an introduction, by}%
154                       {ed.\adddotspace with introduction}},
155    byeditorfo       = {{edited, with a foreword, by}%
156                       {ed.\adddotspace with foreword}},
157    byeditoraf       = {{edited, with an afterword, by}%
158                       {ed.\adddotspace with afterword}},
159    byeditortrco     = {{edited, translated \lbx@lfromlang\finalandcomma\ and commented by}%
160                       {ed.,\addabbrvspace trans\adddot\ \lbx@sfromlang\finalandcomma\ and
                    ↪   comm\adddot}},
161    byeditortran     = {{edited, translated \lbx@lfromlang\finalandcomma\ and annotated by}%
162                       {ed.,\addabbrvspace trans\adddot\ \lbx@sfromlang\finalandcomma\ and
                    ↪   annot\adddot}},
163    byeditortrin     = {{edited and translated \lbx@lfromlang, with an introduction, by}%
164                       {with introduction, ed\adddotspace and trans\adddot\ \lbx@sfromlang}},
165    byeditortrfo     = {{edited and translated \lbx@lfromlang, with a foreword, by}%
166                       {with foreword, ed\adddotspace and trans\adddot\ \lbx@sfromlang}},
167    byeditortraf     = {{edited and translated \lbx@lfromlang, with an afterword, by}%
168                       {with afterword, ed\adddotspace and trans\adddot\ \lbx@sfromlang}},
169    byeditorcoin     = {{edited and commented, with an introduction, by}%
170                       {with introduction, ed\adddotspace and comm\adddot}},
171    byeditorcofo     = {{edited and commented, with a foreword, by}%
172                       {with foreword, ed\adddotspace and comm\adddot}},
173    byeditorcoaf     = {{edited and commented, with an afterword, by}%
174                       {with afterword, ed\adddotspace and comm\adddot}},
175    byeditoranin     = {{edited and annotated, with an introduction, by}%
176                       {with introduction, ed\adddotspace and annot\adddot}},
177    byeditoranfo     = {{edited and annotated, with a foreword, by}%
178                       {with foreword, ed\adddotspace and annot\adddot}},
179    byeditoranaf     = {{edited and annotated, with an afterword, by}%
180                       {with afterword, ed\adddotspace and annot\adddot}},
181    byeditortrcoin   = {{edited, translated \lbx@lfromlang\finalandcomma\ and commented, with
            ↪   an introduction, by}%
182                       {with introduction, ed.,\addabbrvspace trans\adddot\
                       ↪   \lbx@sfromlang\finalandcomma\ and comm\adddot}},
```

```
183       byeditortrcofo    = {{edited, translated \lbx@lfromlang\finalandcomma\ and commented, with a
      ↪   foreword, by}%
184                          {with foreword, ed.,\addabbrvspace trans\adddot\
                          ↪   \lbx@sfromlang\finalandcomma\ and comm\adddot}},
185       byeditortrcoaf    = {{edited, translated \lbx@lfromlang\finalandcomma\ and commented, with
      ↪   an afterword, by}%
186                          {with afterword, ed.,\addabbrvspace trans\adddot\
                          ↪   \lbx@sfromlang\finalandcomma\ and comm\adddot}},
187       byeditortranin    = {{edited, translated \lbx@lfromlang\finalandcomma\ and annotated, with
      ↪   an introduction, by}%
188                          {with introduction, ed.,\addabbrvspace trans\adddot\
                          ↪   \lbx@sfromlang\finalandcomma\ and annot\adddot}},
189       byeditortranfo    = {{edited, translated \lbx@lfromlang\finalandcomma\ and annotated, with a
      ↪   foreword, by}%
190                          {with foreword, ed.,\addabbrvspace trans\adddot\
                          ↪   \lbx@sfromlang\finalandcomma\ and annot\adddot}},
191       byeditortranaf    = {{edited, translated \lbx@lfromlang\finalandcomma\ and annotated, with
      ↪   an afterword, by}%
192                          {with afterword, ed.,\addabbrvspace trans\adddot\
                          ↪   \lbx@sfromlang\finalandcomma\ and annot\adddot}},
193       bytranslatorco    = {{translated \lbx@lfromlang\ and commented by}%
194                          {trans\adddot\ \lbx@sfromlang\ and comm\adddot}},
195       bytranslatoran    = {{translated \lbx@lfromlang\ and annotated by}%
196                          {trans\adddot\ \lbx@sfromlang\ and annot\adddot}},
197       bytranslatorin    = {{translated \lbx@lfromlang, with an introduction, by}%
198                          {trans\adddot\ \lbx@sfromlang\ with introduction}},
199       bytranslatorfo    = {{translated \lbx@lfromlang, with a foreword, by}%
200                          {trans\adddot\ \lbx@sfromlang\ with foreword}},
201       bytranslatoraf    = {{translated \lbx@lfromlang, with an afterword, by}%
202                          {trans\adddot\ \lbx@sfromlang\ with afterword}},
203       bytranslatorcoin = {{translated \lbx@lfromlang\ and commented, with an introduction, by}%
204                          {with introduction, trans\adddot\ \lbx@sfromlang\ and comm\adddot}},
205       bytranslatorcofo = {{translated \lbx@lfromlang\ and commented, with a foreword, by}%
206                          {with foreword, trans\adddot\ \lbx@sfromlang\ and comm\adddot}},
207       bytranslatorcoaf = {{translated \lbx@lfromlang\ and commented, with an afterword, by}%
208                          {with afterword, trans\adddot\ \lbx@sfromlang\ and comm\adddot}},
209       bytranslatoranin = {{translated \lbx@lfromlang\ and annotated, with an introduction, by}%
210                          {with introduction, trans\adddot\ \lbx@sfromlang\ and annot\adddot}},
211       bytranslatoranfo = {{translated \lbx@lfromlang\ and annotated, with a foreword, by}%
212                          {with foreword, trans\adddot\ \lbx@sfromlang\ and annot\adddot}},
213       bytranslatoranaf = {{translated \lbx@lfromlang\ and annotated, with an afterword, by}%
214                          {with afterword, trans\adddot\ \lbx@sfromlang\ and annot\adddot}},
```

The roles expressed as objects and terms for supplementary material are not abbreviated.

```
215       withintroduction = {{with an introduction by}{with an introduction by}},
216       withcommentator  = {{with a commentary by}{with a commentary by}},
217       withannotator    = {{with annotations by}{with annotations by}},
218       withintroduction = {{with an introduction by}{with an introduction by}},
219       withforeword     = {{with a foreword by}{with a foreword by}},
220       withafterword    = {{with an afterword by}{with an afterword by}},
221       introduction     = {{introduction}{introduction}},
```

The abbreviations for some publication details are different.

```
222       newseries        = {{new series}{\mkbibacro{NS}}},
223       oldseries        = {{old series}{\mkbibacro{OS}}},
224       edition          = {{edition}{edn\adddot}},
225       reprint          = {{reprint\nopunct}{repr\adddot\nopunct}},
226       reviewof         = {{review of}{review of}},
227       reprintas        = {{reprinted as}{repr\adddotspace as}},
```

```
228        reprintfrom      = {{from}{from}},
229        translationas    = {{English translation as}{Eng\adddotspace trans\adddotspace as}},
230        origpubin        = {{originally published in}{originally pub\adddot}},
```

There is also a different abbreviation for 'paragraph'.

```
231        paragraph        = {{paragraph}{para\adddot}},
232        paragraphs       = {{paragraphs}{paras\adddot}},
```

New Hart's Rules uses 'accessed' for URL dates.

```
233        urlseen          = {{accessed}{accessed}},
```

Scholarly citation terms are abbreviated. Oxford style is to use 'henceforth' for shorthands and 'at' to cite a page within a range.

```
234        idem             = {{idem}{id\adddot}},
235        idemsm           = {{idem}{id\adddot}},
236        idemsf           = {{eadem}{ead\adddot}},
237        idemsn           = {{idem}{id\adddot}},
238        idempm           = {{eidem}{eid\adddot}},
239        idempf           = {{eaedem}{eaed\adddot}},
240        idempn           = {{eadem}{ead\adddot}},
241        idempp           = {{eidem}{eid\adddot}},
242        citedas          = {{henceforth}{henceforth}},
243        thiscite         = {{at}{at}},
```

Languages are abbreviated.

```
244        langamerican     = {{English}{Eng\adddot}},
245        langbrazilian    = {{Brazilian}{Braz\adddot}},
246        langcatalan      = {{Catalan}{Catal\adddot}},
247        langcroatian     = {{Croatian}{Croat\adddot}},
248        langczech        = {{Czech}{Czech}},
249        langdanish       = {{Danish}{Dan\adddot}},
250        langdutch        = {{Dutch}{Dutch}},
251        langenglish      = {{English}{Eng\adddot}},
252        langestonian     = {{Estonian}{Eston\adddot}},
253        langfinnish      = {{Finnish}{Finn\adddot}},
254        langfrench       = {{French}{Fr\adddot}},
255        langgerman       = {{German}{Ger\adddot}},
256        langgreek        = {{Greek}{Gr\adddot}},
257        langitalian      = {{Italian}{It\adddot}},
258        langlatin        = {{Latin}{Lat\adddot}},
259        langnorwegian    = {{Norwegian}{Norw\adddot}},
260        langpolish       = {{Polish}{Pol\adddot}},
261        langportuguese   = {{Portuguese}{Port\adddot}},
262        langrussian      = {{Russian}{Russ\adddot}},
263        langslovene      = {{Slovene}{Slov\adddot}},
264        langspanish      = {{Spanish}{Sp\adddot}},
265        langswedish      = {{Swedish}{Swed\adddot}},
266    }
```

5.2 British English: british-oxref.lbx

Here we set some language-specific punctuation and date formatting.

```
20      \InheritBibliographyExtras{british}
21      \DeclareBibliographyExtras{%
```

The only difference from the standard British date format is that we print it 'clean', with a cardinal instead of an ordinal day.

```
22        \protected\def\mkbibdatelong#1#2#3{%
23          \iffieldundef{#3}
24            {}
25            {\stripzeros{\thefield{#3}}%
26             \iffieldundef{#2}{}{\nobreakspace}}%
27          \iffieldundef{#2}
28            {}
29            {\mkbibmonth{\thefield{#2}}%
30             \iffieldundef{#1}{}{\space}}%
31          \iffieldbibstring{#1}
32            {\bibstring{\thefield{#1}}}
33            {\dateeraprintpre{#1}\stripzeros{\thefield{#1}}}}%
```

As you'd expect from an Oxford style, we use the Oxford comma, and use a period as the time separator. The redefinition of \blx@ox@langbibstring is given here as well.

```
34        \def\finalandcomma{\addcomma}%
35        \def\bibtimesep{\addperiod}%
36        \def\blx@ox@langbibstring#1#2{#1\addspace\bibstring{#2}}%
37      }
38      \UndeclareBibliographyExtras{%
39        \def\blx@ox@langbibstring#1#2{\bibstring{#2}}%
40      }
```

We use the British abbreviations for 12-hour clock times.

```
41      \DeclareBibliographyStrings{%
42        inherit            = {english},
43        am                 = {{a\adddot m\adddot}{a\adddot m\adddot}},
44        pm                 = {{p\adddot m\adddot}{p\adddot m\adddot}},
45      }
```

5.3   American English: american-oxref.lbx

```
20      \InheritBibliographyExtras{english}
21      \DeclareBibliographyExtras{\uspunctuation}
22      \InheritBibliographyStrings{english}
```

5.4   Spanish: spanish-oxref.lbx

Thanks to Bruno Maltras for contributing these translations.

We load the standard language-specific punctuation and date formatting.

```
20      \InheritBibliographyExtras{spanish}
```

We load the standard set of localization strings, then add our adjustments.

```
21    \DeclareBibliographyStrings{%
22      inherit        = {spanish},
```

These are new strings defined by oxref:

- Roles expressed as functions

```
23      director       = {{direcci\'on}{dir\adddot}},
24      directors      = {{directores}{dirs\adddot}},
25      performer      = {{int\'erprete}{int\adddot}},
26      performers     = {{int\'erpretes}{ints\adddot}},
27      reader         = {{narraci\'on}{narr\adddot}},
28      readers        = {{narradores}{narrs\adddot}},
29      conductor      = {{direcci\'on}{dir\adddot}},
30      conductors     = {{directores}{dirs\adddot}},
31      serieseditor   = {{editor de la serie}{ed\adddotspace ser\adddot}},
32      serieseditors  = {{editores de la serie}{eds\adddotspace ser\adddot}},
33      holder         = {{titular}{tit\adddot}},
34      holders        = {{titulares}{tits\adddot}},
35      editorcm       = {{editor y compilador}{ed\adddotspace y comp\adddot}},
36      editorcms      = {{editores y compiladores}{eds\adddotspace y comps\adddot}},
```

- Roles expressed as actions

```
37      byperformer    = {{interpretado por}{int\adddot}},
38      bydirector     = {{dirigido por}{dir\adddot}},
39      byreader       = {{narrado por}{narr\adddotspace por}},
40      byconductor    = {{dirigido por}{dir\adddot}},
41      byserieseditor = {{editado por}{ed\adddot}},
42      byholder       = {{derechos de}{held by}},
43      byeditorcm     = {{editado y compilado por}{ed\adddotspace y comp\adddot}},
```

- Publication details

```
44      facsimile      = {{edici\'on facs\'imil}{ed\adddotspace facs\adddot}},
45      revised        = {{edici\'on revisada}{ed\adddotspace rev\adddot}},
46      revisedenlarged = {{edici\'on revisada y ampliada}{ed\adddotspace rev\adddotspace y
     ↪    amp\adddot}},
47      revisedreprint = {{reimpresi\'on revisada}{reimpr\adddotspace rev\adddot}},
48      suppto         = {{Suplemento de}{Supl\adddot de}},
49      equals         = {{=}{=}},
50      original       = {{original}{orig\adddot}},
51      amendedby      = {{enmendado por}{enmendado por}},
```

- Publication state

```
52      inpressin      = {{de pr\'oxima publicaci\'on en}{de pr\'ox\adddotspace publ\adddot}},
```

- Pagination

```
53      book           = {{libro}{lib\adddot}},
54      books          = {{libros}{libs\adddot}},
55      canto          = {{canto}{canto}},
56      cantos         = {{cantos}{cantos}},
57      stanza         = {{estrofa}{estr\adddot}},
58      stanzas        = {{estrofas}{estrs\adddot}},
```

```
59      act              = {{Acto}{Acto}},
60      acts             = {{Actos}{Actos}},
61      scene            = {{Escena}{Escena}},
62      scenes           = {{Escenas}{Escenas}},
63      folio            = {{folio}{fol\adddot}},
64      folios           = {{folios}{fols\adddot}},
65      article          = {{art\'iculo}{art\adddot}},
66      articles         = {{art\'iculos}{arts\adddot}},
67      clause           = {{cl\'ausula}{cl\adddot}},
68      clauses          = {{cl\'ausulas}{cls\adddot}},
69      regulation       = {{regulaci\'on}{reg\adddot}},
70      regulations      = {{regulaciones}{regs\adddot}},
71      rule             = {{norma}{nrm\adddot}},
72      rules            = {{normas}{nrms\addot}},
73      booktotal        = {{libro}{lib\adddot}},
74      booktotals       = {{libros}{libs\adddot}},
75      cantototal       = {{canto}{canto}},
76      cantototals      = {{cantos}{cantos}},
77      stanzatotal      = {{estrofa}{estr\adddot}},
78      stanzatotals     = {{estrofas}{estrs\adddot}},
79      acttotal         = {{Acto}{Acto}},
80      acttotals        = {{Actos}{Actos}},
81      scenetotal       = {{Escena}{Escena}},
82      scenetotals      = {{Escenas}{Escenas}},
83      foliototal       = {{folio}{fol\adddot}},
84      foliototals      = {{folios}{fols\adddot}},
85      articletotal     = {{art\'iculo}{art\adddot}},
86      articletotals    = {{art\'iculos}{arts\adddot}},
87      clausetotal      = {{cl\'ausula}{cl\adddot}},
88      clausetotals     = {{cl\'ausulas}{cls\adddot}},
89      regulationtotal  = {{regulaci\'on}{reg\adddot}},
90      regulationtotals = {{regulaciones}{regs\adddot}},
91      ruletotal        = {{norma}{nrm\adddot}},
92      ruletotals       = {{normas}{nrms\adddot}},
```

- Types

```
93      facebook         = {{Facebook post}{Facebook post}},
94      tweet            = {{tweet}{tweet}},
95      podcast          = {{podcast}{podcast}},
96      clip             = {{video}{video}},
97      webcast          = {{webcast}{webcast}},
98      poster           = {{poster}{poster}},
```

- Miscellaneous

```
99      nolocation       = {{sin lugar}{s\adddot l\adddot}},
100     modified         = {{\'ultima modificaci\'on}{\'ult\adddotspace modif\adddot}},
101     recorded         = {{registrado}{registrado}},
102     uploaded         = {{subido}{subido}},
103     filed            = {{archivado}{archivado}},
104     issued           = {{publicado}{publicado}},
```

- Labels

```
105     anon             = {{An\'onimo}{An\'on\adddot}},
106     pseudo           = {{Pseudo-}{Ps\adddot-}},
107     urldown          = {{descargado}{descargado}},
```

- Country names, patents, and patent requests,

```
108    countryjp         = {{Jap\'on}{JP}},
109    patentjp          = {{Patente japonesa}{Pat\adddotspace japonesa}},
110    patreqjp          = {{Solicitud de patente japonesa}{Sol\adddotspace pat\adddotspace
       ↪ japonesa}},
```

- These are borrowed from other styles.

```
111    1column           = {{una columna}{1\addnbspace col\adddot}},
112    2column           = {{dos columnas}{2\addnbspace col\adddot}},
113    inflayer          = {{norma subordinada}{norm\adddotspace sub\adddot}},
114    suplayer          = {{norma superior}{norm\adddotspace sup\adddot}},
115    paper             = {{hoja}{h\adddot}},
116    papyrus           = {{papiro}{papiro}},
117    parchment         = {{pergamino}{pergam\adddot}},
118    eucase            = {{Caso}{Caso}},
119    eujoinedcases     = {{Casos agrupados}{Casos agrupados}},
120    commissiondecision = {{Decisi/'on de la Comisi/'on}{Decisi/'on de la Comisi/'on}},
121    application       = {{Solicitud}{Solic\adddot}},
122    order             = {{Orden}{Ord\adddot}},
123    bill              = {{Proyecto de ley}{Proy\adddotspace de ley}},
124    draft             = {{anteproyecto}{anteproyecto}},
125    opened            = {{abierto a la firma}{abierto a la firma}},
126    signed            = {{aprobada}{aprobada}},
127    adopted           = {{adoptada}{adoptada}},
128    inforce           = {{en vigor}{en vigor}},
```

The rest of these strings are overrides for the standard ones.

In parallel with the English versions, we remove the final 'por' from the abbreviated versions of the roles expressed as actions.

```
129    byeditor          = {{editado}{ed\adddotspace}},
130    byredactor        = {{redacci\'on de}{red\adddotspace de}},
131    byreviser         = {{revisado}{rev\adddotspace}},
132    byreviewer        = {{rese\~nado}{res\adddotspace}},
133    byfounder         = {{fundado}{fund\adddotspace}},
134    bycontinuator     = {{continuado}{cont\adddotspace}},
135    bycollaborator    = {{colaboraci\'on de}{col\adddotspace de}},
136    bytranslator      = {{traducido \lbx@lfromlang\}{trad\adddotspace \lbx@sfromlang\}},
137    bycommentator     = {{comentado}{com\adddotspace}},
138    byannotator       = {{anotado}{anot\adddotspace}},
139    byeditortr        = {{editado y traducido \lbx@lfromlang\}%
140                         {ed\adddotspace y trad\adddotspace \lbx@sfromlang\}},
141    byeditorco        = {{editado y comentado}%
142                         {ed\adddotspace y com\adddotspace}},
143    byeditoran        = {{editado y anotado}%
144                         {ed\adddotspace y anot\adddotspace}},
145    byeditorin        = {{editado e introducido}%
146                         {ed\adddotspace e intr\adddotspace}},
147    byeditorfo        = {{editado y prologado}%
148                         {ed\adddotspace y pr\'ol\adddotspace}},
149    byeditoraf        = {{editado y epilogado}%
150                         {ed\adddotspace y ep\'il\adddotspace}},
151    byeditortrco      = {{editado, traducido \lbx@lfromlang\ y comentado}%
152                         {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang\ y
                            ↪ com\adddotspace}},
153    byeditortran      = {{editado, traducido \lbx@lfromlang\ y anotado}%
```

```
154                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang\ y
    ↪  anot\adddotspace}},
155      byeditortrin    = {{editado, traducido \lbx@lfromlang\ e introducido}%
156                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang\ e
    ↪  intr\adddotspace}},
157      byeditortrfo    = {{editado, traducido \lbx@lfromlang\ y prologado}%
158                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang\ y
    ↪  pr\'ol\adddotspace}},
159      byeditortraf    = {{editado, traducido \lbx@lfromlang\ y epilogado}%
160                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang\ y
    ↪  ep\'il\adddotspace}},
161      byeditorcoin    = {{editado, comentado e introducido}%
162                             {ed.,\addabbrvspace com\adddotspace e intr\adddotspace}},
163      byeditorcofo    = {{editado, comentado y prologado}%
164                             {ed.,\addabbrvspace com\adddotspace y pr\'ol\adddotspace}},
165      byeditorcoaf    = {{editado, comentado y epilogado}%
166                             {ed.,\addabbrvspace com\adddotspace y ep\'il\adddotspace}},
167      byeditoranin    = {{editado, anotado e introducido}%
168                             {ed.,\addabbrvspace anot\adddotspace e intr\adddotspace}},
169      byeditoranfo    = {{editado, anotado y prologado}%
170                             {ed.,\addabbrvspace anot\adddotspace y pr\'ol\adddotspace}},
171      byeditoranaf    = {{editado, anotado y epilogado}%
172                             {ed.,\addabbrvspace anot\adddotspace y ep\'il\adddotspace}},
173      byeditortrcoin  = {{editado, traducido \lbx@lfromlang, comentado e introducido}%
174                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang, com\adddotspace e
    ↪  intr\adddotspace}},
175      byeditortrcofo  = {{editado, traducido \lbx@lfromlang, comentado y prologado}%
176                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang, com\adddotspace y
    ↪  pr\'ol\adddotspace}},
177      byeditortrcoaf  = {{editado, traducido \lbx@lfromlang, comentado y epilogado}%
178                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang, com\adddotspace y
    ↪  ep\'il\adddotspace}},
179      byeditortranin  = {{editado, traducido \lbx@lfromlang, anotado e introducido}%
180                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang, anot\adddotspace e
    ↪  intr\adddotspace}},
181      byeditortranfo  = {{editado, traducido \lbx@lfromlang, anotado y prologado}%
182                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang, anot\adddotspace y
    ↪  pr\'ol\adddotspace}},
183      byeditortranaf  = {{editado, traducido \lbx@lfromlang, anotado y epilogado}%
184                             {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang, anot\adddotspace y
    ↪  ep\'il\adddotspace}},
185      bytranslatorco  = {{traducido \lbx@lfromlang\ y comentado}%
186                             {trad\adddotspace \lbx@sfromlang\ y com\adddotspace}},
187      bytranslatoran  = {{traducido \lbx@lfromlang\ y anotado}%
188                             {trad\adddotspace \lbx@sfromlang\ y anot\adddotspace}},
189      bytranslatorin  = {{traducido \lbx@lfromlang\ e introducido}%
190                             {trad\adddotspace \lbx@sfromlang\ e introd\adddotspace}},
191      bytranslatorfo  = {{traducido \lbx@lfromlang\ y prologado}%
192                             {trad\adddotspace \lbx@sfromlang\ y pr\'ol\adddotspace}},
193      bytranslatoraf  = {{traducido \lbx@lfromlang\ y epilogado}%
194                             {trad\adddotspace \lbx@sfromlang\ y ep\'il\adddotspace}},
195      bytranslatorcoin = {{traducido \lbx@lfromlang, comentado e introducido}%
196                             {trad\adddotspace \lbx@sfromlang, com\adddotspace e intr\adddotspace}},
197      bytranslatorcofo = {{traducido \lbx@lfromlang, comentado y prologado}%
198                             {trad\adddotspace \lbx@sfromlang, com\adddotspace y
    ↪  pr\'ol\adddotspace}},
199      bytranslatorcoaf = {{traducido \lbx@lfromlang, comentado y epilogado}%
200                             {trad\adddotspace \lbx@sfromlang, com\adddotspace y
    ↪  ep\'il\adddotspace}},
201      bytranslatoranin = {{traducido \lbx@lfromlang, anotado e introducido}%
202                             {trad\adddotspace \lbx@sfromlang, anot\adddotspace e intr\adddotspace}},
203      bytranslatoranfo = {{traducido \lbx@lfromlang, anotado y prologado}%
```

```
204                         {trad\adddotspace \lbx@sfromlang, anot\adddotspace y
                     ↪  pr\'ol\adddotspace}},
205     bytranslatoranaf = {{traducido \lbx@lfromlang, anotado y epilogado}%
206                         {trad\adddotspace \lbx@sfromlang, anot\adddotspace y
                     ↪  ep\'il\adddotspace}},
```

The roles expressed as objects and terms for supplementary material are not abbreviated.

```
207     withcommentator  = {{con comentario de}{con comentario de}},
208     withannotator    = {{con notas de}{con notas de}},
209     withintroduction = {{con introduci\'on de}{con introduci\'on de}},
210     withforeword     = {{con pr\'ologo de}{con pr\'ologo de}},
211     withafterword    = {{con ep\'ilogo de}{con ep\'ilogo de}},
212     introduction     = {{introduci\'on}{introduci\'on}},
```

The abbreviations for some publication details are different.

```
213     newseries     = {{nueva \'epoca}{\mkbibacro{N\'E}}},
214     oldseries     = {{antigua \'epoca}{\mkbibacro{A\'E}}},
215     edition       = {{edici\'on}{edn\adddot}},
216     reprintfrom   = {{de}{de}},
217     translationas = {{traducido espa\~nol como}{trad\adddotspace espa\~nol como}},
218     origpubin     = {{publicado originalmente en}{pub\adddot orig\adddotspace}},
```

New Hart's Rules uses 'accessed' for URL dates.

```
219     urlseen       = {{accessed}{accessed}},
```

Oxford style is to use 'henceforth' for shorthands and 'at' to cite a page within a range.

```
220     citedas       = {{henceforth}{henceforth}},
221     thiscite      = {{at}{at}},
```

Languages are abbreviated.

```
222     langamerican    = {{ingl\'es americano}{ingl\'es americano}},
223     langbrazilian   = {{brasile\~no}{brasile\~no}},
224     langbulgarian   = {{b\'ulgaro}{b\'ulgaro}},
225     langcatalan     = {{catal\'an}{catal\'an}},
226     langcroatian    = {{croata}{croata}},
227     langczech       = {{checo}{checo}},
228     langdanish      = {{dan\'es}{dan\'es}},
229     langdutch       = {{neerland\'es}{neerland\'es}},
230     langenglish     = {{ingl\'es}{ingl\'es}},
231     langestonian    = {{estonio}{estonio}},
232     langfinnish     = {{fin\'es}{fin\'es}},
233     langfrench      = {{franc\'es}{franc\'es}},
234     langgalician    = {{gallego}{gallego}},
235     langgerman      = {{alem\'an}{alem\'an}},
236     langgreek       = {{griego}{griego}},
237     langhungarian   = {{h\'ungaro}{h\'ungaro}},
238     langitalian     = {{italiano}{italiano}},
239     langjapanese    = {{japon\'es}{japon\'es}},
240     langlatin       = {{lat\'in}{lat\'in}},
241     langlatvian     = {{lituano}{lituano}},
242     langnorwegian   = {{noruego}{noruego}},
243     langpolish      = {{polaco}{polaco}},
244     langportuguese  = {{portugu\'es}{portugu\'es}},
245     langrussian     = {{ruso}{ruso}},
```

```
246        langserbian      = {{serbio}{serbio}},
247        langslovak       = {{eslovaco}{eslovaco}},
248        langslovene      = {{esloveno}{esloveno}},
249        langspanish      = {{espa\~nol}{espa\~nol}},
250        langswedish      = {{sueco}{sueco}},
251        langukrainian    = {{ucraniano}{ucraniano}},
252    }
```

5.5   Other languages

Currently oxref only supports English (British and American) and Spanish explicitly, but if there is demand more languages may be added. If you would like to contribute support for your language, a list of the non-standard bibliography strings requiring definition may be found in section 2.1.1.