OXREF BUNDLE

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

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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 MiKTeX. 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      }{%
```

Some implementations of \lbx@finalnamedelim do not allow logical tests to be included in the argument, so we need to spell out all these alternatives longhand.

```
170        \ifgiveninits{%
171          \ifitemannotation{pseudo}{%
172            \usebibmacro{name:title-given-family}%
173              {\biblstring{pseudo}\namepartfamily}%
174              {\namepartgiveni}%
175              {\namepartprefix}%
176              {\namepartsuffix}%
177              {\nameparttitle}%
178          }{%
179            \usebibmacro{name:title-given-family}%
180              {\namepartfamily}%
181              {\namepartgiveni}%
182              {\namepartprefix}%
183              {\namepartsuffix}%
184              {\nameparttitle}}%
185        }{%
186          \ifitemannotation{pseudo}{%
187            \usebibmacro{name:title-given-family}%
188              {\biblstring{pseudo}\namepartfamily}%
189              {\namepartgiven}%
190              {\namepartprefix}%
191              {\namepartsuffix}%
192              {\nameparttitle}%
193          }{%
```

```
194            \usebibmacro{name:title-given-family}%
195              {\namepartfamily}%
196              {\namepartgiven}%
197              {\namepartprefix}%
198              {\namepartsuffix}%
199              {\nameparttitle}}%
200          }%
201          \savefield{hash}{\blx@ox@lasthash}%
202        }%
203        \ifitemannotation{inferred}{\bibclosebracket}{}%
204        \usebibmacro{name:andothers}%
205        \iffieldannotation{inferred}{%
206          \ifboolexpr{
207            test {\ifnumequal{\value{listcount}}{\value{maxnames}}}
208            or
209            test {\ifnumequal{\value{listcount}}{\value{listtotal}}}
210            or (
211              test {\ifnumequal{\value{listcount}}{\value{minnames}}}
212              and
213              test {\ifnumgreater{\value{listtotal}}{\value{maxnames}}}
214            )
215          }{\bibclosebracket}{}%
216        }{}%
217      }
```

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`.

```
218      \newtoggle{blx@ox@variantname}
219      \DeclareNameFormat{given-family}{%
220        \ifgiveninits
221          {\usebibmacro{name:title-given-family}
222            {\namepartfamily}
223            {\namepartgiveni}
224            {\namepartprefix}
225            {\namepartsuffix}
226            {\nameparttitle}}
227          {\usebibmacro{name:title-given-family}
228            {\namepartfamily}
229            {\namepartgiven}
230            {\namepartprefix}
231            {\namepartsuffix}
232            {\nameparttitle}}%
233        \savefield{hash}{\blx@ox@lasthash}%
234        \ifitemannotation{variant}{%
235          \global\settoggle{blx@ox@variantname}{true}%
236        }{%
237          \global\settoggle{blx@ox@variantname}{false}}%
238        \usebibmacro{name:andothers}}
```

We do likewise for the regular `family-given` format.

```
239      \DeclareNameFormat{family-given}{%
240        \ifgiveninits
241          {\usebibmacro{name:family-title-given}
242            {\namepartfamily}
243            {\namepartgiveni}
244            {\namepartprefix}
245            {\namepartsuffix}
246            {\nameparttitle}}
```

```
247        {\usebibmacro{name:family-title-given}
248          {\namepartfamily}
249          {\namepartgiven}
250          {\namepartprefix}
251          {\namepartsuffix}
252          {\nameparttitle}}%
253      \savefield{hash}{\blx@ox@lasthash}%
254      \ifitemannotation{variant}{%
255        \global\settoggle{blx@ox@variantname}{true}%
256      }{%
257        \global\settoggle{blx@ox@variantname}{false}}%
258      \ifboolexpe{%
259        test {\ifnumgreater{\value{listcount}}{1}}
260        or (
261          test {\ifdefvoid\namepartgiven}
262          and
263          test {\ifdefvoid\namepartprefix}
264        )
265      }{}{\usebibmacro{name:revsdelim}}%
266      \usebibmacro{name:andothers}}
```

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

```
267      \xpatchbibmacro{name:given-family}%
268        {\bibnamedelimd\mkbibnamesuffix{#4}}%
269        {\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}}%
270      {}{\wlog{WARNING: biblatex-oxref failed to patch name:given-family}}
271      \xpatchbibmacro{name:family-given}%
272        {\bibnamedelimd\mkbibnamesuffix{#4}}%
273        {\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}}%
274      {}{\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).

```
275      \DeclareFieldFormat{nameaddon}{\mkbibbrackets{#1}}
276      \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.

```
277      \newcounter{namepairs}
278      \newsavebox{\blx@ox@namebox}
279      \newsavebox{\blx@ox@altnamebox}
280      \newbibmacro*{namepairs}[2]{%
281        \setcounter{namepairs}{0}%
282        \savebibmacro{name:andothers}%
283        \renewbibmacro*{name:andothers}{}%
284        \whileboolexpr{%
285          test {\ifnumless{\value{namepairs}}{\value{#1}}}
286          and (
287            test {\ifdefvoid{\c@maxnames}}
```

```
288           or
289           test {\ifnumequal{\c@maxnames}{0}}
290           or
291           test {\ifnumless{\value{#1}}{\c@maxnames}}
292           or
293           test {\ifnumequal{\value{#1}}{\c@maxnames}}
294           or
295           test {\ifdefvoid{\c@minnames}}
296           or
297           test {\ifnumequal{\c@minnames}{0}}
298           or
299           test {\ifnumless{\value{namepairs}}{\c@minnames}}
300         )
301       }{%
302         \stepcounter{namepairs}%
303         \ifnumgreater{\value{namepairs}}{1}{%
304           \ifnumequal{\value{#1}}{2}{%
305             \setunit*{\addspace\bibstring{and}\addspace}%
306           }{%
307             \ifnumequal{\value{namepairs}}{\value{#1}}{%
308               \setunit*{\addcomma\space\bibstring{and}\addspace}%
309             }{%
310               \setunit*{\addcomma\space}%
311             }%
312           }%
313         }{}%
314         \savebox{\blx@ox@namebox}{%
315           \printnames[#1][\value{namepairs}-\value{namepairs}]{#1}%
316         }%
317         \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.

```
318         \IfEndWith{#2}{addon}{%
319           \savebox{\blx@ox@altnamebox}{%
320             \printnames[by#1][\value{namepairs}-\value{namepairs}]{#2}%
321           }%
322           \let\blx@ox@secondhash=\blx@ox@lasthash
323           \ifdefstrequal{\blx@ox@firsthash}{\blx@ox@secondhash}{%
324             \unhbox\blx@ox@namebox
325           }{%
326             \unhbox\blx@ox@namebox\addspace
327             \iftoggle{blx@ox@variantname}{%
328               \ifbibliography{%
329
                 ↪  \printtext[namevariant]{\printnames[#1][\value{namepairs}-\value{namepairs}]{#2}}%
330               }{}%
331             }{%
332               \printtext[nameaddon]{\unhbox\blx@ox@altnamebox}%
333             }%
334           }%
```

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.

```
335         }{%
336           \savebox{\blx@ox@altnamebox}{%
337             \printnames[#1][\value{namepairs}-\value{namepairs}]{#2}%
338           }%
```

```
339        \let\blx@ox@secondhash=\blx@ox@lasthash
340        \ifdefstrequal{\blx@ox@firsthash}{\blx@ox@secondhash}{%
341          \unhbox\blx@ox@namebox
342        }{%
343          \unhbox\blx@ox@altnamebox
344          \addspace\mkbibparens{\unhbox\blx@ox@namebox}%
345        }%
346      }%
347    }%
```

Now we return to common code.

```
348    \ifboolexpr{
349      test {\ifnumequal{\value{namepairs}}{\c@minnames}}
350      and
351      test {\ifnumgreater{\value{#1}}{\c@maxnames}}
352    }{%
353      \ifnumgreater{\c@minnames}{1}{%
354        \finalandcomma
355      }{}%
356      \printdelim{andothersdelim}\bibstring{andothers}%
357    }{}%
358    \restorebibmacro{name:andothers}%
359  }
```

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

```
360  \newbibmacro*{author+altauthor}{%
361    \ifboolexpr{
362      test {\ifnameundef{authoraddon}}
363      and
364      test {\ifnameundef{jointauthor}}
365    }{%
366      \printnames{author}%
367    }{%
368      \ifnumequal{\value{authoraddon}}{\value{author}}{%
369        \usebibmacro{namepairs}{author}{authoraddon}%
370      }{%
371        \printnames{author}%
372        \ifnameundef{authoraddon}{}{%
373          \setunit*{\addspace}%
374          \printtext[nameaddon]{\printnames[byauthor]{authoraddon}}}%
375      }%
376      \ifnameundef{jointauthor}{}{%
377        \setunit{\addcomma\space}%
378        \iffieldundef{jointauthortype}{%
379          \bibstring{byeditor}%
380        }{%
381          \printfield{jointauthortype}}%
382        \setunit{\addspace}%
383        \printnames[author]{jointauthor}%
384      }%
385    }%
386  }
387  \DeclareFieldFormat{jointauthortype}{%
388    \ifbibstring{by#1}{\bibstring{by#1}}{#1}}
```

This is the (simpler) implementation for editors.

```
389   \newbibmacro*{editor+alteditor}{%
390     \ifnameundef{editoraddon}{%
391       \printnames{editor}%
392     }{
393       \ifnumequal{\value{editoraddon}}{\value{editor}}{%
394         \usebibmacro{namepairs}{editor}{editoraddon}%
395       }{%
396         \printnames{editor}%
397         \setunit*{\addspace}%
398         \printtext[nameaddon]{\printnames[byeditor]{editoraddon}}%
399       }%
400     }%
401   }
```

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.

```
402   \newbibmacro*{bbx:savehash}{}
403   \DeclareBibliographyOption{dashed}[true]{%
404     \ifstrequal{#1}{true}{%
405       \ExecuteBibliographyOptions{pagetracker}%
406       \renewbibmacro*{bbx:savehash}{\savefield{fullhash}{\bbx@lasthash}}%
407     }{%
408       \renewbibmacro*{bbx:savehash}{}%
409     }%
410   }
411   \InitializeBibliographyStyle{%
412     \global\undef\bbx@lasthash}
413   \newbibmacro*{bbx:dashcheck}[2]{%
414     \ifboolexpr{
415       test {\iffieldequals{fullhash}{\bbx@lasthash}}
416       and
417       not test \iffirstonpage
418       and
419       (
420         not bool {bbx@inset}
421         or
422         test {\iffieldequalstr{entrysetcount}{1}}
423       )
424     }{#1}{#2}%
425   }
```

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

```
426   \newbool{bbx@inset}
427   \DeclareBibliographyDriver{set}{%
428     \booltrue{bbx@inset}%
429     \entryset{}{}%
430     \newunit\newblock
431     \usebibmacro{setpageref}%
432     \finentry}
```

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

```
433   \newtoggle{blx@ox@autoanon}
434   \newtoggle{blx@ox@abbranon}
435   \DeclareBibliographyOption[string]{anon}[short]{%
436     \ifcsdef{blx@ox@opt@anon@#1}{%
```

```
437        \csuse{blx@ox@opt@anon@#1}%
438      }{%
439        \PackageError{biblatex-oxref}
440        {Invalid option 'anon=#1'}
441        {Valid values are 'long','short',and 'literal'.}}}
442    \csdef{blx@ox@opt@anon@literal}{\togglefalse{blx@ox@autoanon}}
443    \csdef{blx@ox@opt@anon@long}{\toggletrue{blx@ox@autoanon}\togglefalse{blx@ox@abbranon}}
444    \csdef{blx@ox@opt@anon@short}{\toggletrue{blx@ox@autoanon}\toggletrue{blx@ox@abbranon}}
```

We copy the author to rawauthor for easier testing.

```
445    \DeclareStyleSourcemap{
446      \maps[datatype=bibtex]{%
447        \map{%
448          \step[fieldsource=author]%
449          \step[fieldset=rawauthor,origfieldval]%
450        }
451      }%
452    }
```

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).

```
453    \newcommand*{\oxrefanon}{Anonymous}
454    \newtoggle{blx@ox@isanon}
455    \renewbibmacro*{author}{%
456      \iffieldequals{rawauthor}{\oxrefanon}{%
457        \toggletrue{blx@ox@isanon}%
458      }{%
459        \togglefalse{blx@ox@isanon}}%
460      \ifboolexpr{
461        test \ifuseauthor
462        and
463        ( not test {\ifnameundef{author}} )
464        and (
465          ( not togl {blx@ox@isanon} )
466          or
467          ( not togl {blx@ox@autoanon} )
468          or
469          test {\ifbibliography}
470        )
471      }
472      {\usebibmacro{bbx:dashcheck}
473        {\bibnamedash}
474        {\usebibmacro{bbx:savehash}%
475          \ifboolexpr{
476            togl {blx@ox@autoanon}
477            and
478            togl {blx@ox@isanon}
479          }{%
480            \iftoggle{blx@ox@abbranon}{\bibcpsstring{anon}}{\bibcplstring{anon}}%
481          }{%
482            \usebibmacro{author+altauthor}%
483          }%
```

```
484        \iffieldundef{nameaddon}
485        {}
486        {\setunit{\addspace}%
487          \printfield{nameaddon}}%
488        \setunit{\printdelim{authortypedelim}}}%
489      \iffieldundef{authortype}
490        {}
491        {\usebibmacro{authorstrg}%
492          \setunit{\addspace}}}%
493    {\global\undef\bbx@lasthash}}
494  \DeclareFieldFormat{authortype}{\mkbibparens{#1}}
```

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

```
495    \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.

```
496  \renewbibmacro*{editor}{%
497    \usebibmacro{bbx:editor}{editorstrg}}
498  \renewbibmacro*{editor+others}{%
499    \usebibmacro{bbx:editor}{editor+othersstrg}}
500  \newbibmacro*{bbx:editor}[1]{%
501    \ifboolexpr{
502      test \ifuseeditor
503      and
504      not test {\ifnameundef{editor}}
505    }
506    {\usebibmacro{bbx:dashcheck}
507      {\bibnamedash}
508      {\usebibmacro{editor+alteditor}%
509       \setunit{\printdelim{editortypedelim}}%
510       \usebibmacro{bbx:savehash}}%
511      \usebibmacro{#1}%
512      \clearname{editor}}
513    {\global\undef\bbx@lasthash}}
514  \DeclareFieldFormat{editortype}{\mkbibparens{#1}}
```

We do the same for translator as well.

```
515  \renewbibmacro*{translator}{%
516    \usebibmacro{bbx:translator}{translatorstrg}}
517  \renewbibmacro*{translator+others}{%
518    \usebibmacro{bbx:translator}{translator+othersstrg}}
519  \newbibmacro*{bbx:translator}[1]{%
520    \ifboolexpr{
521      test \ifusetranslator
522      and
523      not test {\ifnameundef{translator}}
524    }
525    {\usebibmacro{bbx:dashcheck}
526      {\bibnamedash}
527      {\printnames{translator}%
528       \setunit{\printdelim{translatortypedelim}}%
529       \usebibmacro{bbx:savehash}}%
530      \usebibmacro{#1}%
531      \clearname{translator}%
532      \setunit{\addspace}}%
```

```
533        {\global\undef\bbx@lasthash}}
534    \xpatchbibmacro{translatorstrg}%
535        {\bibstring}%
536        {\bibstring[\mkbibparens]}%
537    {}{\wlog{WARNING: biblatex-oxref failed to patch translatorstrg}}%
538    \xpatchbibmacro{translator+othersstrg}%
539        {\bibstring}%
540        {\bibstring[\mkbibparens]}%
541    {}{\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).

```
542    \renewbibmacro*{bybookauthor}{%
543      \ifnamesequal{author}{bookauthor}%
544      {\bibstring{idem\thefield{gender}}}%
545      {\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.

```
546    \newbibmacro*{bookeditor}{%
547      \ifboolexpr{
548        test \ifuseeditor
549        and
550        not test {\ifnameundef{editor}}
551      }{%
552        \ifnamesequal{author}{editor}{%
553          \bibstring{idem\thefield{gender}}%
554          \setunit{\addspace}%
555          \usebibmacro{editor+othersstrg}%
556          \clearname{editor}%
557        }{%
558          \printnames[bookeditor]{editor}%
559          \setunit*{\addspace}%
560          \usebibmacro{editor+othersstrg}%
561          \clearname{editor}%
562        }%
563      }{}}
```

We provide a macro for printing series editors.

```
564    \newbibmacro*{byserieseditor}{%
565      \ifnameundef{serieseditor}
566        {}
567        {\usebibmacro{bytypestrg}{serieseditor}{serieseditor}%
568         \setunit{\addspace}%
569         \printnames[byeditor]{serieseditor}%
570         \newunit}}
571
```

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.

```
572  \renewbibmacro*{title}{%
573    \ifboolexpr{
574      test {\iffieldundef{title}}
575      and
576      test {\iffieldundef{subtitle}}
577    }
578    {}
579    {\printtext[title]{%
580        \printfield[titlecase]{title}%
581        \setunit{\subtitlepunct}%
582        \printfield[titlecase]{subtitle}}%
583      \setunit{\addspace}}%
584    \usebibmacro{origtitle}%
585    \setunit*{\addspace}%
586    \printfield{titleaddon}%
587    \iffieldequalstr{relatedtype}{equals}{%
588      \iftoggle{bbx:related}{%
589        \usebibmacro{related:init}%
590        \usebibmacro{related}%
591        \clearfield{related}%
592      }{}%
593    }{}%
594  }
595  \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'.

```
596  \DeclareFieldFormat{origtitle}{\mkbibemph{#1}}
597  \newbibmacro*{origtitle}{%
598    \iffieldundef{origtitle}{}{%
599      \iflistundef{language}{%
600        \printtext[parens]{\printfield{origtitle}}%
601      }{%
602        \printtext[brackets]{%
603          \blx@ox@langbibstring{\printlist{language}}{translationof}\addspace
604          \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]

```
605  \newcommand{\blx@ox@compyear}[2]{%
606    \def\num@one{#1}%
607    \def\num@two{#2}%
608    \StrLen{\num@one}[\num@one@len]%
609    \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.

---

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

```
610    \ifboolexpr{
611      test {\ifnumequal{\num@one@len}{\num@two@len}}
612      and
613      test {\ifnumless{\num@one}{\num@two}}
614    }{%
```

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

```
615        \StrCompare{\num@one}{\num@two}[\Result]%
616        \ifnum\num@two@len>3%
617          \IfStrEq{\Result}{2}{\def\Result{1}}{}%
618        \fi
```

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

```
619        \ifboolexpr{
620          (
621            test {\ifentrytype{jurisdiction}}
622            or
623            test {\ifentrytype{legislation}}
624          )
625          and
626          test {\IfStrEq{\Result}{4}}
627        }{\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.

```
628        \StrGobbleLeft{0\num@two}{\Result}%
629      }{\num@two}}
```

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

```
630    \patchcmd{\mkdaterangefull}{%
631      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
632    }{%
633      \iffieldundef{#2endmonth}%
634        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
635        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
636    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangefull}}
637    \patchcmd{\mkdaterangefullextra}{%
638      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
639    }{%
640      \iffieldundef{#2endmonth}%
641        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
642        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
643    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangefullextra}}
644    \patchcmd{\mkdaterangetrunc@i}{%
645      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
646    }{%
647      \iffieldundef{#2endmonth}%
648        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
649        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
650    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangetrunc@i}}
651    \patchcmd{\mkdaterangetruncextra@i}{%
652      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
653    }{%
654      \iffieldundef{#2endmonth}%
655        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
```

```
656        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
657    }{}{\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.

```
658    \DeclareFieldFormat{datetype}{%
659      \ifbibstring{#1}{\bibstring{#1}}{#1\isdot}%
660    }
661    \newtoggle{blx@ox@timefirst}
662    \DeclareBiblatexOption{global,type,entry}{timefirst}[true]{%
663      \settoggle{blx@ox@timefirst}{#1}}
664    \newbibmacro*{date+time}{%
665      \ifboolexpr{
666        test {\iffieldundef{year}}
667        and
668        test {\iffieldundef{yeardivision}}
669        and
670        test {\iffieldundef{month}}
671        and
672        test {\iffieldundef{hour}}
673      }{}{%
674        \printfield{datetype}}%
675      \setunit*{\addspace}%
676      \iftoggle{blx@ox@timefirst}{%
677        \printtime
678        \setunit*{\addcomma\space}}{}%
679      \printdate
680      \iftoggle{blx@ox@timefirst}{}{%
681        \setunit*{\addcomma\space}%
682        \printtime}%
683    }
684    \renewbibmacro*{date}{\usebibmacro{date+time}}
```

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

```
685    \DeclareFieldFormat{origdatetype}{%
686      \ifbibstring{#1}{\bibstring{#1}}{#1\isdot}%
687    }
688    \newbibmacro*{origdate+time}{%
689      \ifboolexpr{
690        test {\iffieldundef{origyear}}
691        and
692        test {\iffieldundef{origyeardivision}}
693        and
694        test {\iffieldundef{origmonth}}
695        and
696        test {\iffieldundef{orighour}}
697      }{}{%
698        \printfield{origdatetype}}%
699      \setunit*{\addspace}%
700      \iftoggle{blx@ox@timefirst}{%
701        \printorigtime
702        \setunit*{\addcomma\space}}{}%
703      \printorigdate
704      \iftoggle{blx@ox@timefirst}{}{%
705        \setunit*{\addcomma\space}%
706        \printorigtime}%
707    }
```

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

```
708  \DeclareFieldFormat{date}{%
709    \def\currentfield{date}%
710    \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
711    \undef\currentfield}
712  \DeclareFieldFormat{origdate}{%
713    \def\currentfield{origdate}%
714    \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
715    \undef\currentfield}
716  \DeclareFieldFormat{eventdate}{%
717    \def\currentfield{eventdate}%
718    \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
719    \undef\currentfield}
```

2.1.5 Editions, pages, and other number-like fields

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

```
720  \xpatchfieldformat{edition}%
721    {#1\isdot}%
722    {\ifbibstring{#1}{\bibstring{#1}}{#1\isdot}}%
723  {}{\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.

```
724  \DeclareFieldFormat{pages}{%
725    \iffieldundef{bookpagination}%
726      {\mkcomprange{#1}}%
727      {\mkcomprange[{\mkpageprefix[bookpagination]}]{#1}}%
728  }
```

The same is true in citations.

```
729  \DeclareFieldFormat{postnote}{%
730    \iffieldundef{pagination}%
731    {\mkcomprange{#1}}%
732    {\mkcomprange[{\mkpageprefix}]{#1}}%
733  }
734
```

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.

```
735  \DeclareBibliographyOption{nopublisher}[true]{%
736    \DeclareFieldInputHandler{publisher}{\def\NewValue{}}%
737  }
```

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.

```
738   \DeclareBibliographyOption{nolocation}[true]{%
739     \DeclareStyleSourcemap{
740       \maps[datatype=bibtex]{
741         \map{
742           \pertype{book}
743           \pertype{mvbook}
744           \pertype{bookinbook}
745           \pertype{inbook}
746           \pertype{suppbook}
747           \pertype{collection}
748           \pertype{mvcollection}
749           \pertype{incollection}
750           \pertype{suppcollection}
751           \pertype{reference}
752           \pertype{mvreference}
753           \pertype{inreference}
754           \pertype{proceedings}
755           \pertype{mvproceedings}
756           \pertype{inproceedings}
757
              ↪  \step[notfield=location,fieldset=location,fieldvalue={\noexpand\bibstring{nolocation}}]
758         }
759       }
760     }%
761   }
```

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

```
762   \newtoggle{blx@ox@noloc}
763   \def\blx@ox@noloc{{\bibstring{nolocation}}}
764   \DeclareEntryOption{nolocation}[true]{%
765     \settoggle{blx@ox@noloc}{#1}%
766     \iflistundef{location}{%
767       \iftoggle{blx@ox@noloc}{\restorelist{location}{\blx@ox@noloc}}{}%
768     }{}}
```

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.

```
769   \DeclareBibliographyOption{isourls}[true]{%
770     \ifstrequal{#1}{true}
771       {\DeclareFieldFormat{url}{$\langle$\url{##1}$\rangle$}}
772       {\DeclareFieldFormat{url}{\url{##1}}}%
773   }
774   \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.

```
775   \renewcommand*{\biburlsetup}{%
776     \Urlmuskip=0mu plus 2mu\relax
777     \mathchardef\UrlBigBreakPenalty=100\relax
778     \mathchardef\UrlBreakPenalty=200\relax
779     \def\UrlBigBreaks{\do\/\do\:}%
780     \def\UrlNoBreaks{\do\(\do\[\do\{\do\<}%
781     \def\UrlBreaks{%
```

```
782        \do\>\do\}\do\]\do\)\do\\\do\|%
783        \do\'\do\$\do\*\do\^\do\"}%
784      \appto\UrlSpecials{%
785        \do\!{\mathbin{}\mskip-\Urlmuskip\mathchar`\!\mskip\Urlmuskip}%
786        \do\&{\mathbin{}\mskip-\Urlmuskip\mathchar`\&\mskip\Urlmuskip}%
787        \do\+{\mathbin{}\mskip-\Urlmuskip\mathchar`\+\mskip\Urlmuskip}%
788        \do\,{\mathbin{}\mskip-\Urlmuskip\mathchar`\,\mskip\Urlmuskip}%
789        \do\-{\mathbin{}\mskip-\Urlmuskip\mathchar`\-\mskip\Urlmuskip}%
790        \do\.{\mathbin{}\mskip-\Urlmuskip\mathchar`\.\mskip\Urlmuskip}%
791        \do\;{\mathbin{}\mskip-\Urlmuskip\mathchar`\;\mskip\Urlmuskip}%
792        \do\={\mathbin{}\mskip-\Urlmuskip\mathchar`\=\mskip\Urlmuskip}%
793        \do\?{\mathbin{}\mskip-\Urlmuskip\mathchar`\?\mskip\Urlmuskip}%
794        \do\_{\mathbin{}\mskip-\Urlmuskip\_\mskip\Urlmuskip}%
795        \do\#{\mathbin{}\mskip-\Urlmuskip\#\mskip\Urlmuskip}%
796      }%
797      \ifnumgreater{\value{biburlnumpenalty}}{0}
798        {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburlnumpenalty}}}}%
799         \do\1\do\2\do\3\do\4\do\5\do\6\do\7\do\8\do\9\do\0}
800        {}%
801      \ifnumgreater{\value{biburlucpenalty}}{0}
802        {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburlucpenalty}}}}%
803         \do\A\do\B\do\C\do\D\do\E\do\F\do\G\do\H\do\I\do\J
804         \do\K\do\L\do\M\do\N\do\O\do\P\do\Q\do\R\do\S\do\T
805         \do\U\do\V\do\W\do\X\do\Y\do\Z}
806        {}%
807      \ifnumgreater{\value{biburllcpenalty}}{0}
808        {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburllcpenalty}}}}%
809         \do\a\do\b\do\c\do\d\do\e\do\f\do\g\do\h\do\i\do\j
810         \do\k\do\l\do\m\do\n\do\o\do\p\do\q\do\r\do\s\do\t
811         \do\u\do\v\do\w\do\x\do\y\do\z}
812        {}%
813      \let\do=\noexpand}
```

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

```
814      \DeclareFieldFormat{urldate}{\bibstring{urlseen}\space#1}
815      \xpatchbibmacro{url+urldate}%
816        {\setunit*{\addspace}}%
817        {\setunit*{\addcomma\addspace}}%
818    {}{\wlog{WARNING: biblatex-oxref failed to patch url+urldate}}
```

The DOI is introduced by 'doi' in lowercase.

```
819      \xpatchfieldformat{doi}%
820        {\mkbibacro{DOI}}%
821        {\printtext{doi}}%
822    {}{\wlog{WARNING: biblatex-oxref failed to patch doi}}
```

Unlike URLs, DOIs are preceded by a full stop.

```
823      \xpatchbibmacro{doi+eprint+url}%
824        {\printfield{doi}}%
825        {\setunit{\addperiod\space}\printfield{doi}}%
826    {}{\wlog{WARNING: biblatex-oxref failed to patch doi+eprint+url}}
827
```

2.1.8 Addenda

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

```
828    \renewbibmacro*{addendum+pubstate}{%
829      \ifboolexpr{
830        test {\iffieldundef{pubstate}}
831        or
832        test {\iffieldequalstr{labeldatesource}{pubstate}}
833      }{}{%
834        \nopunct
835        \ifbibstring{\thefield{pubstate}}{%
836          \printtext[pubstate]{\bibstring{\thefield{pubstate}}}%
837        }{%
838          \printfield{pubstate}}}%
839      \setunit{\addsemicolon\addspace}\newblock
840      \printfield{addendum}}
841    \DeclareFieldFormat{pubstate}{\mkbibparens{#1}}
```

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

```
842    \DeclareFieldFormat{howpublished}{\mkbibbrackets{#1}}
843    \DeclareFieldFormat[misc,unpublished]{howpublished}{#1}
```

2.1.9   ARTICLES AND PERIODICALS

Subtypes for articles and similar are in square brackets.

```
844    \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.

```
845    \global\let\blx@ox@abbrevstring\@empty
846    \newrobustcmd*{\DeclareAbbrEndChars}{%
847      \@ifstar{%
848        \blx@ox@apptoabbrevstring
849      }{%
850        \global\let\blx@ox@abbrevstring\@empty
851        \blx@ox@apptoabbrevstring}}
852    \def\blx@ox@apptoabbrevstring#1{
853      \xdef\blx@ox@abbrevstring{\blx@ox@abbrevstring#1}}
854    \DeclareAbbrEndChars{%
855      A\^{A}BCDEFG\u{G}HI\^{I}JKLMNO\"{O}\^{O}PQRSTU\"{U}\^{U}VWXYZ.}%
856    \newcommand*{\ifabbrev}[3]{%
857      \StrRight{#1}{1}[\blx@ox@lastchar]%
858      \expandafter\IfSubStr*{\blx@ox@abbrevstring}{\blx@ox@lastchar}{#2}{#3}%
859    }
```

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.

```
860    \renewbibmacro*{journal+issuetitle}{%
861      \ifboolexpr{
862        test {\iffieldundef{title}}
863        and
```

```
864        not test {\iffieldundef{issuetitle}}
865      }{%
866        \usebibmacro{issue}%
867        \setunit{\addspace =\addspace}%
868      }{%
869        \ifboolexpr{
870          ( not test {\iffieldundef{pubstate}} )
871          and
872          test {\ifbibxstring{\thefield{pubstate}in}}
873        }{%
874          \printtext{\bibstring{\thefield{pubstate}in}\space}%
875          \clearfield{pubstate}%
876        }{}}%
877      \usebibmacro{journal}%
878      \iffieldundef{journalsubtitle}{%
879        \ifabbrev{\strfield{journaltitle}}{\setunit{\addspace}}{\newunit}%
880      }{%
881        \ifabbrev{\strfield{journalsubtitle}}{\setunit{\addspace}}{\newunit}}%
882      \iffieldundef{series}{}{%
883        \newunit\newblock
884        \printfield{series}%
885        \ifbibxstring{\thefield{series}}{%
886          \setunit{\addspace}%
887        }{%
888          \newunit}}%
889      \usebibmacro{volume+number+eid}%
890      \setunit{\addspace}%
891      \usebibmacro{issue+date}%
892      \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.

```
893    \renewbibmacro*{title+issuetitle}{%
894      \usebibmacro{periodical}%
895      \iffieldundef{subtitle}{%
896        \ifabbrev{\strfield{title}}{\setunit{\addspace}}{\newunit}%
897      }{%
898        \ifabbrev{\strfield{subtitle}}{\setunit{\addspace}}{\newunit}}%
899      \iffieldundef{series}{}{%
900        \newunit\newblock
901        \printfield{series}%
902        \ifbibxstring{\thefield{series}}{%
903          \setunit{\addspace}%
904        }{%
905          \newunit}}%
906      \usebibmacro{volume+number+eid}%
907      \setunit{\addspace}%
908      \usebibmacro{issue+date}%
909      \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).

```
910    \DeclareBibliographyOption[string]{issuestyle}[slash]{%
911      \ifcsdef{blx@ox@issuestyle@#1}{%
912        \csuse{blx@ox@issuestyle@#1}%
```

```
913      }{%
914        \PackageError{biblatex-oxref}
915          {Invalid option 'issuestyle=#1'}
916          {Valid values are 'slash','colon','comma','parens'}%
917      }%
918    }
919    \csdef{blx@ox@issuestyle@slash}{%
920      \renewbibmacro*{volume+number+eid}{%
921        \printfield{volume}%
922        \setunit*{\addslash}%
923        \printfield{number}%
924      }%
925    }
926    \csdef{blx@ox@issuestyle@colon}{%
927      \renewbibmacro*{volume+number+eid}{%
928        \printfield{volume}%
929        \setunit*{\addcolon\space}%
930        \printfield{number}%
931      }%
932    }
933    \csdef{blx@ox@issuestyle@comma}{%
934      \renewbibmacro*{volume+number+eid}{%
935        \printfield{volume}%
936        \setunit*{\addcomma\space}%
937        \printfield{number}%
938      }%
939    }
940    \csdef{blx@ox@issuestyle@parens}{%
941      \renewbibmacro*{volume+number+eid}{%
942        \printfield{volume}%
943        \setunit*{\addspace}%
944        \printfield[parens]{number}%
945      }%
946    }
947    \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.

```
948    \newtoggle{blx@ox@varissuedate}
949    \DeclareBiblatexOption{global,type,entry}{varissuedate}[true]{%
950      \settoggle{blx@ox@varissuedate}{#1}}
951    \DeclareBiblatexOption{global,type,entry}{issuedate-plain}[true]{%
952      \settoggle{blx@ox@varissuedate}{#1}}
953    \renewbibmacro*{issue+date}{%
954      \ifboolexpr{
955        test {\iffieldundef{issue}}
956        and
957        test {\iffieldundef{year}}
958        and
959        test {\iffieldundef{yeardivision}}
960        and
961        test {\iffieldundef{month}}
962      }{}{%
963        \ifboolexpr{
964          togl {blx@ox@varissuedate}
```

```
965            and
966            test {\iffieldundef{volume}}
967            and
968            test {\iffieldundef{number}}
969        }{%
970          \newunit
971          \printtext{%
972            \iffieldundef{issue}{%
973              \usebibmacro{date}
974            }{%
975              \printfield{issue}%
976              \setunit*{\addspace}%
977              \usebibmacro{date}}}%
978        }{%
979          \printtext[parens]{%
980            \iffieldundef{issue}{%
981              \usebibmacro{date}%
982            }{%
983              \printfield{issue}%
984              \setunit*{\addspace}%
985              \usebibmacro{date}}}}}%
986      \newunit
987      \printfield{eid}%
988    }
```

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.

```
989    \DeclareBibliographyDriver{article}{%
990      \usebibmacro{bibindex}%
991      \usebibmacro{begentry}%
992      \usebibmacro{author/translator+others}%
993      \setunit{\printdelim{nametitledelim}}\newblock
994      \usebibmacro{title}%
995      \setunit{\titlebyauthordelim}\newblock
996      \usebibmacro{byauthor}%
997      \newunit\newblock
998      \usebibmacro{bytranslator+others}%
999      \newunit\newblock
1000     \printfield{version}%
1001     \newunit\newblock
1002     \usebibmacro{journal+issuetitle}%
1003     \newunit
1004     \usebibmacro{byeditor+others}%
1005     \iffieldequalstr{relatedtype}{suppto}{%
1006       \setunit{\addsemicolon\space}%
1007       \iftoggle{bbx:related}{%
1008         \usebibmacro{related:init}%
1009         \usebibmacro{related}%
1010         \clearfield{related}%
1011       }{}%
1012     }{}%
1013     \newunit
1014     \usebibmacro{note+pages}%
1015     \newunit\newblock
1016     \iftoggle{bbx:isbn}
```

```
1017        {\printfield{issn}}
1018        {}%
1019      \newunit\newblock
1020      \usebibmacro{doi+eprint+url}%
1021      \newunit\newblock
1022      \usebibmacro{addendum+pubstate}%
1023      \iftoggle{bbx:related}
1024        {\usebibmacro{related:init}%
1025         \usebibmacro{related}}
1026        {}%
1027      \setunit{\bibpagerefpunct}\newblock
1028      \usebibmacro{pageref}%
1029      \usebibmacro{finentry}}
```

Similar changes are made to the `periodical` driver.

```
1030    \DeclareBibliographyDriver{periodical}{%
1031      \usebibmacro{bibindex}%
1032      \usebibmacro{begentry}%
1033      \usebibmacro{editor}%
1034      \setunit{\printdelim{nametitledelim}}\newblock
1035      \usebibmacro{title+issuetitle}%
1036      \newunit\newblock
1037      \usebibmacro{byeditor}%
1038      \newunit\newblock
1039      \printfield{note}%
1040      \newunit\newblock
1041      \iftoggle{bbx:isbn}
1042        {\printfield{issn}}
1043        {}%
1044      \newunit\newblock
1045      \usebibmacro{doi+eprint+url}%
1046      \newunit\newblock
1047      \usebibmacro{addendum+pubstate}%
1048      \iftoggle{bbx:related}
1049        {\usebibmacro{related:init}%
1050         \usebibmacro{related}}
1051        {}%
1052      \setunit{\bibpagerefpunct}\newblock
1053      \usebibmacro{pageref}%
1054      \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.

```
1055    \DeclareFieldFormat[suppperiodical]{title}{%
1056      \def\currentfield{title}%
1057      \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
1058      \undef\currentfield}
1059    \DeclareFieldFormat[suppperiodical]{volume}{#1}% volume of a journal
1060    \DeclareFieldFormat[suppperiodical]{number}{#1}% number of a journal
1061    \DeclareFieldFormat[suppperiodical]{series}{% series of a journal
1062      \ifinteger{#1}
1063      {\mkbibordseries{#1}~\bibstring{jourser}}
1064      {\ifbibstring{#1}{\bibstring{#1}}{#1}}}
1065    \DeclareBibliographyDriver{suppperiodical}{%
1066      \usebibmacro{bibindex}%
1067      \usebibmacro{begentry}%
1068      \usebibmacro{author/translator+others}%
```

```
1069      \setunit{\printdelim{nametitledelim}}\newblock
1070      \usebibmacro{title}%
1071      \setunit{\titlebyauthordelim}\newblock
1072      \usebibmacro{byauthor}%
1073      \newunit\newblock
1074      \usebibmacro{bytranslator+others}%
1075      \newunit\newblock
1076      \printfield{note}\clearfield{note}%
1077      \newunit\newblock
1078      \printfield{version}%
1079      \newunit\newblock
1080      \usebibmacro{journal+issuetitle}%
1081      \newunit
1082      \usebibmacro{byeditor+others}%
1083      \iffieldequalstr{relatedtype}{suppto}{%
1084        \setunit{\addsemicolon\space}%
1085        \iftoggle{bbx:related}{%
1086          \usebibmacro{related:init}%
1087          \usebibmacro{related}%
1088          \clearfield{related}%
1089        }{}%
1090      }{}%
1091      \newunit
1092      \usebibmacro{note+pages}%
1093      \newunit\newblock
1094      \iftoggle{bbx:isbn}
1095        {\printfield{issn}}
1096        {}%
1097      \newunit\newblock
1098      \usebibmacro{doi+eprint+url}%
1099      \newunit\newblock
1100      \usebibmacro{addendum+pubstate}%
1101      \iftoggle{bbx:related}
1102        {\usebibmacro{related:init}%
1103         \usebibmacro{related}}
1104        {}%
1105      \setunit{\bibpagerefpunct}\newblock
1106      \usebibmacro{pageref}%
1107      \usebibmacro{finentry}}
```

2.1.10 Books and works in books

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

```
1108      \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.

```
1109      \DeclareFieldFormat[bookinbook]{title}{%
1110        \ifboolexpr{
1111          test {\iffieldequalstr{entrysubtype}{poem}}
1112          or
1113          test {\iffieldequalstr{entrysubtype}{play}}
1114        }{%
1115          \mkbibemph{#1}%
1116        }{%
1117          \mkbibquote{#1\isdot}}}
```

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

```
1118    \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.

```
1119    \DeclareFieldFormat[book,mvbook,bookinbook,inbook,suppbook,%
1120    collection,mvcollection,incollection,suppcollection,%
1121    proceedings,mvproceedings,inproceedings,%
1122    reference,mvreference,inreference]{volume}{%
1123    \IfSubStr{#1}{-}{%
1124      \StrCount{#1}{-}[\blx@ox@dashnum]%
1125      \StrBefore{#1}{-}[\blx@ox@volnum]%
1126      \expandafter\ifinteger\blx@ox@volnum{\Rn{\blx@ox@volnum}}{\blx@ox@volnum}\bibrangedash
1127      \StrBehind[\blx@ox@dashnum]{#1}{-}[\blx@ox@volnum]%
1128      \expandafter\ifinteger\blx@ox@volnum{\Rn{\blx@ox@volnum}}{\blx@ox@volnum}%
1129    }{%
1130      \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.

```
1131    \newbibmacro*{maintitle+volume}{%
1132      \ifboolexpr{
1133        test {\iffieldundef{maintitle}}
1134        or
1135        test {\iffieldundef{volume}}
1136      }{}%
1137      {\printtext[maintitle+volume]{%
1138        \bibstring{volume}\addspace
1139        \printfield{volume}\printfield{part}\addspace
1140        \bibstring{ofseries}\addspace
1141        \usebibmacro{maintitle}}}
1142    }
1143    \DeclareFieldFormat{maintitle+volume}{\mkbibbrackets{#1}}
```

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

```
1144    \renewbibmacro*{in:}{%
1145      \iffieldequalstr{entrysubtype}{yearbook}{}{%
1146        \bibstring{in}%
1147        \printunit{\intitlepunct}}}
```

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

```
1148    \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.

```
1149    \renewbibmacro*{series+number}{%
1150      \printfield{series}%
1151      \setunit*{\addcomma\space}%
1152      \usebibmacro{byserieseditor}%
1153      \setunit*{\addcomma\space}%
```

```
1154          \printfield{number}}
```

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

```
1155     \newtoggle{blx@ox@altbookseries}
1156     \DeclareBibliographyOption[string]{bookseries}[in]{%
1157       \ifstrequal{#1}{out}{%
1158         \toggletrue{blx@ox@altbookseries}%
1159       }{%
1160         \togglefalse{blx@ox@altbookseries}%
1161         \ifstrequal{#1}{in}{}{%
1162           \PackageError{biblatex-oxref}
1163           {Invalid option 'bookseries=#1'}
1164           {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.

```
1165     \newcounter{locpubpairs}
1166     \newbibmacro*{edition+publisher+location+date}{%
1167       \printlist{origlocation}%
1168       \iflistundef{origpublisher}%
1169         {\setunit*{\addcomma\space}}%
1170         {\setunit*{\addcolon\space}}%
1171       \printlist{origpublisher}%
1172       \setunit*{\addcomma\space}%
1173       \ifboolexpr{
1174         test {\iflistundef{origlocation}}
1175         and
1176         test {\iflistundef{origpublisher}}
1177         and
1178         test {\iffieldundef{edition}}
1179       }{}{%
1180         \printorigdate}%
1181       \setunit{\addsemicolon\space}%
1182       \printfield{edition}%
1183       \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.

```
1184       \ifboolexpr{%
1185         test {\ifnumcomp{\value{publisher}}{>}{1}}
1186         and
1187         test {\ifnumequal{\value{location}}{\value{publisher}}}
1188       }{%
1189         \setcounter{locpubpairs}{0}%
1190         \savebibmacro{list:andothers}%
1191         \renewbibmacro*{list:andothers}{}%
1192         \whileboolexpr{%
1193           test {\ifnumcomp{\value{locpubpairs}}{<}{\value{publisher}}}
1194         }{%
1195           \stepcounter{locpubpairs}%
1196           \ifnumcomp{\value{locpubpairs}}{>}{1}{%
1197             \ifnumequal{\value{publisher}}{2}{%
```

```
1198            \setunit*{\addspace\bibstring{and}\addspace}%
1199          }{%
1200            \ifnumequal{\value{locpubpairs}}{\value{publisher}}{%
1201              \setunit*{\addcomma\space\bibstring{and}\addspace}%
1202            }{%
1203              \setunit*{\addcomma\space}%
1204            }%
1205          }%
1206        }{}%
1207        \printlist[][\value{locpubpairs}-\value{locpubpairs}]{location}%
1208        \setunit*{\addcolon\space}%
1209        \printlist[][\value{locpubpairs}-\value{locpubpairs}]{publisher}%
1210      }%
1211      \restorebibmacro{list:andothers}%
1212    }{%
1213      \printlist{location}%
1214      \iflistundef{publisher}%
1215      {\setunit*{\addcomma\space}}%
1216      {\setunit*{\addcolon\space}}%
1217      \printlist{publisher}%
1218    }%
1219    \setunit*{\addcomma\space}%
1220    \usebibmacro{date}%
1221  }
```

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

```
1222  \newbibmacro*{series+number+edition+publisher+location+date}{%
1223    \iftoggle{blx@ox@altbookseries}{%
1224      \usebibmacro{series+number}%
1225      \setunit{\addspace}\newblock}{}%
1226    \ifboolexpr{
1227      test {\iffieldundef{series}}
1228      and
1229      test {\iffieldundef{number}}
1230      and
1231      test {\iffieldundef{edition}}
1232      and
1233      test {\iflistundef{publisher}}
1234      and
1235      test {\iflistundef{location}}
1236      and
1237      test {\iffieldundef{year}}
1238      and
1239      test {\iffieldundef{yeardivision}}
1240      and
1241      test {\iffieldundef{month}}
1242    }{}{%
1243      \nopunct
1244      \printtext[publication]{%
1245      \iftoggle{blx@ox@altbookseries}{}{%
1246        \usebibmacro{series+number}%
1247        \setunit{\addsemicolon\addspace}}%
1248      \usebibmacro{edition+publisher+location+date}%
1249      \usebibmacro{copub}}}%
1250    \iffieldequalstr{relatedtype}{copub}{\clearfield{related}}%
1251    \setunit{\addspace}\newblock
1252    \usebibmacro{origpub}%
1253  }
```

The edition information for reference works is recorded earlier in the reference, so we provide a

variant that excludes it from the publication block.

```
1254    \newbibmacro*{series+number+publisher+location+date}{%
1255      \iftoggle{blx@ox@altbookseries}{%
1256        \usebibmacro{series+number}%
1257        \setunit{\addspace}\newblock}{}%
1258      \ifboolexpr{
1259        test {\iffieldundef{series}}
1260        and
1261        test {\iffieldundef{number}}
1262        and
1263        test {\iflistundef{publisher}}
1264        and
1265        test {\iflistundef{location}}
1266        and
1267        test {\iffieldundef{year}}
1268        and
1269        test {\iffieldundef{yeardivision}}
1270        and
1271        test {\iffieldundef{month}}
1272      }{}{%
1273        \nopunct
1274        \printtext[publication]{%
1275          \iftoggle{blx@ox@altbookseries}{}{%
1276            \usebibmacro{series+number}%
1277            \setunit{\addsemicolon\addspace}}%
1278          \usebibmacro{publisher+location+date}%
1279          \usebibmacro{copub}}}%
1280      \iffieldequalstr{relatedtype}{copub}{\clearfield{related}}%
1281      \setunit{\addspace}\newblock
1282      \usebibmacro{origpub}%
1283    }
```

The copub macro prints co-publication details.

```
1284    \newbibmacro*{copub}{%
1285      \ifboolexpr{
1286        togl {bbx:related}
1287        and
1288        test {\iffieldequalstr{relatedtype}{copub}}
1289      }{%
1290        \setunit{\addsemicolon\space}%
1291        \usebibmacro{related:init}%
1292        \usebibmacro{related}%
1293      }{}%
1294    }
```

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

```
1295    \newbibmacro*{origpub}{%
1296      \ifboolexpr{
1297        test {\iflistundef{origlocation}}
1298        and
1299        test {\iflistundef{origpublisher}}
1300        and
1301        test {\iffieldundef{edition}}
1302        and
1303        ( not test {\iffieldundef{origyear}} )
1304      }{%
1305        \printtext[parens]{\bibstring{origpubin}\space\printorigdate}%
1306      }{}%
```

```
1307        }
```

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;

```
1308    \DeclareBibliographyDriver{book}{%
1309      \usebibmacro{bibindex}%
1310      \usebibmacro{begentry}%
1311      \usebibmacro{author/editor+others/translator+others}%
1312      \setunit{\printdelim{nametitledelim}}\newblock
1313      \usebibmacro{title}%
1314      \setunit{\titlebyauthordelim}\newblock
1315      \usebibmacro{byauthor}%
1316      \newunit\newblock
1317      \usebibmacro{byeditor+others}%
1318      \newunit\newblock
1319      \printfield{note}%
1320      \newunit\newblock
1321      \usebibmacro{maintitle+volume}%
1322      \newunit
1323      \usebibmacro{series+number+edition+publisher+location+date}%
1324      \setunit{\addspace}%
1325      \printfield{howpublished}%
1326      \newunit\newblock
1327      \usebibmacro{chapter+pages}%
1328      \newunit
1329      \printfield{pagetotal}%
1330      \newunit\newblock
1331      \iftoggle{bbx:isbn}
1332        {\printfield{isbn}}
1333        {}%
1334      \newunit\newblock
1335      \usebibmacro{doi+eprint+url}%
1336      \newunit\newblock
1337      \usebibmacro{addendum+pubstate}%
1338      \iftoggle{bbx:related}
1339        {\usebibmacro{related:init}%
1340         \usebibmacro{related}}
1341        {}%
1342      \setunit{\bibpagerefpunct}\newblock
1343      \usebibmacro{pageref}%
1344      \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;

```
1345    \DeclareBibliographyDriver{mvbook}{%
1346      \usebibmacro{bibindex}%
1347      \usebibmacro{begentry}%
1348      \usebibmacro{author/editor+others/translator+others}%
1349      \setunit{\printdelim{nametitledelim}}\newblock
1350      \usebibmacro{maintitle+title}%
1351      \newunit
1352      \ifboolexpr{
1353        test {\iffieldequalstr{relatedtype}{multivolume}}
1354        or
1355        ( not test {\iffieldundef{maintitle}} )
1356      }{}{%
1357        \printfield{volume}%
1358        \printfield{part}}%
1359      \setunit{\titlebyauthordelim}\newblock
1360      \usebibmacro{byauthor}%
1361      \newunit\newblock
1362      \usebibmacro{byeditor+others}%
1363      \newunit\newblock
1364      \printfield{volumes}%
1365      \newunit\newblock
1366      \printfield{note}%
1367      \newunit\newblock
1368      \ifboolexpr{
1369        test {\iffieldequalstr{relatedtype}{multivolume}}
1370        and
1371        test {\iffieldundef{maintitle}}
1372      }{%
1373        \printfield{volume}%
1374        \printfield{part}%
1375      }{}%
1376      \newunit\newblock
1377      \usebibmacro{series+number+edition+publisher+location+date}%
1378      \newunit\newblock
1379      \usebibmacro{chapter+pages}%
1380      \newunit
1381      \printfield{pagetotal}%
1382      \newunit\newblock
1383      \iftoggle{bbx:isbn}
1384        {\printfield{isbn}}
1385        {}%
1386      \newunit\newblock
1387      \usebibmacro{doi+eprint+url}%
1388      \newunit\newblock
1389      \usebibmacro{addendum+pubstate}%
1390      \iftoggle{bbx:related}
1391        {\usebibmacro{related:init}%
1392         \usebibmacro{related}}
1393        {}%
1394      \setunit{\bibpagerefpunct}\newblock
1395      \usebibmacro{pageref}%
1396      \usebibmacro{finentry}}
```

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

```
1397    \DeclareBibliographyDriver{inbook}{%
1398      \usebibmacro{bibindex}%
1399      \usebibmacro{begentry}%
1400      \usebibmacro{author/translator+others}%
1401      \setunit{\printdelim{nametitledelim}}\newblock
```

```
1402    \usebibmacro{title}%
1403    \setunit{\titlebyauthordelim}\newblock
1404    \usebibmacro{byauthor}%
1405    \newunit\newblock
1406    \usebibmacro{in:}%
1407    \usebibmacro{bybookauthor}%
1408    \newunit\newblock
1409    \usebibmacro{maintitle+booktitle}%
1410    \newunit
1411    \iffieldundef{maintitle}
1412      {\printfield{volume}%
1413       \printfield{part}}
1414      {}%
1415    \newunit\newblock
1416    \usebibmacro{byeditor+others}%
1417    \newunit\newblock
1418    \printfield{volumes}%
1419    \newunit\newblock
1420    \printfield{note}%
1421    \newunit\newblock
1422    \usebibmacro{series+number+edition+publisher+location+date}%
1423    \newunit\newblock
1424    \usebibmacro{chapter+pages}%
1425    \newunit\newblock
1426    \iftoggle{bbx:isbn}
1427      {\printfield{isbn}}
1428      {}%
1429    \newunit\newblock
1430    \usebibmacro{doi+eprint+url}%
1431    \newunit\newblock
1432    \usebibmacro{addendum+pubstate}%
1433    \iftoggle{bbx:related}
1434      {\usebibmacro{related:init}%
1435       \usebibmacro{related}}
1436      {}%
1437    \setunit{\bibpagerefpunct}\newblock
1438    \usebibmacro{pageref}%
1439    \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.

```
1440    \DeclareFieldFormat[suppbook]{title}{%
1441      \def\currentfield{title}%
1442      \iffieldannotation{descriptor}{#1}{\mkbibemph{#1}}%
1443      \undef\currentfield}
1444    \DeclareBibliographyDriver{suppbook}{%
1445      \usebibmacro{bibindex}%
1446      \usebibmacro{begentry}%
1447      \usebibmacro{author/translator+others}%
1448      \setunit{\printdelim{nametitledelim}}\newblock
1449      \usebibmacro{title}%
1450      \setunit{\titlebyauthordelim}\newblock
1451      \usebibmacro{byauthor}%
1452      \newunit\newblock
1453      \printfield{note}%
1454      \setunit{\addspace}\newblock
1455      \usebibmacro{in:}%
1456      \usebibmacro{bybookauthor}%
1457      \newunit\newblock
1458      \usebibmacro{maintitle+booktitle}%
```

```
1459      \newunit
1460      \iffieldundef{maintitle}
1461        {\printfield{volume}%
1462         \printfield{part}}
1463        {}%
1464      \newunit\newblock
1465      \usebibmacro{byeditor+others}%
1466      \newunit\newblock
1467      \printfield{volumes}%
1468      \newunit\newblock
1469      \usebibmacro{series+number+edition+publisher+location+date}%
1470      \newunit\newblock
1471      \usebibmacro{chapter+pages}%
1472      \newunit\newblock
1473      \iftoggle{bbx:isbn}
1474        {\printfield{isbn}}
1475        {}%
1476      \newunit\newblock
1477      \usebibmacro{doi+eprint+url}%
1478      \newunit\newblock
1479      \usebibmacro{addendum+pubstate}%
1480      \iftoggle{bbx:related}
1481        {\usebibmacro{related:init}%
1482         \usebibmacro{related}}
1483        {}%
1484      \setunit{\bibpagerefpunct}\newblock
1485      \usebibmacro{pageref}%
1486      \usebibmacro{finentry}}
```

We also provide a bookinbook driver that handles origdate differently.

```
1487      \DeclareBibliographyDriver{bookinbook}{%
1488      \usebibmacro{bibindex}%
1489      \usebibmacro{begentry}%
1490      \usebibmacro{author/translator+others}%
1491      \setunit{\printdelim{nametitledelim}}\newblock
1492      \usebibmacro{title}%
1493      \setunit{\titlebyauthordelim}\newblock
1494      \usebibmacro{byauthor}%
1495      \newunit\newblock
1496      \usebibmacro{in:}%
1497      \usebibmacro{bybookauthor}%
1498      \newunit\newblock
1499      \usebibmacro{maintitle+booktitle}%
1500      \newunit
1501      \iffieldundef{maintitle}
1502        {\printfield{volume}%
1503         \printfield{part}}
1504        {}%
1505      \newunit\newblock
1506      \usebibmacro{byeditor+others}%
1507      \newunit\newblock
1508      \printfield{volumes}%
1509      \newunit\newblock
1510      \printfield{note}%
1511      \newunit\newblock
1512      \usebibmacro{series+number+edition+publisher+location+date}%
1513      \newunit\newblock
1514      \usebibmacro{chapter+pages}%
1515      \newunit\newblock
1516      \iftoggle{bbx:isbn}
```

```
1517        {\printfield{isbn}}
1518        {}%
1519      \newunit\newblock
1520      \usebibmacro{doi+eprint+url}%
1521      \newunit\newblock
1522      \usebibmacro{addendum+pubstate}%
1523      \iftoggle{bbx:related}
1524        {\usebibmacro{related:init}%
1525         \usebibmacro{related}}
1526        {}%
1527      \setunit{\bibpagerefpunct}\newblock
1528      \usebibmacro{pageref}%
1529      \usebibmacro{finentry}}
```

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

```
1530    \DeclareBibliographyDriver{collection}{%
1531      \usebibmacro{bibindex}%
1532      \usebibmacro{begentry}%
1533      \usebibmacro{editor+others}%
1534      \setunit{\printdelim{nametitledelim}}\newblock
1535      \usebibmacro{title}%
1536      \newunit\newblock
1537      \usebibmacro{byeditor+others}%
1538      \newunit\newblock
1539      \printfield{note}%
1540      \newunit\newblock
1541      \usebibmacro{maintitle+volume}%
1542      \newunit
1543      \usebibmacro{series+number+edition+publisher+location+date}%
1544      \newunit\newblock
1545      \usebibmacro{chapter+pages}%
1546      \newunit
1547      \printfield{pagetotal}%
1548      \newunit\newblock
1549      \iftoggle{bbx:isbn}
1550        {\printfield{isbn}}
1551        {}%
1552      \newunit\newblock
1553      \usebibmacro{doi+eprint+url}%
1554      \newunit\newblock
1555      \usebibmacro{addendum+pubstate}%
1556      \iftoggle{bbx:related}
1557        {\usebibmacro{related:init}%
1558         \usebibmacro{related}}
1559        {}%
1560      \setunit{\bibpagerefpunct}\newblock
1561      \usebibmacro{pageref}%
1562      \usebibmacro{finentry}}
```

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

```
1563    \DeclareBibliographyDriver{mvcollection}{%
1564      \usebibmacro{bibindex}%
1565      \usebibmacro{begentry}%
1566      \usebibmacro{editor+others}%
1567      \setunit{\printdelim{nametitledelim}}\newblock
1568      \usebibmacro{maintitle+title}%
1569      \newunit
1570      \ifboolexpr{
```

```
1571          test {\iffieldequalstr{relatedtype}{multivolume}}
1572          or
1573          ( not test {\iffieldundef{maintitle}} )
1574        }{}{%
1575          \printfield{volume}%
1576          \printfield{part}}%
1577        \newunit\newblock
1578        \usebibmacro{byeditor+others}%
1579        \newunit\newblock
1580        \printfield{volumes}%
1581        \newunit\newblock
1582        \printfield{note}%
1583        \newunit\newblock
1584        \ifboolexpr{
1585          test {\iffieldequalstr{relatedtype}{multivolume}}
1586          and
1587          test {\iffieldundef{maintitle}}
1588        }{%
1589          \printfield{volume}%
1590          \printfield{part}%
1591        }{}%
1592        \newunit\newblock
1593        \usebibmacro{series+number+edition+publisher+location+date}%
1594        \newunit\newblock
1595        \usebibmacro{chapter+pages}%
1596        \newunit
1597        \printfield{pagetotal}%
1598        \newunit\newblock
1599        \iftoggle{bbx:isbn}
1600          {\printfield{isbn}}
1601          {}%
1602        \newunit\newblock
1603        \usebibmacro{doi+eprint+url}%
1604        \newunit\newblock
1605        \usebibmacro{addendum+pubstate}%
1606        \iftoggle{bbx:related}
1607          {\usebibmacro{related:init}%
1608           \usebibmacro{related}}
1609          {}%
1610        \setunit{\bibpagerefpunct}\newblock
1611        \usebibmacro{pageref}%
1612        \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.

```
1613      \DeclareBibliographyDriver{incollection}{%
1614        \usebibmacro{bibindex}%
1615        \usebibmacro{begentry}%
1616        \usebibmacro{author/translator+others}%
1617        \setunit{\printdelim{nametitledelim}}\newblock
1618        \usebibmacro{title}%
1619        \setunit{\titlebyauthordelim}\newblock
1620        \usebibmacro{byauthor}%
1621        \newunit\newblock
1622        \usebibmacro{in:}%
1623        \usebibmacro{bookeditor}%
1624        \newunit\newblock
1625        \usebibmacro{maintitle+booktitle}%
1626        \newunit
```

```
1627    \iffieldundef{maintitle}
1628      {\printfield{volume}%
1629        \printfield{part}}
1630      {}%
1631    \newunit\newblock
1632    \printfield{volumes}%
1633    \newunit\newblock
1634    \printfield{note}%
1635    \newunit\newblock%
1636    \usebibmacro{series+number+edition+publisher+location+date}%
1637    \newunit\newblock
1638    \usebibmacro{chapter+pages}%
1639    \newunit\newblock
1640    \iftoggle{bbx:isbn}
1641      {\printfield{isbn}}
1642      {}%
1643    \newunit\newblock
1644    \usebibmacro{doi+eprint+url}%
1645    \newunit\newblock
1646    \usebibmacro{addendum+pubstate}%
1647    \iftoggle{bbx:related}
1648      {\usebibmacro{related:init}%
1649        \usebibmacro{related}}
1650      {}%
1651    \setunit{\bibpagerefpunct}\newblock
1652    \usebibmacro{pageref}%
1653    \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.

```
1654    \DeclareFieldFormat[suppcollection]{title}{%
1655      \def\currentfield{title}%
1656      \iffieldannotation{descriptor}{#1}{\mkbibemph{#1}}%
1657      \undef\currentfield}
1658    \DeclareBibliographyDriver{suppcollection}{%
1659      \usebibmacro{bibindex}%
1660      \usebibmacro{begentry}%
1661      \usebibmacro{author/translator+others}%
1662      \setunit{\printdelim{nametitledelim}}\newblock
1663      \usebibmacro{title}%
1664      \setunit{\titlebyauthordelim}\newblock
1665      \usebibmacro{byauthor}%
1666      \newunit\newblock
1667      \printfield{note}%
1668      \setunit{\addspace}\newblock
1669      \usebibmacro{in:}%
1670      \usebibmacro{bookeditor}%
1671      \newunit\newblock
1672      \usebibmacro{maintitle+booktitle}%
1673      \newunit
1674      \iffieldundef{maintitle}
1675        {\printfield{volume}%
1676          \printfield{part}}
1677        {}%
1678      \newunit\newblock
1679      \printfield{volumes}%
1680      \newunit\newblock%
1681      \usebibmacro{series+number+edition+publisher+location+date}%
1682      \newunit\newblock
1683      \usebibmacro{chapter+pages}%
```

```
1684        \newunit\newblock
1685        \iftoggle{bbx:isbn}
1686          {\printfield{isbn}}
1687          {}%
1688        \newunit\newblock
1689        \usebibmacro{doi+eprint+url}%
1690        \newunit\newblock
1691        \usebibmacro{addendum+pubstate}%
1692        \iftoggle{bbx:related}
1693          {\usebibmacro{related:init}%
1694           \usebibmacro{related}}
1695          {}%
1696        \setunit{\bibpagerefpunct}\newblock
1697        \usebibmacro{pageref}%
1698        \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.

```
1699    \DeclareBibliographyDriver{reference}{%
1700      \usebibmacro{bibindex}%
1701      \usebibmacro{begentry}%
1702      \usebibmacro{author/editor+others/translator+others}%
1703      \setunit{\printdelim{nametitledelim}}\newblock
1704      \usebibmacro{title}%
1705      \newunit\newblock
1706      \printfield{edition}%
1707      \setunit{\titlebyauthordelim}\newblock
1708      \usebibmacro{byauthor}%
1709      \newunit\newblock
1710      \usebibmacro{byeditor+others}%
1711      \newunit\newblock
1712      \printfield{note}%
1713      \newunit\newblock
1714      \usebibmacro{maintitle+volume}%
1715      \newunit
1716      \usebibmacro{series+number+publisher+location+date}%
1717      \newunit\newblock
1718      \usebibmacro{chapter+pages}%
1719      \newunit
1720      \printfield{pagetotal}%
1721      \newunit\newblock
1722      \iftoggle{bbx:isbn}
1723        {\printfield{isbn}}
1724        {}%
1725      \newunit\newblock
1726      \usebibmacro{doi+eprint+url}%
1727      \newunit\newblock
1728      \usebibmacro{addendum+pubstate}%
1729      \iftoggle{bbx:related}
1730        {\usebibmacro{related:init}%
1731         \usebibmacro{related}}
1732        {}%
1733      \setunit{\bibpagerefpunct}\newblock
1734      \usebibmacro{pageref}%
1735      \usebibmacro{finentry}}
```

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

```
1736  \DeclareBibliographyDriver{mvreference}{%
1737    \usebibmacro{bibindex}%
1738    \usebibmacro{begentry}%
1739    \usebibmacro{author/editor+others/translator+others}%
1740    \setunit{\printdelim{nametitledelim}}\newblock
1741    \usebibmacro{maintitle+title}%
1742    \newunit
1743    \ifboolexpr{
1744      test {\iffieldequalstr{relatedtype}{multivolume}}
1745      or
1746      ( not test {\iffieldundef{maintitle}} )
1747    }{}{%
1748      \printfield{volume}%
1749      \printfield{part}}%
1750    \newunit\newblock
1751    \printfield{edition}%
1752    \setunit{\titlebyauthordelim}\newblock
1753    \usebibmacro{byauthor}%
1754    \newunit\newblock
1755    \usebibmacro{byeditor+others}%
1756    \newunit\newblock
1757    \printfield{volumes}%
1758    \newunit\newblock
1759    \printfield{note}%
1760    \newunit\newblock
1761    \ifboolexpr{
1762      test {\iffieldequalstr{relatedtype}{multivolume}}
1763      and
1764      test {\iffieldundef{maintitle}}
1765    }{%
1766      \printfield{volume}%
1767      \printfield{part}%
1768    }{}%
1769    \newunit\newblock
1770    \usebibmacro{series+number+publisher+location+date}%
1771    \newunit\newblock
1772    \usebibmacro{chapter+pages}%
1773    \newunit
1774    \printfield{pagetotal}%
1775    \newunit\newblock
1776    \iftoggle{bbx:isbn}
1777      {\printfield{isbn}}
1778      {}%
1779    \newunit\newblock
1780    \usebibmacro{doi+eprint+url}%
1781    \newunit\newblock
1782    \usebibmacro{addendum+pubstate}%
1783    \iftoggle{bbx:related}
1784      {\usebibmacro{related:init}%
1785       \usebibmacro{related}}
1786      {}%
1787    \setunit{\bibpagerefpunct}\newblock
1788    \usebibmacro{pageref}%
1789    \usebibmacro{finentry}}
```

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

```
1790  \DeclareBibliographyDriver{inreference}{%
1791    \usebibmacro{bibindex}%
1792    \usebibmacro{begentry}%
```

```
1793        \usebibmacro{author/translator+others}%
1794        \setunit{\printdelim{nametitledelim}}\newblock
1795        \usebibmacro{title}%
1796        \setunit{\titlebyauthordelim}\newblock
1797        \usebibmacro{byauthor}%
1798        \newunit\newblock
1799        \iffieldundef{editor}{}{%
1800          \usebibmacro{in:}%
1801          \usebibmacro{bookeditor}%
1802          \newunit\newblock}%
1803        \usebibmacro{maintitle+booktitle}%
1804        \newunit
1805        \iffieldundef{maintitle}
1806          {\printfield{volume}%
1807           \printfield{part}}
1808          {}%
1809        \newunit\newblock
1810        \printfield{edition}%
1811        \newunit
1812        \usebibmacro{byeditor+others}%
1813        \newunit\newblock
1814        \printfield{volumes}%
1815        \newunit\newblock
1816        \printfield{note}%
1817        \newunit\newblock%
1818        \usebibmacro{series+number+publisher+location+date}%
1819        \newunit\newblock
1820        \usebibmacro{chapter+pages}%
1821        \newunit
1822        \printfield{pagetotal}%
1823        \newunit\newblock
1824        \iftoggle{bbx:isbn}
1825          {\printfield{isbn}}
1826          {}%
1827        \newunit\newblock
1828        \usebibmacro{doi+eprint+url}%
1829        \newunit\newblock
1830        \usebibmacro{addendum+pubstate}%
1831        \iftoggle{bbx:related}
1832          {\usebibmacro{related:init}%
1833           \usebibmacro{related}}
1834          {}%
1835        \setunit{\bibpagerefpunct}\newblock
1836        \usebibmacro{pageref}%
1837        \usebibmacro{finentry}}
```

2.1.11 Works presented at meetings

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

```
1838        \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.

```
1839        \renewbibmacro*{event+venue+date}{%
1840          \printfield{eventtitle}%
1841          \newunit
1842          \printfield{eventtitleaddon}%
1843          \newunit
```

```
1844        \printfield{venue}%
1845        \newunit%
1846        \printeventdate%
1847        \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!

```
1848    \DeclareBibliographyDriver{proceedings}{%
1849      \usebibmacro{bibindex}%
1850      \usebibmacro{begentry}%
1851      \usebibmacro{author}%
1852      \newunit
1853      \usebibmacro{maintitle+title}%
1854      \newunit
1855      \iffieldundef{maintitle}
1856        {\printfield{volume}%
1857         \printfield{part}}
1858        {}%
1859      \newunit\newblock
1860      \usebibmacro{event+venue+date}%
1861      \newunit\newblock
1862      \usebibmacro{byeditor+others}%
1863      \newunit\newblock
1864      \printfield{volumes}%
1865      \newunit\newblock
1866      \printfield{note}%
1867      \newunit\newblock
1868      \printlist{organization}%
1869      \newunit
1870      \usebibmacro{series+number+edition+publisher+location+date}%
1871      \newunit\newblock
1872      \usebibmacro{chapter+pages}%
1873      \newunit
1874      \printfield{pagetotal}%
1875      \newunit\newblock
1876      \iftoggle{bbx:isbn}
1877        {\printfield{isbn}}
1878        {}%
1879      \newunit\newblock
1880      \usebibmacro{doi+eprint+url}%
1881      \newunit\newblock
1882      \usebibmacro{addendum+pubstate}%
1883      \iftoggle{bbx:related}
1884        {\usebibmacro{related:init}%
1885         \usebibmacro{related}}
1886        {}%
1887      \setunit{\bibpagerefpunct}\newblock
1888      \usebibmacro{pageref}%
1889      \usebibmacro{finentry}}
```

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

```
1890    \DeclareBibliographyDriver{inproceedings}{%
1891      \usebibmacro{bibindex}%
1892      \usebibmacro{begentry}%
1893      \usebibmacro{author/translator+others}%
1894      \setunit{\printdelim{nametitledelim}}\newblock
1895      \usebibmacro{title}%
1896      \setunit{\titlebyauthordelim}\newblock
1897      \usebibmacro{byauthor}%
1898      \newunit\newblock
1899      \usebibmacro{in:}%
1900      \usebibmacro{maintitle+booktitle}%
1901      \newunit
1902      \iffieldundef{maintitle}
1903        {\printfield{volume}%
1904         \printfield{part}}
1905        {}%
1906      \newunit\newblock
1907      \usebibmacro{event+venue+date}%
1908      \newunit\newblock
1909      \usebibmacro{byeditor+others}%
1910      \newunit\newblock
1911      \printfield{volumes}%
1912      \newunit\newblock
1913      \printfield{note}%
1914      \newunit\newblock
1915      \printlist{organization}%
1916      \newunit
1917      \usebibmacro{series+number+publisher+location+date}%
1918      \newunit\newblock
1919      \usebibmacro{chapter+pages}%
1920      \newunit\newblock
1921      \iftoggle{bbx:isbn}
1922        {\printfield{isbn}}
1923        {}%
1924      \newunit\newblock
1925      \usebibmacro{doi+eprint+url}%
1926      \newunit\newblock
1927      \usebibmacro{addendum+pubstate}%
1928      \iftoggle{bbx:related}
1929        {\usebibmacro{related:init}%
1930         \usebibmacro{related}}
1931        {}%
1932      \setunit{\bibpagerefpunct}\newblock
1933      \usebibmacro{pageref}%
1934      \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.

```
1935    \newbibmacro*{series+type+number}{%
1936      \ifboolexpr{
1937        test {\iffieldundef{series}}
1938        and
1939        test {\iffieldundef{type}}
1940      }{}{%
1941        \printfield{series}%
```

```
1942          \newunit
1943          \ifboolexpr{%
1944              test {\iffieldundef{type}}
1945              and
1946              not test {\iffieldundef{number}}
1947          }{%
1948            \bibcpstring{number}
1949          }{%
1950            \printfield{type}%
1951          }%
1952          \setunit*{\addspace}%
1953          \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.

```
1954    \renewbibmacro*{institution+location+date}{%
1955      \ifboolexpr{
1956        ( test {\iffieldundef{number}}
1957          or
1958          not test {\iffieldundef{type}}
1959          or
1960          not test {\iffieldundef{series}}
1961        )
1962        and
1963        test {\iflistundef{institution}}
1964        and
1965        test {\iflistundef{location}}
1966        and
1967        test {\iffieldundef{year}}
1968        and
1969        test {\iffieldundef{yeardivision}}
1970        and
1971        test {\iffieldundef{month}}
1972      }{}{%
1973        \nopunct
1974        \printtext[publication]{%
1975          \ifboolexpr{
1976            test {\iffieldundef{series}}
1977            and
1978            test {\iffieldundef{type}}
1979          }{%
1980            \printfield{number}%
1981            \setunit*{\addcomma\space}%
1982          }{}%
1983          \printlist{location}%
1984          \iflistundef{institution}%
1985          {\setunit*{\addcomma\space}}%
1986          {\setunit*{\addcolon\space}}%
1987          \printlist{institution}%
1988          \setunit*{\addcomma\space}%
1989          \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.

```
1990    \newtoggle{blx@ox@altthesis}
1991    \newtoggle{blx@ox@plainthesis}
1992    \DeclareFieldAlias{thesis:publication}{publication}
1993    \DeclareFieldFormat{plain}{#1}
1994    \DeclareBibliographyOption{altthesis}[true]{%
1995      \settoggle{blx@ox@altthesis}{#1}
1996    }
1997    \DeclareBibliographyOption[string]{thesis}[out]{%
1998      \ifstrequal{#1}{plain}{%
1999        \toggletrue{blx@ox@altthesis}%
2000        \toggletrue{blx@ox@plainthesis}%
2001        \DeclareFieldAlias{thesis:publication}{plain}%
2002      }{%
2003        \togglefalse{blx@ox@plainthesis}%
2004        \DeclareFieldAlias{thesis:publication}{publication}%
2005        \ifstrequal{#1}{in}{%
2006          \toggletrue{blx@ox@altthesis}%
2007        }{%
2008          \togglefalse{blx@ox@altthesis}%
2009          \ifstrequal{#1}{out}{}{%
2010            \PackageError{biblatex-oxref}
2011            {Invalid option 'bookseries=#1'}
2012            {Valid values are 'in','out',and 'plain'.}}}}}}
2013  \newbibmacro*{type+institution+location+date}{%
2014    \iftoggle{blx@ox@altthesis}{%
2015      \ifboolexpr{
2016        test {\iffieldundef{type}}
2017        and
2018        test {\iflistundef{institution}}
2019        and
2020        test {\iflistundef{location}}
2021        and
2022        test {\iffieldundef{year}}
2023        and
2024        test {\iffieldundef{yeardivision}}
2025        and
2026        test {\iffieldundef{month}}
2027      }{}{%
2028        \iftoggle{blx@ox@plainthesis}{}{\nopunct}%
2029        \printtext[thesis:publication]{%
2030          \printfield{type}%
2031          \setunit*{\addcomma\space}%
2032          \printlist{location}%
2033          \iflistundef{institution}{%
2034            \setunit*{\addcomma\space}%
2035          }{%
2036            \setunit*{\addcolon\space}}%
2037          \printlist{institution}%
2038          \setunit*{\addcomma\space}%
2039          \usebibmacro{date}}}
2040    }{%
2041      \printfield{type}%
2042      \newunit
2043      \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.

```
2044   \newbibmacro*{type+series+number+edition+organization+publisher+location+date}{%
2045     \ifboolexpr{
2046       test {\iffieldundef{type}}
2047       and
2048       test {\iffieldundef{series}}
2049       and
2050       test {\iffieldundef{number}}
2051       and
2052       test {\iffieldundef{edition}}
2053       and
2054       test {\iflistundef{organization}}
2055       and
2056       test {\iflistundef{publisher}}
2057       and
2058       test {\iflistundef{location}}
2059       and
2060       test {\iffieldundef{year}}
2061       and
2062       test {\iffieldundef{yeardivision}}
2063       and
2064       test {\iffieldundef{month}}
2065     }{}{%
2066       \nopunct
2067       \printtext[publication]{%
2068         \usebibmacro{series+type+number}%
2069         \setunit{\addsemicolon\space}%
2070         \printfield{edition}%
2071         \setunit*{\addcomma\space}%
2072         \iflistundef{publisher}{}{%
2073           \printlist{organization}%
2074           \setunit*{\addcomma\space}}%
2075         \printlist{location}%
2076         \iflistundef{publisher}{%
2077           \iflistundef{organization}{%
2078             \setunit*{\addcomma\space}%
2079           }{%
2080             \setunit*{\addcolon\space}%
2081             \printlist{organization}}%
2082         }{%
2083           \setunit*{\addcolon\space}%
2084           \printlist{publisher}}%
2085         \setunit*{\addcomma\space}%
2086         \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.

```
2087   \newcommand*{\legreport}{legal}
2088   \DeclareBibliographyDriver{report}{%
2089     \usebibmacro{bibindex}%
2090     \usebibmacro{begentry}%
2091     \usebibmacro{author}%
2092     \setunit{\printdelim{nametitledelim}}\newblock
2093     \usebibmacro{maintitle+title}%
2094     \newunit
2095     \iffieldundef{maintitle}
2096       {\printfield{volume}%
```

```
2097        \printfield{part}}
2098        {}%
2099      \setunit{\titlebyauthordelim}\newblock
2100      \usebibmacro{byauthor}%
2101      \newunit\newblock
2102      \printfield{version}%
2103      \newunit\newblock
2104      \printfield{note}%
2105      \newunit\newblock
2106      \usebibmacro{series+type+number}%
2107      \setunit{\addspace}%
2108      \usebibmacro{institution+location+date}%
2109      \iffieldequals{entrysubtype}{\legreport}{%
2110        \setunit{\addspace}\nopunct
2111        \let\origadddot\adddot
2112        \def\adddot{}%
2113        \usebibmacro{chapter+pages}%
2114        \let\adddot\origadddot
2115      }{%
2116        \newunit\newblock
2117        \usebibmacro{chapter+pages}%
2118      }%
2119      \newunit
2120      \printfield{pagetotal}%
2121      \newunit\newblock
2122      \iftoggle{bbx:isbn}
2123        {\printfield{isrn}}
2124        {}%
2125      \newunit\newblock
2126      \usebibmacro{doi+eprint+url}%
2127      \newunit\newblock
2128      \usebibmacro{addendum+pubstate}%
2129      \iftoggle{bbx:related}
2130        {\usebibmacro{related:init}%
2131         \usebibmacro{related}}
2132        {}%
2133      \setunit{\bibpagerefpunct}\newblock
2134      \usebibmacro{pageref}%
2135      \usebibmacro{finentry}}
```

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

```
2136    \xpatchbibdriver{thesis}{%
2137      \printfield{type}%
2138      \newunit
2139      \usebibmacro{institution+location+date}%
2140    }{%
2141      \usebibmacro{type+institution+location+date}%
2142    }{}{\wlog{WARNING: biblatex-oxref failed to patch thesis}}
```

We give booklet entries descriptor support.

```
2143    \DeclareFieldFormat[booklet]{title}{%
2144      \def\currentfield{title}%
2145      \iffieldannotation{descriptor}{#1}{%
2146        \mkbibquote{#1\isdot}}%
2147      \undef\currentfield}
```

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

```
2148    \DeclareFieldFormat[patent]{title}{\mkbibemph{#1}}
2149    \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.

```
2150    \DeclareNameAlias{byholder}{default}
2151    \renewbibmacro*{byholder}{%
2152      \ifnameundef{holder}{}{%
2153        \bibstring{byholder}%
2154        \setunit{\addspace}%
2155        \printnames[byholder]{holder}}}
2156    \newbibmacro*{location+dates}{%
2157      \ifboolexpr{
2158        test {\iffieldundef{location}}
2159        and
2160        test {\iffieldundef{origyear}}
2161        and
2162        test {\iffieldundef{origmonth}}
2163        and
2164        test {\iffieldundef{year}}
2165        and
2166        test {\iffieldundef{month}}
2167      }{}{%
2168        \nopunct
2169        \printtext[publication]{%
2170          \printlist[][-\value{listtotal}]{location}%
2171          \setunit*{\addcomma\space}%
2172          \ifboolexpr{
2173            test {\iffieldundef{origyear}}
2174            and
2175            test {\iffieldundef{origmonth}}
2176          }{}{%
2177            \iffieldundef{origdatetype}{%
2178              \bibstring{filed}
2179            }{
2180              \printfield{origdatetype}}%
2181            \setunit*{\addspace}}%
2182          \usebibmacro{origdate+time}%
2183          \setunit*{\addcomma\space}%
2184          \ifboolexpr{
2185            test {\iffieldundef{year}}
2186            and
2187            test {\iffieldundef{month}}
2188          }{}{%
2189            \iffieldundef{datetype}{%
2190              \bibstring{issued}%
2191            }{
2192              \printfield{datetype}}%
2193            \setunit*{\addspace}}%
2194          \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.

```
2195    \DeclareBibliographyDriver{patent}{%
2196      \usebibmacro{bibindex}%
2197      \usebibmacro{begentry}%
2198      \usebibmacro{author}%
2199      \setunit{\printdelim{nametitledelim}}\newblock
```

```
2200        \usebibmacro{title}%
2201        \newunit
2202        \printlist{language}%
2203        \setunit{\titlebyauthordelim}\newblock
2204        \usebibmacro{byauthor}%
2205        \newunit\newblock
2206        \printfield{note}%
2207        \newunit\newblock
2208        \printfield{type}%
2209        \setunit*{\addspace}%
2210        \printfield{number}%
2211        \newunit\newblock
2212        \usebibmacro{byholder}%
2213        \newunit\newblock
2214        \usebibmacro{location+dates}%
2215        \newunit\newblock
2216        \usebibmacro{doi+eprint+url}%
2217        \newunit\newblock
2218        \usebibmacro{addendum+pubstate}%
2219        \iftoggle{bbx:related}
2220          {\usebibmacro{related:init}%
2221           \usebibmacro{related}}
2222          {}%
2223        \setunit{\bibpagerefpunct}\newblock
2224        \usebibmacro{pageref}%
2225        \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.

```
2226        \DeclareBibliographyDriver{manual}{%
2227          \usebibmacro{bibindex}%
2228          \usebibmacro{begentry}%
2229          \ifboolexpr{
2230            test {\ifentrytype{standard}}
2231            and
2232            ( test {\ifnameundef{author}}
2233              or
2234              not test \ifuseauthor )
2235            and
2236            not test {\iffieldundef{number}}
2237          }{%
2238            \printfield{number}\clearfield{number}%
2239            \newunit\newblock
2240          }{}%
2241          \usebibmacro{author/editor}%
2242          \setunit{\printdelim{nametitledelim}}\newblock
2243          \ifentrytype{software}
2244            {\usebibmacro{title+version}}
2245            {\usebibmacro{title}}%
2246          \setunit{\titlebyauthordelim}\newblock
2247          \usebibmacro{byauthor}%
2248          \newunit\newblock
2249          \usebibmacro{byeditor}%
2250          \newunit
2251          \ifentrytype{software}
2252            {}
2253            {\newunit\printfield{version}}%
```

```
2254        \newunit
2255        \printfield{note}%
2256        \newunit\newblock
2257        \usebibmacro{type+series+number+edition+organization+publisher+location+date}%
2258        \newunit\newblock
2259        \usebibmacro{chapter+pages}%
2260        \newunit
2261        \printfield{pagetotal}%
2262        \newunit\newblock
2263        \iftoggle{bbx:isbn}
2264          {\printfield{isbn}}
2265          {}%
2266        \newunit\newblock
2267        \usebibmacro{doi+eprint+url}%
2268        \newunit\newblock
2269        \usebibmacro{addendum+pubstate}%
2270        \iftoggle{bbx:related}
2271          {\usebibmacro{related:init}%
2272           \usebibmacro{related}}
2273          {}%
2274        \setunit{\bibpagerefpunct}\newblock
2275        \usebibmacro{pageref}%
2276        \usebibmacro{finentry}}
2277      \DeclareBibliographyAlias{standard}{manual}
2278      \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.

```
2279      \newbibmacro*{publisher+type+series+number+date}{%
2280        \iffieldundef{number}{}{%
2281          \setunit{\addcomma\space}%
2282          \usebibmacro{origdate+time}%
2283        }%
2284        \ifboolexpr{%
2285          test {\iflistundef{origpublisher}}
2286          and
2287          test {\iflistundef{location}}
2288          and
2289          test {\iflistundef{publisher}}
2290          and
2291          test {\iffieldundef{type}}
2292          and
2293          test {\iffieldundef{series}}
2294          and
2295          test {\iffieldundef{number}}
2296          and
2297          test {\iffieldundef{year}}
2298          and
2299          test {\iffieldundef{yeardivision}}
2300          and
2301          test {\iffieldundef{month}}
2302          and
2303          test {\iffieldundef{origyear}}
2304          and
2305          test {\iffieldundef{origyeardivision}}
```

```
2306          and
2307          test {\iffieldundef{origmonth}}
2308          and
2309          test {\iffieldundef{hour}}
2310        }{}{%
2311          \nopunct
2312          \printtext[publication]{%
2313            \printlist{origpublisher}%
2314            \setunit*{\addsemicolon\space}%
2315            \printlist{location}%
2316            \iflistundef{publisher}%
2317              {\setunit*{\addcomma\space}}%
2318              {\setunit*{\addcolon\space}}%
2319            \printlist{publisher}%
2320            \iffieldundef{series}%
2321              {\setunit*{\addspace}}%
2322              {\setunit*{\recordseriespunct}}%
2323            \printfield{series}%
2324            \setunit*{\addcomma\space}%
2325            \printfield{type}%
2326            \iflistundef{publisher}%
2327              {\setunit*{\addcomma\space}}%
2328              {\setunit*{\addspace}}%
2329            \printfield{number}%
2330            \iffieldundef{number}{%
2331              \setunit{\addcomma\space}%
2332              \usebibmacro{origdate+time}%
2333            }{}%
2334            \setunit{\addcomma\space}%
2335            \usebibmacro{date+time}}}}
```

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

```
2336        \newtoggle{blx@ox@endeditor}
2337        \DeclareEntryOption{endeditor}[true]{%
2338          \settoggle{blx@ox@endeditor}{#1}}
2339        \newbibmacro*{pre-byeditor+others}{%
2340          \iftoggle{blx@ox@endeditor}{}{%
2341            \usebibmacro{byeditor+others}%
2342          }}
2343        \newbibmacro*{post-byeditor+others}{%
2344          \iftoggle{blx@ox@endeditor}{%
2345            \usebibmacro{byeditor+others}%
2346          }{}}
```

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

```
2347        \DeclareBibliographyDriver{audio}{%
2348          \usebibmacro{bibindex}%
2349          \usebibmacro{begentry}%
2350          \usebibmacro{author}%
2351          \setunit{\printdelim{nametitledelim}}\newblock
2352          \usebibmacro{title}%
2353          \newunit
2354          \usebibmacro{maintitle}%
2355          \iffieldequalstr{relatedtype}{includes}{%
2356            \iftoggle{bbx:related}{%
2357              \newunit\newblock
```

```
2358        \usebibmacro{related:init}%
2359        \usebibmacro{related}%
2360        \clearfield{related}%
2361      }{}%
2362    }{}%
2363    \setunit{\addspace}
2364    \usebibmacro{onlinetype}%
2365    \setunit{\titlebyauthordelim}\newblock
2366    \usebibmacro{byauthor}%
2367    \newunit\newblock
2368    \usebibmacro{pre-byeditor+others}%
2369    \newunit\newblock
2370    \printfield{volumes}%
2371    \newunit\newblock
2372    \printfield{note}%
2373    \newunit\newblock%
2374    \printlist{organization}%
2375    \newunit\newblock%
2376    \usebibmacro{publisher+type+series+number+date}%
2377    \setunit{\addspace}%
2378    \printfield{howpublished}%
2379    \newunit\newblock
2380    \usebibmacro{post-byeditor+others}%
2381    \newunit\newblock
2382    \iftoggle{bbx:isbn}
2383      {\printfield{isbn}}
2384      {}%
2385    \newunit\newblock
2386    \usebibmacro{doi+eprint+url}%
2387    \newunit\newblock
2388    \usebibmacro{addendum+pubstate}%
2389    \iftoggle{bbx:related}
2390      {\usebibmacro{related:init}%
2391       \usebibmacro{related}}
2392      {}%
2393    \setunit{\bibpagerefpunct}\newblock
2394    \usebibmacro{pageref}%
2395    \usebibmacro{finentry}}
```

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

```
2396    \DeclareBibliographyAlias{music}{audio}
2397    \DeclareBibliographyAlias{movie}{audio}
2398    \DeclareBibliographyAlias{video}{audio}
```

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

```
2399    \DeclareBibliographyDriver{inaudio}{%
2400      \usebibmacro{bibindex}%
2401      \usebibmacro{begentry}%
2402      \usebibmacro{author}%
2403      \setunit{\printdelim{nametitledelim}}\newblock
2404      \usebibmacro{title}%
2405      \setunit{\titlebyauthordelim}\newblock
2406      \usebibmacro{byauthor}%
2407      \newunit\newblock
2408      \usebibmacro{in:}%
2409      \usebibmacro{bybookauthor}%
2410      \newunit\newblock
2411      \usebibmacro{maintitle+booktitle}%
2412      \iffieldequalstr{relatedtype}{includes}{%
```

```
2413        \iftoggle{bbx:related}{%
2414          \newunit\newblock
2415          \usebibmacro{related:init}%
2416          \usebibmacro{related}%
2417          \clearfield{related}%
2418        }{}%
2419      }{}%
2420      \setunit{\addspace}
2421      \usebibmacro{onlinetype}%
2422      \newunit\newblock
2423      \usebibmacro{pre-byeditor+others}%
2424      \newunit\newblock
2425      \printfield{volumes}%
2426      \newunit\newblock
2427      \printfield{note}%
2428      \newunit\newblock%
2429      \printlist{organization}%
2430      \newunit\newblock%
2431      \usebibmacro{publisher+type+series+number+date}%
2432      \setunit{\addspace}%
2433      \printfield{howpublished}%
2434      \newunit\newblock
2435      \usebibmacro{post-byeditor+others}%
2436      \newunit\newblock
2437      \iftoggle{bbx:isbn}
2438        {\printfield{isbn}}
2439        {}%
2440      \newunit\newblock
2441      \usebibmacro{doi+eprint+url}%
2442      \newunit\newblock
2443      \usebibmacro{addendum+pubstate}%
2444      \iftoggle{bbx:related}
2445        {\usebibmacro{related:init}%
2446         \usebibmacro{related}}
2447        {}%
2448      \setunit{\bibpagerefpunct}\newblock
2449      \usebibmacro{pageref}%
2450      \usebibmacro{finentry}}
```

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

```
2451    \DeclareBibliographyAlias{inmusic}{inaudio}
2452    \DeclareBibliographyAlias{inmovie}{inaudio}
2453    \DeclareBibliographyAlias{invideo}{inaudio}
```

We set up appropriate inheritance rules.

```
2454    \DeclareDataInheritance{audio,music,movie,video}{inaudio,inmusic,inmovie,invideo}{%
2455      \inherit{title}{booktitle}
2456      \inherit{subtitle}{booksubtitle}
2457      \inherit{titleaddon}{booktitleaddon}
2458      \noinherit{shorttitle}
2459      \noinherit{sorttitle}
2460      \noinherit{indextitle}
2461      \noinherit{indexsorttitle}
2462    }
```

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.

```
2463    \DeclareFieldFormat[audio,music]{title}{%
2464      \def\currentfield{title}%
2465      \iffieldannotation{descriptor}{#1}{%
2466        \iffieldequalstr{entrysubtype}{podcast}{%
2467          \mkbibquote{#1\isdot}%
2468        }{%
2469          \mkbibemph{#1}}}%
2470      \undef\currentfield}
2471    \DeclareFieldFormat[movie,video]{title}{%
2472      \def\currentfield{title}%
2473      \iffieldannotation{descriptor}{#1}{%
2474        \ifboolexpr{
2475          test {\iffieldequalstr{entrysubtype}{episode}}
2476          or
2477          test {\iffieldequalstr{entrysubtype}{clip}}
2478          or
2479          test {\iffieldequalstr{entrysubtype}{webcast}}
2480        }{%
2481          \mkbibquote{#1\isdot}%
2482        }{%
2483          \mkbibemph{#1}}}%
2484      \undef\currentfield}
2485    \DeclareFieldFormat[inaudio,inmusic,inmovie,invideo]{title}{%
2486      \def\currentfield{title}%
2487      \iffieldannotation{descriptor}{#1}{%
2488        \mkbibquote{#1\isdot}%
2489      }%
2490      \undef\currentfield}
2491    \DeclareFieldFormat[inaudio,inmusic]{booktitle}{%
2492      \def\currentfield{booktitle}%
2493      \iffieldannotation{descriptor}{#1}{%
2494        \iffieldequalstr{entrysubtype}{podcast}{%
2495          \mkbibquote{#1\isdot}%
2496        }{%
2497          \mkbibemph{#1}}}%
2498      \undef\currentfield}
2499    \DeclareFieldFormat[inmovie,invideo]{booktitle}{%
2500      \def\currentfield{booktitle}%
2501      \iffieldannotation{descriptor}{#1}{%
2502        \ifboolexpr{
2503          test {\iffieldequalstr{entrysubtype}{episode}}
2504          or
2505          test {\iffieldequalstr{entrysubtype}{clip}}
2506          or
2507          test {\iffieldequalstr{entrysubtype}{webcast}}
2508        }{%
2509          \mkbibquote{#1\isdot}%
2510        }{%
2511          \mkbibemph{#1}}}%
2512      \undef\currentfield}
2513
```

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.

```
2514    \DeclareBibliographyDriver{performance}{%
2515      \usebibmacro{bibindex}%
2516      \usebibmacro{begentry}%
```

```
2517      \usebibmacro{author}%
2518      \setunit{\printdelim{nametitledelim}}\newblock
2519      \usebibmacro{title}%
2520      \newunit
2521      \usebibmacro{maintitle}%
2522      \iffieldequalstr{relatedtype}{includes}{%
2523        \iftoggle{bbx:related}{%
2524          \newunit\newblock
2525          \usebibmacro{related:init}%
2526          \usebibmacro{related}%
2527          \clearfield{related}%
2528        }{}%
2529      }{}%
2530      \setunit{\addspace}
2531      \usebibmacro{onlinetype}%
2532      \setunit{\titlebyauthordelim}\newblock
2533      \usebibmacro{byauthor}%
2534      \newunit\newblock
2535      \usebibmacro{pre-byeditor+others}%
2536      \setunit{\addspace}%
2537      \printfield{howpublished}%
2538      \newunit\newblock
2539      \printfield{type}%
2540      \newunit\newblock
2541      \printfield{note}%
2542      \ifboolexpr{
2543        test {\iffieldundef{origyear}}
2544        and
2545        test {\iffieldundef{origmonth}}
2546      }{}{%
2547        \setunit{\addspace}\newblock
2548        \printtext[publication]{\usebibmacro{origdate+time}}}}
2549      \newunit\newblock
2550      \usebibmacro{event+venue+location+date}%
2551      \newunit\newblock
2552      \usebibmacro{post-byeditor+others}%
2553      \newunit\newblock
2554      \printlist{organization}%
2555      \newunit\newblock
2556      \iftoggle{bbx:isbn}
2557        {\printfield{isbn}}
2558        {}%
2559      \newunit\newblock
2560      \usebibmacro{doi+eprint+url}%
2561      \newunit\newblock
2562      \usebibmacro{addendum+pubstate}%
2563      \iftoggle{bbx:related}
2564        {\usebibmacro{related:init}%
2565         \usebibmacro{related}}
2566        {}%
2567      \setunit{\bibpagerefpunct}\newblock
2568      \usebibmacro{pageref}%
2569      \usebibmacro{finentry}}
2570    \DeclareBibliographyAlias{image}{performance}
2571    \DeclareBibliographyAlias{artwork}{performance}
```

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

```
2572      \newbibmacro*{event+venue+location+date}{%
2573        \printfield{eventtitle}%
2574        \newunit
```

```
2575    \printfield{eventtitleaddon}%
2576    \newunit
2577    \printlist{institution}%
2578    \newunit
2579    \printfield{venue}%
2580    \newunit
2581    \printlist{location}%
2582    \newunit%
2583    \ifboolexpr{
2584      test {\iffieldundef{year}}
2585      and
2586      test {\iffieldundef{month}}
2587    }{\printeventdate}{\usebibmacro{date+time}}}
2588
```

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.

```
2589    \DeclareFieldFormat[online,image]{title}{%
2590      \def\currentfield{title}%
2591      \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
2592      \undef\currentfield}
2593
```

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

```
2594    \newbibmacro*{onlinetype}{%
2595      \ifboolexpr{
2596        test {\iffieldundef{url}}
2597        or
2598        test {\iffieldundef{entrysubtype}}
2599      }{}{%
2600        \ifbibxstring{\thefield{entrysubtype}}{%
2601          \printtext[brackets]{\bibstring{\thefield{entrysubtype}}}%
2602        }{}}}
```

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.

```
2603    \DeclareBibliographyDriver{online}{%
2604      \usebibmacro{bibindex}%
2605      \usebibmacro{begentry}%
2606      \usebibmacro{author/editor+others/translator+others}%
2607      \setunit{\printdelim{nametitledelim}}\newblock
2608      \usebibmacro{title}%
2609      \newunit
```

```
2610      \usebibmacro{maintitle}
2611      \setunit{\addspace}%
2612      \usebibmacro{onlinetype}%
2613      \setunit{\titlebyauthordelim}\newblock
2614      \usebibmacro{byauthor}%
2615      \newunit\newblock
2616      \usebibmacro{byeditor+others}%
2617      \newunit\newblock
2618      \printfield{version}%
2619      \newunit
2620      \printfield{note}%
2621      \newunit\newblock
2622      \printlist{organization}%
2623      \iffieldundef{year}{}{%
2624        \setunit{\addspace}\newblock
2625        \printtext[parens]{\usebibmacro{date+time}}%
2626      }%
2627      \newunit\newblock
2628      \printlist{publisher}%
2629      \newunit\newblock
2630      \iftoggle{bbx:eprint}
2631        {\usebibmacro{eprint}}
2632        {}%
2633      \newunit\newblock
2634      \usebibmacro{url+urldate}%
2635      \newunit\newblock
2636      \usebibmacro{addendum+pubstate}%
2637      \iftoggle{bbx:related}
2638        {\usebibmacro{related:init}%
2639         \usebibmacro{related}}
2640        {}%
2641      \setunit{\bibpagerefpunct}\newblock
2642      \usebibmacro{pageref}%
2643      \usebibmacro{finentry}}
```

Software

The version for software goes between the title and titleaddon.

```
2644    \newbibmacro*{title+version}{%
2645      \ifboolexpr{
2646        test {\iffieldundef{title}}
2647        and
2648        test {\iffieldundef{subtitle}}
2649      }
2650      {}
2651      {\printtext[title]{%
2652          \printfield[titlecase]{title}%
2653          \setunit{\subtitlepunct}%
2654          \printfield[titlecase]{subtitle}}%
2655        \setunit{\addspace}}%
2656      \printfield{version}%
2657      \setunit{\addspace}%
2658      \printfield{titleaddon}%
2659    }
2660    \DeclareFieldFormat[software]{version}{\mkbibparens{\bibstring{version}~#1}}
```

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

```
2661    \DeclareFieldFormat[software]{urldate}{\bibstring{urldown}\space#1}
```

The software driver is a variant of the manual driver.

```
2662    \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.

```
2663    \DeclareBibliographyDriver{dataset}{%
2664      \usebibmacro{bibindex}%
2665      \usebibmacro{begentry}%
2666      \usebibmacro{author/editor+others/translator+others}%
2667      \setunit{\printdelim{nametitledelim}}\newblock
2668      \usebibmacro{title}%
2669      \newunit
2670      \printlist{language}%
2671      \setunit{\titlebyauthordelim}\newblock
2672      \usebibmacro{byauthor}%
2673      \newunit\newblock
2674      \usebibmacro{byeditor+others}%
2675      \newunit\newblock
2676      \printfield{type}%
2677      \newunit
2678      \printfield{version}%
2679      \newunit\newblock
2680      \printfield{note}%
2681      \newunit\newblock
2682      \usebibmacro{type+series+number+edition+organization+publisher+location+date}%
2683      \newunit\newblock
2684      \usebibmacro{doi+eprint+url}%
2685      \newunit\newblock
2686      \usebibmacro{addendum+pubstate}%
2687      \iftoggle{bbx:related}
2688        {\usebibmacro{related:init}%
2689         \usebibmacro{related}}
2690        {}%
2691      \setunit{\bibpagerefpunct}\newblock
2692      \usebibmacro{pageref}%
2693      \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

```
2694    \newtoggle{bbx:scotstyle}
2695    \DeclareEntryOption{scottish-style}[true]{%
2696      \settoggle{bbx:scotstyle}{#1}}
2697    \newboolean{bbx@year-essential}\setboolean{bbx@year-essential}{false}
2698    \DeclareEntryOption{year-essential}[true]{%
2699        \setboolean{bbx@year-essential}{#1}}
2700    \newboolean{bbx@paryear-essential}\setboolean{bbx@paryear-essential}{false}
2701    \DeclareEntryOption{paryear-essential}[true]{%
2702        \setboolean{bbx@paryear-essential}{#1}}
```

```
2703    \newtoggle{blx@ox@nopostnotedelim}
2704    \newtoggle{bbx:altcourt}
2705    \DeclareBiblatexOption{global,type,entry}{court-plain}[true]{%
2706      \settoggle{bbx:altcourt}{#1}}
2707    \newtoggle{bbx@ecliuse}
2708    \newtoggle{bbx@eclionly}
2709    \DeclareBibliographyOption[string]{ecli}[yes]{%
2710      \ifstrequal{#1}{no}{%
2711        \global\togglefalse{bbx@ecliuse}%
2712        \global\togglefalse{bbx@eclionly}%
2713      }{%
2714        \global\toggletrue{bbx@ecliuse}%
2715        \ifstrequal{#1}{only}{%
2716          \global\toggletrue{bbx@eclionly}%
2717        }{}}}
```

Field formats

```
2718    \DeclareFieldFormat{casenotetitle}{\mkbibquote{\mkbibemph{#1}}}
2719    \DeclareFieldFormat[jurisdiction,legislation,legal]{journaltitle}{#1}
2720    \DeclareFieldFormat[jurisdiction]{volume}{#1}
2721    \DeclareFieldFormat[jurisdiction]{titleaddon}{\mkbibparens{#1}}
2722    \DeclareFieldFormat{romanvol}{\RN{#1}}
2723    \DeclareListFormat[jurisdiction]{listb}{}
2724    \protected\def\mkusbibordinal#1{%
2725      \begingroup
2726      \@tempcnta0#1\relax\number\@tempcnta
2727      \@whilenum\@tempcnta>100\do{\advance\@tempcnta-100\relax}%
2728      \ifnum\@tempcnta>20
2729        \@whilenum\@tempcnta>9\do{\advance\@tempcnta-10\relax}%
2730      \fi
2731      \ifcase\@tempcnta th\or st\or d\or d\else th\fi
2732      \endgroup}%
2733    \DeclareFieldFormat{usseries}{\ifinteger{#1}{\mkusbibordinal{#1}}{#1}}
2734    \DeclareFieldFormat{verba}{#1}
2735
2736    \DeclareListFormat{echrinst}{%
2737      \ifboolexpr{%
2738        test {\ifnumequal{\value{listtotal}}{1}}
2739        or
2740        test {\ifnumequal{\value{listcount}}{\value{listtotal}}}
2741      }{%
2742        \ifboolexpr{
2743          test {\ifdefstring{\Commission}{#1}}
2744          or
2745          test {\ifdefstring{\commission}{#1}}%
2746        }{%
2747          \bibstring{commissiondecision}%
2748        }{#1}%
2749      }{%
2750        \setcounter{blx@tmpcnt}{\value{listcount}}%
2751        \addtocounter{blx@tmpcnt}{1}%
2752        \ifnumequal{\value{blx@tmpcnt}}{\value{listtotal}}{%
2753          #1\space\bibstring{and}\addspace
2754        }{%
2755          #1\addcomma\space}}}%
2756
2757    \newcommand*{\commission}{commission}
2758    \newcommand*{\Commission}{Commission}
2759    \DeclareListFormat{ecthr}{%
```

```
2760    \ifboolexpr{
2761      test {\ifdefstring{\Commission}{#1}}
2762      or
2763      test {\ifdefstring{\commission}{#1}}
2764    }{\bibstring[\mkbibparens]{commissiondecision}\toggletrue{blx@ox@nopostnotedelim}}{}}
2765
2766    \newcommand*{\pcijrep}{PCIJ Rep}
2767    \DeclareFieldFormat{international}{%
2768      \iffieldequals{journaltitle}{\pcijrep}{%
2769        \bibcplstring{jourser}\space #1%
2770      }{#1}}
2771
2772    \DeclareListFormat{checkcontains}{%
2773      \bbx@check{#1}}
2774    \newtoggle{bbx@institutiontoggle}
2775    \newcommand\iflistcontains[2]{%
2776      \global\togglefalse{bbx@institutiontoggle}%
2777      \def\bbx@check##1{%
2778        \ifdefstring{#2}{##1}{\global\toggletrue{bbx@institutiontoggle}}{}}%
2779      \printlist[checkcontains]{#1}%
2780      \iftoggle{bbx@institutiontoggle}}
2781
2782    \DeclareFieldFormat{draftleg}{%
2783      \StrBefore{#1}{ Bill}}
2784
2785    \DeclareListFormat{billprinting}{%
2786      \ifstrequal{#1}{HC}{%
2787        \mkbibbrackets{\strfield{number}}%
2788        \toggletrue{blx@ox@nopostnotedelim}%
2789      }{%
2790        \strfield{number}%
2791        \togglefalse{blx@ox@nopostnotedelim}}}
2792
2793    \newcommand*{\treatypartysep}{\allowbreak ---\allowbreak}
2794    \DeclareListFormat{treaty}{%
2795      \ifmoreitems{}{%
2796        \ifnumequal{\value{listcount}}{1}{%
2797          \bibopenparen
2798        }{}%
2799        \ifnumgreater{\value{liststop}}{\value{listcount}}{%
2800          #1\treatypartysep
2801        }{%
2802          #1\bibcloseparen}}}
2803
2804    \def\siganddate#1{%
2805      \def\bbx@tempa{#1}%
2806      \expandafter\bbx@signeddatei#1/relax}
2807    \def\bbx@signeddatei#1=#2/relax{%
2808      \def\bbx@tempa{#2-}%
2809      \bibstring{#1}\space\expandafter\makebbx@datei\bbx@tempa}
2810    \def\makebbx@datei#1-#2-#3-{%
2811      \makebbx@dateii{#1}{#2}{#3}}
2812    \def\makebbx@dateii#1#2#3{%
2813      \blx@imc@stripzeros{#3}~\mkbibmonth{#2}%
2814      \space
2815      #1}
2816    \DeclareListFormat{treatydates}{%
2817      \ifnumequal{\value{listcount}}{1}{%
2818        \siganddate{#1}%
2819      }{%
2820        \addcomma\space\siganddate{#1}}}}
2821
```

Pagination formats

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

```
2822    \newrobustcmd*{\mkrawpageprefix}[1][none]{%
2823      \begingroup
2824      \def\blx@tempa{\blx@mkpageprefix@i}%
2825      \ifstrequal{#1}{none}{}{%
2826        \ifbibstring{#1}{%
2827          \def\blx@tempa{\blx@mkpageprefix{#1}}%
2828        }{%
2829          \blx@warning@entry{Unknown pagination type '#1'}}}%
2830      \@ifnextchar[%]
2831        {\blx@tempa}
2832        {\blx@tempa[\@firstofone]}}

2834    \newcommand*\paragraphmarkings{[]}
2835    \DeclareFieldFormat[jurisdiction,legislation,legal]{postnote}{%
2836      \iffieldundef{pagination}{%
2837        \ifboolexpr{
2838          test {\ifkeyword{eu}}
2839          or
2840          test {\ifkeyword{echr}}
2841        }{%
2842          \mkcomprange[{\mkrawpageprefix[paragraph]}]{#1}%
2843        }{%
2844          \mkcomprange{#1}}%
2845      }{%
2846        \iffieldequals{pagination}{\paragraphmarkings}{%
2847          \mkcomprange[\mkbibbrackets]{#1}%
2848        }{%
2849          \mkcomprange[{\mkpageprefix[pagination]}]{#1}}}}
```

Shorthands

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

```
2850    \renewbibmacro*{shorthandintro}{%
2851      \iffieldundef{shorthandintro}
2852        {\iffieldundef{shorthand}
2853          {}
2854          {\setunit{\addspace}%
2855           \printtext[parens]{%
2856             \ifboolexpr{
2857               test {\ifentrytype{jurisdiction}}
2858               or
2859               test {\ifentrytype{legal}}
2860               or
2861               test {\ifentrytype{legislation}}
2862             }{}{%
2863               \bibstring{citedas}\space}%
2864             \printfield{shorthand}}}}
2865        {\setunit{\addspace}%
2866         \printtext[parens]{\printfield{shorthandintro}}}}
2867
```

Common macros

```
2868    \newbibmacro*{issue/volume}{%
2869      \iffieldundef{volume}%
2870        {\iffieldundef{issue}%
2871         {}%
2872         {\printfield{issue}}}%
2873        {\printfield[default]{volume}}}
2874    \newcommand*{\subtypenewsp}{newspaper}
2875    \newbibmacro*{year+vol+report}[1][default]{%
2876      \iffieldequals{entrysubtype}{\subtypenewsp}{%
2877        \setunit{\addcomma\space}%
2878      }{%
2879        \usebibmacro{journaldate}%
2880        \setunit{\addspace}%
2881        \printfield[parens]{origyear}%
2882        \setunit{\addspace}%
2883        \printfield{volume}%
2884        \setunit{\addspace}}%
2885      \printfield{journaltitle}%
2886      \setunit*{\addspace}%
2887      \iffieldundef{series}{}{%
2888        \setunit{\addspace}%
2889        \printfield[#1]{series}%
2890        \setunit{\addspace}}%
2891      \iffieldequals{entrysubtype}{\subtypenewsp}{%
2892        \setunit{\addcomma\space}%
2893        \printdate%
2894      }{}}
2895    \newbibmacro*{journaldate}[1][]{%
2896      \ifboolexpr{
2897        test {\iffieldundef{#1volume}}
2898        or
2899        bool {bbx@#1year-essential}
2900      }{%
2901        \ifboolexpr{
2902          test {\ifkeyword{sc}}
2903          or
2904          test {\iftoggle{bbx:scotstyle}}
2905        }{%
2906          \setunit{\addcomma\space}%
2907          \printfield{#1year}%
2908        }{%
2909          \printfield[brackets]{#1year}}%
2910      }{%
2911        \printfield[parens]{#1year}}}
2912    \newcommand*{\casenote}{casenote}
2913    \newcommand{\casenotetext}{\bibstring{casenote}}
2914    \newbibmacro{journaltitle}{%
2915      \iffieldequals{entrysubtype}{\casenote}{%
2916        \iffieldundef{crossref}{%
2917          \usebibmacro{title}%
2918        }{%
2919          \iffieldundef{note}{%
2920            \restorefield{note}{\casenotetext}%
2921          }{}%
2922          \ifboolexpr{
2923            test {\iffootnote}
2924            and test {\iftoggle{bbx@samefootnote}}
2925            and test {\iffieldequals{crossref}{\blx@lastkey@foot}}
2926          }{}{\printfield[casenotetitle]{title}}}%
2927      }{%
```

```
2928          \usebibmacro{title}}}
2929    \newbibmacro*{unreported}[1][default]{%
2930      \iffieldundef{verba}{%
2931        \ifboolexpr{
2932          test {\iflistundef{institution}}
2933          and
2934          test {\iffieldundef{date}}
2935          and
2936          test {\iffieldundef{year}}
2937        }{}{%
2938          \ifboolexpr{
2939            test {\iffieldundef{date}}
2940            and
2941            test {\iffieldundef{year}}
2942          }{%
2943            \mkbibparens{\printlist[jurisdiction]{institution}}%
2944          }{%
2945            \toggletrue{blx@ox@nopostnotedelim}%
2946            \iflistundef{institution}{%
2947              \mkbibparens{\usebibmacro{date}}%
2948            }{%
2949              \printtext[parens]{%
2950                \printlist[#1]{institution}%
2951                \setunit{\addcomma\space}
2952                \usebibmacro{date}}}}}%
2953      }{%
2954        \iftoggle{bbx@ecliuse}{}{%
2955          \printfield{verba}}}}
2956    \newbibmacro{court-note}{%
2957      \iffieldundef{note}%
2958        {}%
2959        {\printfield{note}%
2960         \toggletrue{blx@ox@nopostnotedelim}}}
2961    \newbibmacro*{jurisdictionpages}{%
2962      \let\origadddot\adddot
2963      \def\adddot{}%
2964      \iffieldequals{entrysubtype}{\subtypenewsp}{}{%
2965        \setunit{\addspace}%
2966        \printfield{pages}}%
2967      \let\adddot\origadddot
2968    }
2969    \newbibmacro{pcitenote}{%
2970      \iffieldundef{parreporter}{}{%
2971        \setunit{\addcomma\space}%
2972        \iffieldundef{postnote}{}{%
2973          \printfield{postnote}%
2974          \clearfield{postnote}%
2975          \setunit{\addsemicolon\space}}}}
2976    \newbibmacro*{courtid}{%
2977      \iffieldundef{number}{%
2978        \ifboolexpr{
2979          test {\iflistundef{institution}}
2980          and
2981          test {\iffieldundef{location}}%
2982        }{%
2983          \togglefalse{blx@ox@nopostnotedelim}%
2984        }{%
2985          \ifboolexpr{%
2986            test {\iffieldundef{journaltitle}}
2987            or
2988            not togl {bbx:altcourt}
2989          }{%
```

```
2990              \printtext[parens]{%
2991                \printfield{location}%
2992                \setunit{\addspace}%
2993                \printlist{institution}%
2994                \usebibmacro{unrep:date}}%
2995              \toggletrue{blx@ox@nopostnotedelim}
2996           }{%
2997              \setunit{\addcomma\space}%
2998              \printfield{location}%
2999              \setunit*{\addspace}%
3000              \printlist{institution}}}%
3001        }{%
3002          \togglefalse{blx@ox@nopostnotedelim}}}
3003     \newbibmacro*{unrep:date}{%
3004       \ifboolexpr{
3005          test {\iffieldundef{journaltitle}}%
3006          and
3007          test {\iffieldundef{number}}%
3008          and
3009          test {\iffieldundef{neutralcite}}%
3010       }{%
3011          \setunit{\addcomma\space}%
3012          \usebibmacro{date}%
3013       }{}}
3014
```

Legal cases

There are different formats depending on the jurisdiction.

```
3015     \DeclareBibliographyDriver{jurisdiction}{%
3016       \usebibmacro{bibindex}%
3017       \usebibmacro{begentry}%
3018       \usebibmacro{juriscitation}%
3019       \usebibmacro{doi+eprint+url}%
3020       \setunit{\addspace}%\newblock
3021       \usebibmacro{addendum+pubstate}%
3022       \setunit{\addspace}%\newblock
3023       \iftoggle{bbx:related}
3024          {\usebibmacro{related:init}%
3025           \usebibmacro{related}}
3026          {}%
3027       \setunit{\bibpagerefpunct}\newblock
3028       \usebibmacro{pageref}%
3029       \usebibmacro{finentry}}
3030     \newtoggle{bbx@juriscitedone}
3031     \newbibmacro{juriscitation}{%
3032       \togglefalse{bbx@juriscitedone}%
3033       \renewcommand{\do}[1]{%
3034          \ifkeyword{##1}{%
3035             \toggletrue{bbx@juriscitedone}\usebibmacro{##1juriscitation}%
3036             \listbreak
3037          }{}}%
3038       \docsvlist{eu,echr,int,ca,us}%
3039       \iftoggle{bbx@juriscitedone}{}{\usebibmacro{enjuriscitation}}%
3040     }
```

Here is the format for EU cases.

```
3041    \newtoggle{bbx@commissiondecision}
3042    \newbibmacro*{eujuriscitation}{%
3043      \ifboolexpr{
3044        test {\iflistcontains{institution}{\commission}}
3045        or
3046        test {\iflistcontains{institution}{\Commission}}
3047      }{%
3048        \toggletrue{bbx@commissiondecision}%
3049      }{%
3050        \togglefalse{bbx@commissiondecision}}%
3051      \iftoggle{bbx@commissiondecision}{}{%
3052        \usebibmacro{eucasenumber}}%
3053      \usebibmacro{title}%
3054      \setunit{\addspace}%
3055      \iftoggle{bbx@commissiondecision}{%
3056        \usebibmacro{eucommissiondecision}}{}%
3057      \setunit{\addspace}%
3058      \usebibmacro{eu:reportinfo}%
3059      \iftoggle{bbx@commissiondecision}{%
3060        \setunit{\addcomma\space}%
3061      }{%
3062        \setunit{\addspace}}%
3063      \usebibmacro{altreportdetails}%
3064      \usebibmacro{court-note}%
3065    }
3066    \newcommand*\oxrefand{ and }
3067    \newbibmacro{eucasetype}{%
3068      \iffieldundef{type}{%
3069        \ifboolexpr{
3070          test {\IfSubStr{\thefield{number}}{,}}
3071          or
3072          test {\IfSubStr{\thefield{number}}{--}}
3073          or
3074          test {\IfSubStr{\thefield{number}}{\oxrefand}}
3075        }{%
3076          \bibstring{eujoinedcases}%
3077        }{%
3078          \bibstring{eucase}}%
3079      }{%
3080        \printfield{type}}%
3081    }
3082    \newbibmacro{eucasenumber}{%
3083      \usebibmacro{eucasetype}%
3084      \setunit{\addnbspace}%
3085      \printfield{number}%
3086      \setunit{\addspace}}
3087    \newbibmacro{eucommissiondecision}{%
3088      \iffieldundef{userb}{%
3089        \iffieldundef{number}{}{%
3090          \printtext[parens]{%
3091            \usebibmacro{eucasetype}%
3092            \setunit{\addnbspace}%
3093            \printfield{number}}}%
3094      }{%
3095        \printtext[parens]{%
3096          \printfield{userb}}%
3097        \setunit{\addspace}%
3098        \iffieldundef{number}{}{%
3099          \iffieldundef{type}{%
3100            \setunit{\addspace\bibstring{commissiondecision}\addspace}%
3101          }{%
3102            \setunit{\addspace\printfield{type}\addspace}}%
```

```
3103            \printfield{number}}%
3104          }%
3105       }
3106    \newbibmacro*{eu:reportinfo}{%
3107       \iftoggle{bbx@eclionly}{%
3108          \iffieldundef{verba}{%
3109             \usebibmacro{eu:osreport}
3110          }{%
3111             \printfield{verba}}%
3112       }{%
3113          \usebibmacro{eu:osreport}}}
3114    \newbibmacro*{eu:osreport}{%
3115       \iftoggle{bbx@ecliuse}{%
3116          \iffieldundef{verba}{}{%
3117             \printfield{verba}%
3118             \setunit{\addcomma\space}}%
3119       }{}%
3120       \iffieldundef{journaltitle}{%
3121          \usebibmacro{unreported}%
3122       }{%
3123          \usebibmacro{eu:year+vol+report}}}
3124    \newcommand*\officialjournaltitle{OJ}
3125    \newcommand*\ecrreporttitle{ECR}
3126    \newbibmacro*{eu:year+vol+report}{%
3127       \iffieldequals{journaltitle}{\ecrreporttitle}{%
3128          \printfield[brackets]{year}%
3129          \setunit{\addspace}%
3130          \printfield{journaltitle}%
3131          \setunit{\addspace}%
3132          \printfield{volume}%
3133          \setunit*{\printtext{--\allowbreak}}%
3134          \printfield{pages}%
3135       }{%
3136          \iffieldequals{journaltitle}{\officialjournaltitle}{%
3137             \printfield[brackets]{year}%
3138             \setunit{\addspace}%
3139             \printfield{journaltitle}%
3140             \setunit{\addspace}%
3141             \printfield[default]{series}%
3142             \usebibmacro{issue/volume}%
3143             \setunit{\printtext{\slash}}%
3144             \printfield{pages}%
3145          }{%
3146             \usebibmacro{year+vol+report}}}}
3147
```

Here is the format for European Human Rights cases.

```
3148       \newbibmacro*{echrjuriscitation}{%
3149         \usebibmacro{title}%
3150       \setunit{\addspace}\newblock
3151       \iffieldundef{number}{}{%
3152          \printtext[parens]{%
3153             \def\adddot{}%
3154             \bibstring{application}\space
3155             \bibstring{number}\space
3156             \printfield{number}}%
3157          \setunit{\addspace}\newblock}%
3158       \iffieldundef{journaltitle}{%
3159          \usebibmacro{unreported}[echrinst]%
3160       }{%
```

```
3161        \usebibmacro{echr:year+vol+report}
3162        \setunit{\addspace}\newblock
3163        \usebibmacro{echr:courtid}}%
3164      \setunit{\addspace}%
3165      \usebibmacro{court-note}%
3166      \newblock
3167      \setunit{\addspace}}
3168    \newcommand*{\seriesa}{Series A}
3169    \newcommand*{\echrreports}{ECHR}
3170    \newbibmacro*{echr:year+vol+report}{%
3171      \iffieldequals{journaltitle}{\seriesa}{%
3172        \usebibmacro{seriesareport}%
3173      }{%
3174        \iffieldequals{journaltitle}{\echrreports}{%
3175          \usebibmacro{echrreports}%
3176        }{%
3177          \usebibmacro{year+vol+report}
3178          \setunit{\addspace}%
3179      \printfield{pages}}}}
3180    \newbibmacro*{seriesareport}{%
3181      \printfield[parens]{year}%
3182      \setunit{\addspace}%
3183      \printfield{journaltitle}%
3184      \setunit{\addspace}%
3185      \printtext{\def\adddot{}\bibstring{number}\addspace}%
3186      \printfield{pages}}
3187    \newbibmacro*{echrreports}{%
3188      \printfield{journaltitle}%
3189      \setunit{\addspace}%
3190      \printfield{year}%
3191      \iffieldundef{volume}{}{%
3192        \printtext{--}\printfield[romanvol]{volume}}
3193      \setunit{\addspace}%
3194      \printfield{pages}}
3195    \newcommand*{\decisionsandreports}{DR}
3196    \newcommand*{\collectionofdecisions}{CD}
3197    \newbibmacro*{echr:courtid}{%
3198      \ifboolexpr{
3199        test {\iffieldequals{journaltitle}{\decisionsandreports}}
3200        or
3201        test {\iffieldequals{journaltitle}{\collectionofdecisions}}%
3202      }{}{%
3203        \printlist[ecthr]{institution}}}
3204
```

Here is the format for international cases.

```
3205    \newbibmacro*{intjuriscitation}{%
3206      \iflistundef{institution}{%
3207        \setunit{}\printtext{}%
3208      }{%
3209        \printlist{institution}%
3210        \setunit{\addcomma\space}}%
3211      \usebibmacro{int:title}%
3212      \setunit{\addspace}\newblock
3213      \iffieldundef{journaltitle}{%
3214        \printfield{number}%
3215        \setunit{\addspace}\newblock
3216        \printtext[parens]{\printdate}%
3217      }{%
3218        \usebibmacro{year+vol+report}[international]%
3219      }%
```

```
3220      \setunit{\addspace}%
3221      \usebibmacro{int:jurisdictionpages}%
3222      \setunit{\addspace}\newblock
3223      \usebibmacro{court-note}%
3224    }
3225    \newbibmacro*{int:title}{%
3226      \ifboolexpr{
3227        test {\iffieldundef{title}}
3228        and
3229        test {\iffieldundef{subtitle}}
3230      }{}{%
3231        \printtext[title]{%
3232          \printfield[titlecase]{title}%
3233          \setunit{\addspace}%
3234          \printfield[parens]{subtitle}}}%
3235      \setunit{\addspace}%
3236      \printfield{titleaddon}%
3237    }
3238    \newbibmacro*{int:jurisdictionpages}{%
3239      \let\origaddot\adddot
3240      \def\adddot{}%
3241      \iffieldequals{journaltitle}{\pcijrep}{%
3242        \printtext{\bibcpstring{number}\addspace}%
3243        \iffieldundef{pages}{%
3244          \printfield{number}%
3245        }{%
3246          \printfield{pages}}%
3247      }{%
3248        \printfield{pages}}%
3249      \let\addot\origadddot
3250    }
3251
```

Here is the format for Canadian cases.

```
3252    \newbibmacro{cajuriscitation}{%
3253      \usebibmacro{title}%
3254      \setunit{\cacasetitlepunct}\newblock
3255      \printfield{number}%
3256      \setunit{\addcomma\space}%
3257      \iffieldundef{journaltitle}{}{%
3258        \usebibmacro{can:year+vol+report}}%
3259      \usebibmacro{jurisdictionpages}%
3260      \usebibmacro{pcitenote}%
3261      \usebibmacro{altreportdetails}%
3262      \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}%
3263      \newunit\newblock
3264      \usebibmacro{courtid}%
3265      \newunit%
3266      \usebibmacro{court-note}%
3267      \newblock%
3268      \newunit}
3269    \newbibmacro*{can:year+vol+report}{%
3270      \iffieldundef{number}{%
3271        \setunit{\addspace}%
3272      }{%
3273        \ifboolexpr{
3274          test {\iffieldundef{volume}}
3275          or
3276          bool {bbx@year-essential}%
3277        }{}{%
```

```
3278              \clearfield{year}}}%
3279          \iffieldequals{entrysubtype}{\subtypenewsp}{}{%
3280            \iffieldundef{year}{}{%
3281              \usebibmacro{journaldate}%
3282              \setunit{\addspace}}}
3283          \printfield{volume}%
3284          \setunit{\addspace}%
3285          \printfield{journaltitle}%
3286          \setunit*{\addspace}%
3287          \iffieldundef{series}{}{%
3288            \setunit{\addspace}%
3289            \printtext[parens]{\printfield[usseries]{series}}%
3290            \setunit{\addspace}}%
3291          \iffieldequals{entrysubtype}{\subtypenewsp}{%
3292            \setunit{\addcomma\space}%
3293            \usebibmacro{newspaperdate}%
3294          }{}}
```

Here is the format for American cases.

```
3295      \newbibmacro{usjuriscitation}{%
3296        \usebibmacro{title}%
3297        \setunit{\uscasetitlepunct}\newblock%
3298        \iffieldundef{journaltitle}{%
3299          \printfield{number}%
3300          \setunit{\addcomma\space}%
3301          \printfield[default]{eprint}%
3302          \clearfield{eprint}%
3303        }{
3304          \usebibmacro{us:vol+report}}%
3305        \setunit{\addspace}%
3306        \usebibmacro{jurisdictionpages}%
3307        \usebibmacro{us:postnote}%
3308        \usebibmacro{altreportdetails}%
3309        \setunit{\addspace}\newblock
3310        \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}%
3311        \setunit{\addspace}%
3312        \usebibmacro{us:courtid+date}%
3313        \setunit{\addspace}%
3314        \usebibmacro{court-note}%
3315        \newblock
3316        \setunit{\addspace}}
3317      \newbibmacro{us:vol+report}{%
3318        \printfield{volume}%
3319        \setunit{\addspace}%
3320        \printfield{journaltitle}%
3321        \iffieldundef{series}{}{%
3322          \setunit{\addspace}%
3323          \printfield[usseries]{series}}}
3324      \newbibmacro{us:postnote}{%
3325        \iffieldundef{postnote}{}{%
3326          \setunit{\addcomma\space}%
3327          \printfield{postnote}%
3328          \clearfield{postnote}%
3329        }}
3330      \newbibmacro{us:courtid+date}{%
3331        \ifboolexpr{
3332          test {\iflistundef{institution}}
3333          and
3334          test {\iflistundef{location}}
3335          and
3336          test {\iffieldundef{year}}
```

```
3337          }{}{%
3338            \printtext[parens]{%
3339              \printlist{location}%
3340              \setunit*{\addspace}%
3341              \printlist{institution}%
3342              \setunit{\addspace}%
3343              \printfield{year}%
3344              \nopunct}}}
3345
```

Here is the format for English cases.

```
3346      \newbibmacro{enjuriscitation}{%
3347        \usebibmacro{title}%
3348        \setunit{\addspace}\newblock
3349        \printfield{neutralcite}%
3350        \setunit*{\addcomma\space}%
3351        \printfield{number}%
3352        \setunit*{\addcomma\space}%
3353        \iffieldundef{journaltitle}{}{%
3354          \usebibmacro{year+vol+report}}%
3355        \usebibmacro{jurisdictionpages}%
3356        \usebibmacro{pcitenote}%
3357        \usebibmacro{altreportdetails}%
3358        \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}% additionalreports
3359        \setunit{\addspace}\newblock
3360        \usebibmacro{courtid}%
3361        \setunit{\addspace}%
3362        \usebibmacro{court-note}}
3363      \newbibmacro{altreportdetails}{%
3364        \restorefield{prenote}{\postnotesecond}%
3365        \iffieldundef{parreporter}{}{%
3366          \usebibmacro{journaldate}[par]%
3367          \setunit{\addspace}\newblock
3368          \usebibmacro{altreportvolume}%
3369          \setunit{\addspace}\newblock
3370          \usebibmacro{altjournaltitle}%
3371          \setunit{\addspace}\newblock
3372          \usebibmacro{altseries}%
3373          \setunit{\addspace}\newblock
3374          \usebibmacro{altjurisdictionpages}%
3375          \iffieldundef{prenote}{}{%
3376            \setunit{\addcomma\space}%
3377            \printfield[postnote]{prenote}}}}
3378      \newbibmacro*{altreportvolume}{%
3379        \iffieldundef{parvolume}{}{%
3380          \printfield{parvolume}}}
3381      \newbibmacro*{altjournaltitle}{%
3382        \iffieldundef{parreporter}{}{
3383          \printfield{parreporter}}}
3384      \newbibmacro*{altseries}{%
3385        \iffieldundef{parseries}{}{%
3386          \printfield{parseries}}}
3387      \newbibmacro*{altjurisdictionpages}{%
3388        \iffieldundef{parpages}{}{%
3389          \printfield{parpages}}}%
3390
```

Legislation

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

```
3391   \newcommand*{\subtypecourtrules}{procedure-rule}
3392   \DeclareBibliographyDriver{legislation}{%
3393     \usebibmacro{bibindex}%
3394     \usebibmacro{begentry}%
3395     \iffieldequals{entrysubtype}{\subtypecourtrules}{%
3396       \usebibmacro{courtrules}%
3397     }{%
3398       \ifkeyword{draft}{%
3399         \usebibmacro{legislation:bill}%
3400       }{%
3401         \ifkeyword{eu}{%
3402           \usebibmacro{eulegislation}%
3403         }{%
3404           \printfield[default]{title}%
3405           \setunit{\addspace}%
3406           \printfield[default]{year}%
3407           \setunit*{\addspace}%
3408           \usebibmacro{legnumber}%
3409           \setunit{\addspace}\newblock
3410           \usebibmacro{legsupp}}}}%
3411     \setunit{\addcomma\space}%
3412     \printfield{note}%
3413     \setunit{\bibpagerefpunct}\newblock
3414     \usebibmacro{pageref}%
3415     \usebibmacro{finentry}}
3416   \newbibmacro*{courtrules}{%
3417     \restorefield{prenote}{\postnotesecond}%
3418     \iffieldequalstr{shorttitle}{PD}{%
3419       \printfield{postnote}%
3420       \clearfield{postnote}%
3421       \setunit{\addspace}%
3422     }{}%
3423     \iffieldundef{shorttitle}{%
3424       \printfield[default]{title}%
3425     }{%
3426       \printfield[default]{shorttitle}}%
3427     \setunit{\addspace}\newblock
3428     \iffieldundef{postnote}{%
3429       \toggletrue{blx@ox@nopostnotedelim}%
3430     }{%
3431       \iffieldequalstr{shorttitle}{CPR}{%
3432         \printfield{postnote}%
3433         \setunit{\addspace}%
3434       }{%
3435         \printtext{%
3436           \bibstring{order}\space
3437           \printfield{postnote}%
3438           \setunit{\addcomma\space}}}}%
3439     \restorefield{postnote}{\postnotesecond}%
3440     \usebibmacro{postnote}%
3441     \clearfield{postnote}%
3442     \setunit{\addspace}\newblock}
3443   \newcommand*{\subtypeprimarylegislation}{primary}
3444   \newbibmacro*{legislation:bill}{%
3445     \printfield[draftleg]{title}%
3446     \setunit{\addspace}%
3447     \printlist{institution}%
```

```
3448      \setunit*{\addspace}%
3449      \iffieldequals{entrysubtype}{\subtypeprimarylegislation}{%
3450        \bibcpstring{bill}%
3451        \setunit{\addspace}%
3452        \printtext[parens]{\usebibmacro{sessionyear}}%
3453        \setunit{\addspace}%
3454        \iffieldundef{number}{}{%
3455          \printlist[billprinting]{institution}}%
3456      }{%
3457        \printtext[parens]{%
3458          \bibstring{draft}\space
3459          \printdate}}
3460      \setunit{\addspace}}
3461    \newbibmacro*{sessionyear}{%
3462      \iffieldundef{year}{}{%
3463        \printfield{year}%
3464        \iffieldundef{endyear}{}{%
3465          \bibdaterangesep
3466          \blx@ox@compyear{\thefield{year}}{\thefield{endyear}}}}}}
3467    \newbibmacro{eulegislation}{%
3468      \printfield[default]{title}%
3469      \setunit{\addspace}\newblock%
3470      \usebibmacro{eulegref}}
3471    \newcommand*{\ojspecedtitle}{OJ Spec Ed}
3472    \newbibmacro*{eulegref}{%
3473      \iffieldequals{journaltitle}{\officialjournaltitle}{%
3474        \printfield[brackets]{year}%
3475        \setunit{\addspace}%
3476        \printfield{journaltitle}%
3477        \setunit{\addspace}%
3478        \iffieldundef{series}{%
3479          \printtext{L}%
3480        }{%
3481          \printfield[default]{series}}%
3482        \usebibmacro{issue/volume}%
3483        \setunit*{\addslash}%
3484        \printfield{pages}%
3485        \togglefalse{blx@ox@nopostnotedelim}%
3486      }{%
3487        \usebibmacro{year+vol+report}%
3488        \setunit*{\addspace}%
3489        \printfield{pages}}}
3490    \newbibmacro*{legnumber}{%
3491      \iffieldequals{entrysubtype}{\subtypeprimarylegislation}{%
3492        \ifboolexpr{(
3493            test {\iffieldundef{number}}
3494            or
3495            not test {\iffieldundef{title}} )
3496          and not (
3497            test {\ifkeyword{cy}}
3498            or
3499            test {\ifkeyword{sc}}
3500            or
3501            test {\ifkeyword{ni}} )
3502        }{}{%
3503          \printtext[parens]{\printfield{number}}%
3504          \toggletrue{blx@ox@nopostnotedelim}}%
3505      }{%
3506        \iffieldundef{number}{}{%
3507          \setunit{\addcomma\addspace}%
3508          \printfield{number}%
3509          \togglefalse{blx@ox@nopostnotedelim}}}}
```

This adds additional material for Welsh statutory instruments.

```
3510    \newbibmacro*{legsupp}{%
3511      \ifkeyword{cy}
3512      {\iffieldundef{userb}
3513        {}
3514        {\printtext{\mkbibparens{\printfield{userb}}}\toggletrue{blx@ox@nopostnotedelim}}}
3515      {}}
3516
```

Treaties, explanatory notes and Hansard

```
3517    \newcommand*{\explanatorynote}{explanatory note}
3518    \newcommand*{\parliamentarytype}{parliamentary}
3519    \newcommand*{\treatysubtype}{piltreaty}
3520    \DeclareBibliographyDriver{legal}{%
3521      \usebibmacro{bibindex}%
3522      \usebibmacro{begentry}%
3523      \iffieldequals{entrysubtype}{\explanatorynote}{%
3524        \printfield[default]{title}%
3525        \setunit{\addspace}\newblock
3526      }{%
3527        \iffieldequals{entrysubtype}{\parliamentarytype}{%
3528          \usebibmacro{legal:parliamentary}%
3529        }{%
3530          \usebibmacro{treatycitation}}}%
3531      \setunit{\addcomma\space}\newblock
3532      \printfield[default]{note}
3533      \setunit{\addspace}\newblock
3534      \iftoggle{bbx:related}
3535        {\usebibmacro{related:init}%
3536         \usebibmacro{related}}
3537        {}%
3538      \setunit{\bibpagerefpunct}%
3539      \usebibmacro{pageref}%
3540      \usebibmacro{finentry}}
3541    \newbibmacro{legal:parliamentary}{%
3542      \printfield[default]{title}%
3543      \newunit\newblock
3544      \printfield{type}%
3545      \setunit{\addspace}%
3546      \iffieldundef{series}{}{%
3547        \printtext[parens]{%
3548          \biblstring{jourser}\space
3549          \printfield{series}}}%
3550      \setunit{\addspace}%
3551      \printfield{volume}%
3552      \setunit{\addcomma\space}%
3553      \usebibmacro{hansard-ref}%
3554      \setunit{\addspace}%
3555      \iffieldundef{year}{}{%
3556        \printtext[parens]{\usebibmacro{date}}}%
3557      \togglefalse{blx@ox@nopostnotedelim}}
3558    \newbibmacro*{hansard-ref}{%
3559      \iffieldundef{postnote}{%
3560        \iffieldundef{pages}{}{%
3561          \printfield{pages}}%
3562      }{}}%
3563    \newbibmacro{treatycitation}{%
3564      \printfield[default]{title}%
```

```
3565        \setunit{\addspace}\newblock%
3566        \printlist[treaty]{institution}
3567        \setunit{\addspace}\newblock
3568        \usebibmacro{treatyinfo}%
3569        \setunit{\addspace}\newblock
3570        \usebibmacro{treaty:year+vol+report}}
3571      \newbibmacro{treatyinfo}{%
3572        \iflistundef{lista}{% execution
3573          \iffieldundef{year}{}{%
3574            \iffieldundef{volume}{}{%
3575              \printtext[parens]{\printdate}}}%
3576        }{%
3577          \printtext[parens]{\printlist[treatydates]{lista}}}}
3578      \newbibmacro{treaty:year+vol+report}{%
3579        \iffieldequals{journaltitle}{\officialjournaltitle}{%
3580          \usebibmacro{eulegref}%
3581        }{%
3582          \usebibmacro{treaty:date}%
3583          \setunit{\addspace}%
3584          \printfield[default]{volume}%
3585          \setunit{\addspace}%
3586          \printfield{journaltitle}%
3587          \setunit*{\addspace}%
3588          \iffieldundef{series}{%
3589            \printfield{type}%
3590            \setunit*{\addspace}%
3591          }{%
3592            \printfield{series}%
3593            \iffieldundef{type}{%
3594              \setunit{\addspace}%
3595              \bibcpstring{number}
3596              \setunit{\addspace}%
3597            }{%
3598              \setunit{\addcomma\space}%
3599          }}
3600          \printfield{number}
3601          \setunit*{\addspace}%
3602          \printfield{pages}}}%
3603      \newbibmacro*{treaty:date}{%
3604        \ifboolexpr{
3605          test {\iffieldundef{volume}}
3606          or
3607          bool {bbx@year-essential}
3608        }{%
3609          \ifboolexpr{
3610            test {\ifkeyword{sc}}
3611            or
3612            test {\iftoggle{bbx:scotstyle}}
3613          }{%
3614            \printfield{year}%
3615          }{%
3616            \printfield[brackets]{year}%
3617        }}{}}
3618
```

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

```
3619        \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.

```
3620    \newcommand{\locationlibrarypunct}{\addcomma\addspace}
3621    \newcommand{\collectionshelfmarkpunct}{\addspace}
3622    \newcommand{\datingpagespunct}{\addcomma\addspace}
3623    \newcommand{\librarycollectionpunct}{\addcomma\addspace}
3624    \newcommand{\pagetotalpagespunct}{\addcomma\addspace}
3625    \newcommand{\columnslayerpunct}{\addsemicolon\addspace}%
```

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

```
3626    \def\recto{r}
3627    \def\verso{v}
3628    \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.

```
3629    \DeclareFieldFormat[manuscript,unpublished]{title}{%
3630      \def\currentfield{title}%
3631      \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
3632      \undef\currentfield}
3633    \DeclareFieldFormat{columns+layer}{\mkbibparens{#1}}
3634    \DeclareFieldFormat{columns}{\mkbibparens{#1}}
3635    \DeclareFieldFormat{layer}{\mkbibparens{#1}}
3636    \DeclareFieldFormat{dating}{#1\isdot}%
3637    \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.

```
3638    \newbibmacro{manuscript:date}{%
3639      \ifboolexpr{
3640        test {\ifnameundef{author}}
3641        and
3642        test {\iffieldundef{title}}
3643        and
3644        test {\iffieldundef{label}}
3645      }{}{\usebibmacro{date}}}
3646    \newbibmacro{dating}{%
3647      \ifboolexpr{(
3648          test {\ifnameundef{author}}
3649          and
3650          test {\iffieldundef{title}}
3651          and
3652          test {\iffieldundef{label}}
3653        ) or
3654        test {\iffieldundef{year}}
3655      }{%
3656        \printfield{dating}%
3657      }{}}
```

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.

```
3658  \newbibmacro{location+library+collection+shelfmark}{%
3659    \printfield{library}%
3660    \setunit{\locationlibrarypunct}%
3661    \printlist{location}%
3662    \setunit{\librarycollectionpunct}%
3663    \usebibmacro{collection+shelfmark}}
3664  \newbibmacro{collection+shelfmark}{%
3665    \ifboolexpr{
3666      test {\iffieldundef{collection}}
3667      and
3668      test {\iffieldundef{shelfmark}}
3669    }{}{%
3670      \printtext[collection+shelfmark]{%
3671        \printfield{collection}%
3672        \setunit*{\collectionshelfmarkpunct}%
3673        \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.

```
3674  \newbibmacro{manuscript:pages}{%
3675    \printfield{pagetotal}%
3676    \setunit{\addspace}%
3677    \iffieldundef{pages}{%
3678      \usebibmacro{manuscript:columns+layer}%
3679    }{%
3680      \usebibmacro{manuscript:columns}%
3681      \setunit{\pagetotalpagespunct}%
3682      \printfield{pages}%
3683      \setunit{\addspace}%
3684      \usebibmacro{manuscript:layer}}}
3685  \newbibmacro{manuscript:columns}{%
3686    \iffieldundef{columns}{}{%
3687      \printtext[columns]{\bibstring{\strfield{columns}column}}}%
3688  }%
3689  \newbibmacro{manuscript:layer}{%
3690    \iffieldundef{layer}{}{%
3691      \printtext[layer]{\bibstring{\strfield{layer}layer}}}%
3692  }%
3693  \newbibmacro{manuscript:columns+layer}{%
3694    \ifboolexpr{
3695      test {\iffieldundef{columns}}
3696      or
3697      test{\iffieldundef{layer}}
3698    }{%
3699      \usebibmacro{manuscript:columns}%
3700      \usebibmacro{manuscript:layer}%
3701    }{%
3702      \printtext[columns+layer]{%
3703        \bibstring{\strfield{columns}column}%
3704        \setunit*{\columnslayerpunct}%
3705        \bibstring{\strfield{layer}layer}}}}%
```

Putting it all together, here is the manuscript driver.

```
3706    \DeclareBibliographyDriver{manuscript}{%
3707      \usebibmacro{bibindex}%
3708      \usebibmacro{begentry}%
3709      \usebibmacro{author}%
3710      \setunit{\printdelim{nametitledelim}}\newblock
3711      \usebibmacro{title}%
3712      \setunit{\titlebyauthordelim}\newblock
3713      \usebibmacro{byauthor}%
3714      \newunit\newblock
3715      \printfield{howpublished}%
3716      \newunit\newblock
3717      \printfield{note}%
3718      \newunit\newblock
3719      \usebibmacro{manuscript:date}%
3720      \newunit\newblock
3721      \usebibmacro{location+library+collection+shelfmark}%
3722      \newunit
3723      \printfield{support}%
3724      \newunit
3725      \usebibmacro{dating}%
3726      \setunit{\datingpagespunct}
3727      \usebibmacro{manuscript:pages}
3728      \newunit\newblock%
3729      \iftoggle{bbx:url}{%
3730        \usebibmacro{url+urldate}%
3731      }{}%
3732      \iftoggle{bbx:related}{%
3733        \usebibmacro{related:init}%
3734        \usebibmacro{related}%
3735      }{}%
3736      \setunit{\bibpagerefpunct}\newblock
3737      \usebibmacro{pageref}%
3738      \usebibmacro{finentry}}
```

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

```
3739    \newbibmacro*{library+location+series+number}{%
3740      \printfield{library}%
3741      \setunit{\locationlibrarypunct}%
3742      \printlist{location}%
3743      \setunit{\librarycollectionpunct}%
3744      \ifboolexpr{
3745        test {\iffieldundef{series}}
3746        and
3747        test {\iffieldundef{number}}
3748      }{}{%
3749        \printtext[collection+shelfmark]{%
3750          \printfield{series}%
3751          \setunit*{\collectionshelfmarkpunct}%
3752          \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'.

```
3753    \newtoggle{blx@ox@ms}
3754    \DeclareBibliographyDriver{unpublished}{%
3755      \usebibmacro{bibindex}%
3756      \usebibmacro{begentry}%
3757      \iffieldundef{library}{\togglefalse{blx@ox@ms}}{\toggletrue{blx@ox@ms}}%
3758      \usebibmacro{author}%
3759      \setunit{\printdelim{nametitledelim}}\newblock
```

```
3760      \usebibmacro{title}%
3761      \setunit{\titlebyauthordelim}\newblock
3762      \usebibmacro{byauthor}%
3763      \newunit\newblock
3764      \printfield{note}%
3765      \newunit\newblock
3766      \printfield{howpublished}%
3767      \newunit\newblock
3768      \iftoggle{blx@ox@ms}{%
3769        \usebibmacro{manuscript:date}%
3770        \newunit\newblock
3771        \usebibmacro{library+location+series+number}%
3772        \newunit
3773        \printfield{support}%
3774        \newunit
3775        \usebibmacro{dating}%
3776        \setunit{\datingpagespunct}
3777        \usebibmacro{manuscript:pages}
3778      }{%
3779        \usebibmacro{location+date}%
3780      }%
3781      \newunit\newblock
3782      \iftoggle{bbx:url}
3783        {\usebibmacro{url+urldate}}
3784        {}%
3785      \newunit\newblock
3786      \usebibmacro{addendum+pubstate}%
3787      \iftoggle{bbx:related}
3788        {\usebibmacro{related:init}%
3789         \usebibmacro{related}}
3790        {}%
3791      \setunit{\bibpagerefpunct}\newblock
3792      \usebibmacro{pageref}%
3793      \usebibmacro{finentry}}
```

2.1.17 Letters

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

```
3794    \DeclareBibliographyDriver{letter}{%
3795      \usebibmacro{bibindex}%
3796      \usebibmacro{begentry}%
3797      \iffieldundef{library}{\togglefalse{blx@ox@ms}}{\toggletrue{blx@ox@ms}}%
3798      \usebibmacro{author}%
3799      \setunit{\printdelim{nametitledelim}}\newblock
3800      \usebibmacro{title}%
3801      \setunit{\titlebyauthordelim}\newblock
3802      \usebibmacro{byauthor}%
3803      \newunit\newblock
3804      \printfield{note}%
3805      \iffieldundef{howpublished}{}{\nopunct\printfield{howpublished}}%
3806      \newunit\newblock
3807      \iftoggle{blx@ox@ms}{%
3808        \usebibmacro{manuscript:date}%
3809        \newunit\newblock
3810        \usebibmacro{library+location+series+number}%
3811        \newunit
3812        \printfield{support}%
3813        \newunit
3814        \usebibmacro{dating}%
```

```
3815        \setunit{\datingpagespunct}
3816        \usebibmacro{manuscript:pages}
3817      }{%
3818        \usebibmacro{location+date}%
3819      }%
3820      \newunit\newblock
3821      \iftoggle{bbx:url}
3822        {\usebibmacro{url+urldate}}
3823        {}%
3824      \newunit\newblock
3825      \usebibmacro{addendum+pubstate}%
3826      \iftoggle{bbx:related}
3827        {\usebibmacro{related:init}%
3828         \usebibmacro{related}}
3829        {}%
3830      \setunit{\bibpagerefpunct}\newblock
3831      \usebibmacro{pageref}%
3832      \usebibmacro{finentry}}
3833    \DeclareFieldFormat[letter]{title}{%
3834      \def\currentfield{title}%
3835      \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
3836      \undef\currentfield}
3837    \DeclareFieldFormat[letter]{date}{%
3838      \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.

```
3839    \xpatchbibdriver{booklet}{%
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 booklet}}
```

```
3855    \xpatchbibdriver{misc}{%
3856      \setunit{\bibpagerefpunct}\newblock
3857      \usebibmacro{pageref}%
3858      \newunit\newblock
3859      \iftoggle{bbx:related}
3860        {\usebibmacro{related:init}%
3861         \usebibmacro{related}}
3862        {}%
3863    }{%
3864      \iftoggle{bbx:related}
3865        {\usebibmacro{related:init}%
3866         \usebibmacro{related}}
```

```
3867          {}%
3868        \setunit{\bibpagerefpunct}\newblock
3869        \usebibmacro{pageref}%
3870      }{}{\wlog{WARNING: biblatex-oxref failed to patch misc}}
```

We provide an option for setting the relatedtype punctuation.

```
3871        \DeclareDelimFormat{begrelateddelimamendedby}{\addcomma\space}
3872        \DeclareDelimFormat{begrelateddelimequals}{\addspace}
3873        \DeclareDelimFormat{begrelateddelimin}{\addcomma\space}
3874        \DeclareDelimFormat{begrelateddelimincludes}{\addcomma\space}
3875        \DeclareDelimFormat{begrelateddelimreprintfrom}{\addperiod\space}
3876        \DeclareDelimFormat{begrelateddelimreviewof}{\newunitpunct}
3877        \DeclareDelimFormat{begrelateddelimtranslationof}{\addspace}
3878        \DeclareDelimFormat{begrelateddelimmultivolume}{\newunitpunct}
3879        \DeclareDelimFormat{relateddelimmultivolume}{\newunitpunct}
3880      \newtoggle{blx@ox@success}
3881      \DeclareBiblatexOption{global,type}[string]{relationpunct}[semicolon]{%
3882        \bgroup\blx@blxinit
3883        \ifcsdef{add#1}{\global\toggletrue{blx@ox@success}}{%
3884          \global\togglefalse{blx@ox@success}%
3885          \PackageError{biblatex-oxref}{%
3886            Invalid option 'relationpunct=#1'%
3887          }{%
3888            Valid values are 'dot','comma','semicolon','colon',\MessageBreak
3889            'period','exclam','question',and 'space'.}}%
3890        \egroup
3891        \iftoggle{blx@ox@success}{\ifstrequal{#1}{space}{%
3892          \DeclareDelimFormat{begrelateddelim}{\addspace}%
3893        }{%
3894          \DeclareDelimFormat{begrelateddelim}{\csuse{add#1}\space}}%
3895        }{}}
3896      \DeclareEntryOption[string]{relationpunct}[semicolon]{%
3897        \bgroup\blx@blxinit
3898        \ifcsdef{add#1}{\global\toggletrue{blx@ox@success}}{%
3899          \global\togglefalse{blx@ox@success}%
3900          \PackageError{biblatex-oxref}{%
3901            Invalid option 'relationpunct=#1'%
3902          }{%
3903            Valid values are 'dot','comma','semicolon','colon',\MessageBreak
3904            'period','exclam','question',and 'space'.}}%
3905        \egroup
3906        \iftoggle{blx@ox@success}{\ifstrequal{#1}{space}{%
3907          \DeclareDelimFormat{begrelateddelim}{\addspace}%
3908          \DeclareDelimFormat{begrelateddelimamendedby}{\addspace}
3909          \DeclareDelimFormat{begrelateddelimequals}{\addspace}%
3910          \DeclareDelimFormat{begrelateddelimin}{\addspace}%
3911          \DeclareDelimFormat{begrelateddelimincludes}{\addspace}%
3912          \DeclareDelimFormat{begrelateddelimreprintfrom}{\addspace}%
3913          \DeclareDelimFormat{begrelateddelimreviewof}{\addspace}%
3914          \DeclareDelimFormat{begrelateddelimtranslationof}{\addspace}%
3915          \DeclareDelimFormat{begrelateddelimmultivolume}{\addspace}%
3916        }{%
3917          \DeclareDelimFormat{begrelateddelim}{\csuse{add#1}\space}%
3918          \DeclareDelimFormat{begrelateddelimamendedby}{\csuse{add#1}\space}
3919          \DeclareDelimFormat{begrelateddelimequals}{\csuse{add#1}\space}%
3920          \DeclareDelimFormat{begrelateddelimin}{\csuse{add#1}\space}%
3921          \DeclareDelimFormat{begrelateddelimincludes}{\csuse{add#1}\space}%
3922          \DeclareDelimFormat{begrelateddelimreprintfrom}{\csuse{add#1}\space}%
3923          \DeclareDelimFormat{begrelateddelimreviewof}{\csuse{add#1}\space}%
3924          \DeclareDelimFormat{begrelateddelimtranslationof}{\csuse{add#1}\space}%
```

```
3925        \DeclareDelimFormat{begrelateddelimmultivolume}{\csuse{add#1}\space}}%
3926      }{}}
3927    \ExecuteBibliographyOptions{relationpunct}
3928    \newcounter{blx@ox@relitem}
3929    \xapptobibmacro{begrelated}{%
3930      \setcounter{blx@ox@relitem}{0}%
3931    }{}{\wlog{WARNING: biblatex-oxref failed to append to begrelated}}
```

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

```
3932    \newtoggle{blx@ox@norelin}
3933    \DeclareBiblatexOption{global,type,entry}{norelatedin}[true]{%
3934      \settoggle{blx@ox@norelin}{#1}}
3935    \xapptobibmacro{begrelatedloop}{%
3936      \iftoggle{blx@ox@norelin}{%
3937        \renewbibmacro*{in:}{%
3938          \ifboolexpr{
3939            test {\iffieldequalstr{entrysubtype}{yearbook}}
3940            or (
3941              test {\ifnameundef{author}}
3942              and
3943              test {\ifnameundef{translator}}
3944              and
3945              test {\iffieldundef{title}}
3946          )}{}{%
3947            \bibstring{in}%
3948            \printunit{\intitlepunct}%
3949          }}}{}%
3950      }{}{\wlog{WARNING: biblatex-oxref failed to append to begrelatedloop}}
3951
```

Translations

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

```
3952    \newbibmacro*{rellanguage}{%
3953      \def\do##1{%
3954        \entrydata{##1}{%
3955          \printlist{language}}}%
3956      \docsvfield{related}%
3957    }
3958    \DeclareFieldFormat{relatedstring:translationof}{%
3959      \iffieldundef{relatedstring}{%
3960        \blx@ox@langbibstring{\usebibmacro{rellanguage}}{original}%
3961        \printunit{\addcomma\space}
3962      }{%
3963        \thefield{relatedstring}\printunit{\relatedpunct}}}
3964
3965    \DeclareFieldFormat{related:translationof}{%
3966      \mkbibbrackets{#1}}
```

Co-publications

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

```
3967    \newbibmacro*{related:copub}[1]{%
3968      \entrydata*{#1}{%
```

```
3969        \usebibmacro{publisher+location+date}%
3970        \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.

```
3971    \renewbibmacro*{related:reprintfrom}[1]{%
3972      \entrydata*{#1}{%
3973        \nopunct
3974        \usedriver{%
3975          \ifnameundef{savedauthor}{%
3976            \ifnameundef{savededitor}{}{%
3977              \ifnamesequal{editor}{savededitor}{%
3978                \clearname{editor}%
3979              }{}}%
3980          }{%
3981            \ifnamesequal{author}{savedauthor}{%
3982              \clearname{author}%
3983            }{}}%
3984          \iffieldundef{savedtitle}{}{%
3985            \iffieldsequal{savedtitle}{title}{%
3986              \clearfield{title}%
3987            }{}}%
3988          \renewbibmacro*{related:init}{}%
3989          \DeclareNameAlias{sortname}{default}%
3990          \ifbibmacroundef{date+extradate}{}{%
3991            \renewbibmacro*{date+extradate}{}%
3992            \renewbibmacro*{date}{\printdate}}%
3993          \renewbibmacro*{pageref}{}%
3994        }{%
3995          \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.

```
3996    \newbibmacro*{related:serialarticle}[1]{%
3997      \entrydata*{#1}{%
3998        \iffieldundef{savedjournaltitle}{}{%
3999          \iffieldsequal{journaltitle}{savedjournaltitle}{%
4000            \clearfield{journaltitle}%
4001          }{}}%
4002        \iffieldundef{savedjournalsubtitle}{}{%
4003          \iffieldsequal{journalsubtitle}{savedjournalsubtitle}{%
4004            \clearfield{journalsubtitle}%
4005          }{}}%
4006        \iffieldundef{savedseries}{}{%
4007          \iffieldsequal{series}{savedseries}{%
4008            \clearfield{series}%
4009          }{}}%
4010        \iffieldundef{savedyear}{\clearfield{year}}{
4011          \iffieldsequal{year}{savedyear}{%
4012            \clearfield{year}%
4013          }{}}%
4014        \usebibmacro{journal+issuetitle}%
4015        \newunit
```

```
4016          \usebibmacro{note+pages}%
4017          \newunit\newblock
4018          \usebibmacro{doi+eprint+url}%
4019          \newunit\newblock
4020          \usebibmacro{addendum+pubstate}}}
```

Reviews

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

```
4021      \DeclareFieldFormat[review]{title}{\mkbibquote{#1\isdot}}
4022      \DeclareFieldFormat[review]{volume}{#1}% volume of a journal
4023      \DeclareFieldFormat[review]{number}{#1}% number of a journal
4024      \DeclareFieldFormat[review]{series}{% series of a journal
4025        \ifinteger{#1}
4026        {\mkbibordseries{#1}~\bibstring{jourser}}
4027        {\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.

```
4028      \newbibmacro*{related:reviewof}[1]{%
4029        \entrydata*{#1}{%
4030          \usedriver{%
4031            \renewbibmacro*{related:init}{}%
4032            \DeclareNameAlias{author}{given-family}%
4033            \renewbibmacro*{pageref}{}%
4034          }{\thefield{entrytype}}%
4035        }%
4036      }
```

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'.

```
4037      \DeclareBibliographyDriver{review}{%
4038        \usebibmacro{bibindex}%
4039        \usebibmacro{begentry}%
4040        \usebibmacro{author/translator+others}%
4041        \setunit{\printdelim{nametitledelim}}\newblock
4042        \usebibmacro{title}%
4043        \setunit{\titlebyauthordelim}\newblock
4044        \usebibmacro{byauthor}%
4045        \newunit\newblock
4046        \usebibmacro{bytranslator+others}%
4047        \newunit\newblock
4048        \printfield{version}%
4049        \newunit\newblock
4050        \iftoggle{bbx:related}{%
4051          \usebibmacro{related:init}%
4052          \usebibmacro{related}%
4053        }{}%
4054        \newunit\newblock
4055        \usebibmacro{in:}%
4056        \setunit{\addspace}%
4057        \usebibmacro{journal+issuetitle}%
4058        \newunit
```

```
4059        \usebibmacro{byeditor+others}%
4060        \iffieldundef{note}%
4061          {\newunit}%
4062          {\setunit{\addsemicolon\addspace}}%
4063        \usebibmacro{note+pages}%
4064        \newunit\newblock
4065        \iftoggle{bbx:isbn}
4066          {\printfield{issn}}
4067          {}%
4068        \newunit\newblock
4069        \usebibmacro{doi+eprint+url}%
4070        \newunit\newblock
4071        \usebibmacro{addendum+pubstate}%
4072        \setunit{\bibpagerefpunct}\newblock
4073        \usebibmacro{pageref}%
4074        \usebibmacro{finentry}}
4075
```

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.

```
4076        \DeclareFieldFormat{related:multivolume}{#1}
4077        \renewbibmacro*{related:multivolume}[1]{%
4078          \entrydata*{#1}{%
4079            \printtext{%
4080              \printfield{volume}%
4081              \printfield{part}%
4082              \iffieldsequal{savedtitle}{title}{}{%
4083                \setunit{\addcolon\space}%
4084                \usebibmacro{title}}%
4085            }%
4086            \setunit*{\addspace}%
4087            \iffieldsequal{savedseries}{series}{\clearfield{series}}{}%
4088            \iffieldsequal{savednumber}{number}{\clearfield{number}}{}%
4089            \iffieldsequal{savededition}{edition}{\clearfield{edition}}{}%
4090            \ifboolexpr{
4091              test {\iflistsequal{savedpublisher}{publisher}}
4092              and
4093              test {\iflistsequal{savedlocation}{location}}
4094            }{\clearlist{publisher}\clearlist{location}}{}%
4095            \iffieldsequal{saveddate}{date}{\clearfield{date}}{}%
4096            \usebibmacro{series+number+edition+publisher+location+date}%
4097          }}
4098
```

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.

```
4099        \providecommand*{\mkrelatedstringtext}[1]{{{\mainlang #1}}}
4100        \newbibmacro*{related:editedas}[1]{%
4101          \entrydata{#1}{%
4102            \renewbibmacro*{name:hook}[1]{%
4103              \ifnumequal{\value{listcount}}{1}
4104                {\mkrelatedstringtext{\lbx@initnamehook{#1}}}
```

```
4105            {}}%
4106        \printfield{edition}%
4107        \setunit{\addspace}%
4108        \usebibmacro{byeditor+others}%
4109        \setunit*{\addcomma\space\bibstring[\mkrelatedstringtext]{astitle}\space}%
4110        \usebibmacro{maintitle+title}%
4111        \setunit{\addspace}%
4112        \printfield{note}%
4113        \newunit\newblock
4114        \printfield{volumes}%
4115        \newunit
4116        \usebibmacro{series+number+publisher+location+date}}}
4117    \renewbibmacro*{related:bytranslator}[1]{%
4118      \entrydata{#1}{%
4119        \renewbibmacro*{name:hook}[1]{%
4120          \ifnumequal{\value{listcount}}{1}
4121            {\mkrelatedstringtext{\lbx@initnamehook{#1}}}
4122            {}}%
4123        \printnames[bytranslator]{translator}%
4124        \setunit*{\addspace\bibstring[\mkrelatedstringtext]{astitle}\space}%
4125        \usebibmacro{maintitle+title}%
4126        \setunit{\addspace}%
4127        \printfield{note}%
4128        \newunit\newblock
4129        \printfield{volumes}%
4130        \newunit
4131        \usebibmacro{series+number+publisher+location+date}}}
4132
```

Joint releases

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

```
4133    \newbibmacro*{related:includes}[1]{%
4134      \stepcounter{blx@ox@relitem}%
4135      \ifnumequal{\value{blx@ox@relitem}}{\value{bbx:relatedtotal}}%
4136        {\bibstring{and}\addspace}{}%
4137      \entrydata{#1}{%
4138        \ifbibmacroundef{date+extradate}{}{%
4139          \renewbibmacro*{date+extradate}{}}%
4140        \usebibmacro{author}%
4141        \setunit{\printdelim{nametitledelim}}\newblock
4142        \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.

```
4143    \DeclareFieldFormat[misc]{title}{%
4144      \def\currentfield{title}%
4145      \iffieldannotation{descriptor}{#1}{%
4146        \iffieldequalstr{relatedtype}{in}{%
4147          \mkbibquote{#1\isdot}%
4148        }{%
4149          \mkbibemph{#1}%
4150        }}%
4151      \undef\currentfield}
```

```
4152    \newbibmacro*{related:in}[1]{%
4153      \entrydata*{#1}{%
4154        \usedriver
4155          {\ifnameundef{savedauthor}
4156             {\ifnameundef{savededitor}
4157                {}
4158                {\ifnamesequal{editor}{savededitor}
4159                   {\clearname{editor}}
4160                   {}}}
4161             {\ifnamesequal{author}{savedauthor}
4162                {\clearname{author}}
4163                {}}%
4164           \renewbibmacro*{related:init}{}%
4165           \DeclareNameAlias{sortname}{default}%
4166           \ifbibmacroundef{date+extradate}
4167             {}
4168             {\renewbibmacro*{date+extradate}{}%
4169              \renewbibmacro*{date}{\printdate}}%
4170           \renewbibmacro*{pageref}{}}}
4171        {\thefield{entrytype}}%
4172      \ifboolexpr{
4173        test {\iffieldundef{pages}}
4174        or
4175        test {\iffieldundef{savedpages}}
4176      }{%
4177        \newunit\newblock
4178      }{%
4179        \setunit{\addspace}%
4180        \bibstring{thiscite}%
4181        \printunit{\addspace}%
4182      }%
4183    }%
4184    \usebibmacro{chapter+pages}%
4185  }
4186
```

2.1.19 Source maps

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

```
4187    \DeclareStyleSourcemap{%
4188      \maps[datatype=bibtex]{%
```

Sort order

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

```
4189        \map{
4190          \pertype{proceedings}
4191          \pertype{mvproceedings}
4192          \step[notfield=author,
4193            fieldsource=organization,
4194            fieldtarget=author]
4195        }
```

Descriptors

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

```
4196        \map[overwrite=false]{
4197          \step[fieldsource=descriptor,final]
4198          \step[notfield=title,
4199            fieldset=title+an,
4200            fieldvalue={=descriptor}]
4201          \step[notfield=title,
4202            fieldsource=descriptor,
4203            fieldtarget=title]
4204          \step[fieldsource=descriptor,
4205            fieldtarget=note]
4206        }
```

Pseudonyms and inferred authorship

These help ensure compatibility with biblatex-realauthor.

```
4207        \map[overwrite=false]{
4208          \step[fieldsource=realauthor,final]
4209          \step[notfield=author,
4210            fieldset=author+an,
4211            fieldvalue={=inferred}]
4212          \step[notfield=author,
4213            fieldsource=realauthor,
4214            fieldtarget=author]
4215          \step[fieldsource=realauthor,
4216            fieldtarget=authoraddon]
4217        }
4218        \map[overwrite=false]{
4219          \step[fieldsource=realeditor,final]
4220          \step[notfield=editor,
4221            fieldset=editor+an,
4222            fieldvalue={=inferred}]
4223          \step[notfield=editor,
4224            fieldsource=realeditor,
4225            fieldtarget=editor]
4226          \step[fieldsource=realeditor,
4227            fieldtarget=editoraddon]
4228        }
```

Editors as joint authors

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

```
4229        \map[overwrite=false]{
4230          \step[fieldsource=editor+an,
4231            match=\regexp{=jointauthor},
4232            final]
4233          \step[fieldsource=editor,
4234            fieldtarget=jointauthor]
4235          \step[fieldsource=editortype,
4236            fieldtarget=jointauthortype]
4237        }
4238        \map[overwrite=false]{
4239          \step[fieldsource=translator+an,
```

```
4240        match=\regexp{=jointauthor},
4241        final]
4242      \step[fieldsource=translator,
4243        fieldtarget=jointauthor]
4244      \step[fieldset=jointauthortype,
4245        fieldvalue={=translator}]
4246    }
```

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.

```
4247      \map[overwrite=false]{
4248        \pertype{standard}
4249        \step[notfield=author,
4250            fieldsource=number,
4251            final]
4252        \step[fieldset=sortkey,
4253            origfieldval]
4254      }
```

Audiovisual materials

For audiovisual materials, origdatetype defaults to 'recorded'.

```
4255      \map[overwrite=false]{
4256        \pertype{audio}
4257        \pertype{music}
4258        \pertype{movie}
4259        \pertype{video}
4260        \pertype{inaudio}
4261        \pertype{inmusic}
4262        \pertype{inmovie}
4263        \pertype{invideo}
4264        \step[fieldset=origdatetype,fieldvalue={recorded}]
4265      }
```

Legal references

These help ensure compatibility with oscola.

```
4266      \map[overwrite=false]{
4267        \pertype{jurisdiction}
4268        \step[fieldsource=reporter,
4269            fieldtarget=journaltitle]
4270        \step[fieldsource=court,
4271            fieldtarget=institution]
4272        \step[fieldsource=additionalreports,
4273            fieldtarget=listb]
4274        \step[fieldsource=ecli,
4275            fieldtarget=verba]
4276      }%
4277      \map[overwrite=false]{
4278        \pertype{legal}
4279        \step[fieldsource=reporter,
4280            fieldtarget=journaltitle]
4281      }
```

```
4282        \map[overwrite=true]{
4283            \pertype{legal}
4284            \step[fieldsource=parties,
4285                  fieldtarget=institution]
4286            \step[fieldsource=execution,
4287                  fieldtarget=lista]
4288        }
```

This is how oscola removes dots from entries.

```
4289        \map[overwrite=true]{
4290         \pertype{jurisdiction}
4291         \pertype{legislation}
4292         \pertype{legal}
4293         \step[fieldsource=title,
4294               match=\regexp{(\d)\.(\d)},
4295               replace=\regexp{$1.$2}]
4296         \step[fieldsource=title,
4297               match=\regexp{(\D)\.(\d)},
4298               replace=\regexp{$1 $2}]
4299         \step[fieldsource=title,
4300                match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4301                replace=\regexp{$1}]
4302         \step [fieldsource=title,
4303                match=\regexp{([^\d{])\.(?![}])},
4304                replace=\regexp{$1}]
4305         \step[fieldsource=shorttitle,
4306               match=\regexp{(\d)\.(\d)},
4307               replace=\regexp{$1.$2}]
4308         \step[fieldsource=shorttitle,
4309               match=\regexp{(\D)\.(\d)},
4310               replace=\regexp{$1 $2}]
4311         \step[fieldsource=shorttitle,
4312                match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4313                replace=\regexp{$1}]
4314         \step [fieldsource=shorttitle,
4315                match=\regexp{([^\d{])\.(?![}])},
4316                replace=\regexp{$1}]
4317         \step[fieldsource=parreporter,
4318               match=\regexp{(\d)\.(\d)},
4319               replace=\regexp{$1.$2}]
4320         \step[fieldsource=parreporter,
4321               match=\regexp{(\D)\.(\d)},
4322               replace=\regexp{$1 $2}]
4323         \step[fieldsource=parreporter,
4324                match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4325                replace=\regexp{$1}]
4326         \step [fieldsource=parreporter,
4327                match=\regexp{([^\d{])\.(?![}])},
4328                replace=\regexp{$1}]
4329         \step[fieldsource=journaltitle,
4330               match=\regexp{(\d)\.(\d)},
4331               replace=\regexp{$1.$2}]
4332         \step[fieldsource=journaltitle,
4333               match=\regexp{(\D)\.(\d)},
4334               replace=\regexp{$1 $2}]
4335         \step[fieldsource=journaltitle,
4336                match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4337                replace=\regexp{$1}]
4338         \step [fieldsource=journaltitle,
4339                match=\regexp{([^\d{])\.(?![}])},
```

```
4340               replace=\regexp{$1}]
4341        \step[fieldsource=institution,
4342               match=\regexp{(\d)\.(\d)},
4343               replace=\regexp{$1.$2}]
4344        \step[fieldsource=institution,
4345               match=\regexp{(\D)\.(\d)},
4346               replace=\regexp{$1 $2}]
4347        \step[fieldsource=institution,
4348               match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4349               replace=\regexp{$1}]
4350        \step[fieldsource=institution,
4351               match=\regexp{([^\d{])\.(?![}])},
4352               replace=\regexp{$1}]
4353        \step[fieldsource=publisher,
4354               match=\regexp{(\d)\.(\d)},
4355               replace=\regexp{$1.$2}]
4356        \step[fieldsource=publisher,
4357               match=\regexp{(\D)\.(\d)},
4358               replace=\regexp{$1 $2}]
4359        \step[fieldsource=publisher,
4360               match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4361               replace=\regexp{$1}]
4362        \step [fieldsource=publisher,
4363               match=\regexp{([^\d{])\.(?![}])},
4364               replace=\regexp{$1}]
4365        \step[fieldsource=location,
4366               match=\regexp{(\d)\.(\d)},
4367               replace=\regexp{$1.$2}]
4368        \step[fieldsource=location,
4369               match=\regexp{(\D)\.(\d)},
4370               replace=\regexp{$1 $2}]
4371        \step[fieldsource=location,
4372               match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4373               replace=\regexp{$1}]
4374        \step [fieldsource=location,
4375               match=\regexp{([^\d{])\.(?![}])},
4376               replace=\regexp{$1}]
4377        \step[fieldsource=series,
4378               match=\regexp{(\d)\.(\d)},
4379               replace=\regexp{$1.$2}]
4380        \step[fieldsource=series,
4381               match=\regexp{(\D)\.(\d)},
4382               replace=\regexp{$1 $2}]
4383        \step[fieldsource=series,
4384               match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4385               replace=\regexp{$1}]
4386        \step [fieldsource=series,
4387               match=\regexp{([^\d{])\.(?![}])},
4388               replace=\regexp{$1}]
4389        \step[fieldsource=indextitle,
4390               match=\regexp{(\d)\.(\d)},
4391               replace=\regexp{$1.$2}]
4392        \step[fieldsource=indextitle,
4393               match=\regexp{(\D)\.(\d)},
4394               replace=\regexp{$1 $2}]
4395        \step[fieldsource=indextitle,
4396               match=\regexp{(?:\A|[^{])\K\.([^\d}])},
4397               replace=\regexp{$1}]
4398        \step [fieldsource=indextitle,
4399               match=\regexp{([^\d{])\.(?![}])},
4400               replace=\regexp{$1}]
4401      }
```

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

```
4402        \map[overwrite=false]{
4403          \step[fieldsource=casenumber,final]
4404          \step[notfield=number,fieldsource=casenumber,fieldtarget=number]
4405          \step[fieldsource=casenumber,fieldtarget=userb]
4406        }
4407      }%
4408    }
4409
```

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.

```
4410    \DeclareSortingTemplate{nty}{
4411      \sort{
4412        \field{presort}
4413      }
4414      \sort[final]{
4415        \field{sortkey}
4416      }
4417      \sort{
4418        \field{sortname}
4419        \field{author}
4420        \field{editor}
4421        \field{translator}
4422        \field{sorttitle}
4423        \field{title}
4424        \field{library}
4425      }
4426      \sort{
4427        \field{sorttitle}
4428        \field{title}
4429      }
4430      \sort{
4431        \field{sortyear}
4432        \field{year}
4433      }
4434      \sort{
4435        \field{volume}
4436        \literal{0}
4437      }
4438      \sort{
4439        \field{location}
4440      }
4441      \sort{
4442        \field{collection}
4443        \field{series}
4444      }
4445    }
```

The 'nyt' scheme is used by oxyear.

```
4446    \DeclareSortingTemplate{nyt}{
4447      \sort{
4448        \field{presort}
4449      }
4450      \sort[final]{
```

```
4451        \field{sortkey}
4452      }
4453    \sort{
4454      \field{sortname}
4455      \field{author}
4456      \field{editor}
4457      \field{translator}
4458      \field{sorttitle}
4459      \field{title}
4460      \field{library}
4461    }
4462    \sort{
4463      \field{sortyear}
4464      \field{labelyear}
4465      \field{year}
4466    }
4467    \sort{
4468      \field{sorttitle}
4469      \field{title}
4470    }
4471    \sort{
4472      \field{volume}
4473      \literal{0}
4474    }
4475    \sort{
4476      \field{location}
4477    }
4478    \sort{
4479      \field{collection}
4480      \field{series}
4481    }
4482  }
```

The 'anyt' scheme is used by oxalph.

```
4483  \DeclareSortingTemplate{anyt}{
4484    \sort{
4485      \field{presort}
4486    }
4487    \sort{
4488      \field{labelalpha}
4489    }
4490    \sort[final]{
4491      \field{sortkey}
4492    }
4493    \sort{
4494      \field{sortname}
4495      \field{author}
4496      \field{editor}
4497      \field{translator}
4498      \field{sorttitle}
4499      \field{title}
4500      \field{library}
4501    }
4502    \sort{
4503      \field{sortyear}
4504      \field{labelyear}
4505      \field{year}
4506    }
4507    \sort{
4508      \field{sorttitle}
```

```
4509        \field{title}
4510      }
4511      \sort{
4512        \field{volume}
4513        \literal{0}
4514      }
4515      \sort{
4516        \field{location}
4517      }
4518      \sort{
4519        \field{collection}
4520        \field{series}
4521      }
4522    }
```

The following entry types never put editors first.

```
4523    \ExecuteBibliographyOptions
4524      [proceedings,report,artwork,audio,image,music,movie,performance,video,%
4525      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 stand-
ard 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}}}
```

Since v3.12, authoryear.bbx has had an bbx:ifmergeddate test. We don't use it, but if we define it too it suppresses redefinition warnings later.

```
78    \newbibmacro*{bbx:ifmergeddate}{\@secondoftwo}
79
```

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).

```
80    \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.

```
81    \def\bbx@opt@mergedate@maximum{%
82      \renewbibmacro*{date+extradate}{%
83        \iffieldundef{labelyear}{}{%
84          \iflabeldateisdate{%
85            \printtext[datelabel]{%
86              \printfield{issue}\clearfield{issue}%
87              \setunit*{\addspace}%
88              \printdateextra}%
89            \clearfield{year}\clearfield{yeardivision}\clearfield{month}\clearfield{day}%
90          }{%
91            \iflabeldateisanydate{%
92              \printtext[datelabel]{%
93                \csuse{print\thefield{labeldatesource}dateextra}}%
94              \clearfield{\thefield{labeldatesource}year}%
95              \clearfield{\thefield{labeldatesource}yeardivision}%
96              \clearfield{\thefield{labeldatesource}month}%
97              \clearfield{\thefield{labeldatesource}day}%
98            }{%
99              \usebibmacro{labeldate}%
100             \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.

```
101   \def\bbx@opt@mergedate@compact{%
102     \renewbibmacro*{date+extradate}{%
103       \iffieldundef{labelyear}{}{%
104         \iflabeldateisdate{%
105           \printtext[datelabel]{\printdateextra}%
106           \clearfield{year}\clearfield{yeardivision}\clearfield{month}\clearfield{day}%
107         }{%
108           \iflabeldateisanydate{%
109             \printtext[datelabel]{%
110               \csuse{print\thefield{labeldatesource}dateextra}}%
111             \clearfield{\thefield{labeldatesource}year}%
112             \clearfield{\thefield{labeldatesource}yeardivision}%
113             \clearfield{\thefield{labeldatesource}month}%
114             \clearfield{\thefield{labeldatesource}day}%
115           }{%
116             \usebibmacro{labeldate}%
117             \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}}}}}}
```

- `year` always merges the year, and only the year, with the label date. Other date and time componencts 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.

```
118  \def\bbx@opt@mergedate@year{%
119    \renewbibmacro*{date+extradate}{%
120      \iffieldundef{labelyear}{}{%
121        \usebibmacro{labeldate}%
122        \iflabeldateisdate{%
123          \clearfield{year}
124        }{%
125          \iflabeldateisanydate{%
126            \clearfield{\thefield{labeldatesource}year}%
127          }{%
128            \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
129          }}}}}
```

- 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.

```
130  \def\bbx@opt@mergedate@basic{%
131    \renewbibmacro*{date+extradate}{%
132      \iffieldundef{labelyear}{}{%
133        \usebibmacro{labeldate}%
134        \iflabeldateisdate{%
135          \ifboolexpr{
136            test {\ifdateshavedifferentprecision{label}{}}
137            or
138            not test {\iffieldundef{issue}}
139          }{}{%
140            \clearfield{year}}%
141        }{%
142          \iflabeldateisanydate{%
143            \ifdateshavedifferentprecision{label}{\thefield{labeldatesource}}{}{%
144              \clearfield{\thefield{labeldatesource}year}}%
145          }{%
146            \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
147          }}}}}
```

- 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.

```
148  \def\bbx@opt@mergedate@minimum{%
149    \renewbibmacro*{date+extradate}{%
150      \iffieldundef{labelyear}{}{%
151        \usebibmacro{labeldate}%
152        \iflabeldateisdate{%
153          \ifboolexpr{
154            test {\ifdateshavedifferentprecision{label}{}}
155            or
156            not test {\iffieldundef{extradate}}
157            or
158            not test {\iffieldundef{issue}}
159          }{}{%
160            \clearfield{year}}%
161        }{%
162          \iflabeldateisanydate{%
163            \ifboolexpr{
164              test {\ifdateshavedifferentprecision{label}{\thefield{labeldatesource}}}
165              or
166              not test {\iffieldundef{extradate}}
```

```
167              }{}{%
168                \clearfield{\thefield{labeldatesource}year}}%
169            }{%
170              \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
171          }}}}}
```

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

```
172      \def\bbx@opt@mergedate@false{%
173        \renewbibmacro*{date+extradate}{%
174          \iffieldundef{labelyear}{}{%
175            \usebibmacro{labeldate}%
176            \iflabeldateisanydate{}{%
177              \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
178          }}}}
```

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

```
179      \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`.

```
180      \newrobustcmd*{\mknoyeardaterangefull}[2]{%
181        \iffieldundef{#2month}{}{%
182          \printtext[{#2date}]{%
183            \datecircaprint
184            \iffieldundef{#2yeardivision}{%
185              \csuse{mkbibdate#1}{}{#2month}{#2day}%
186              \blx@printtime{#2}{}%
187            }{%
188              \csuse{mkbibyeardivisiondate#1}{}{#2yeardivision}}%
189            \dateuncertainprint
190            \iffieldundef{#2endmonth}{}{%
191              \iffieldequalstr{#2endmonth}{}{%
192                \mbox{\bibdaterangesep}%
193              }{%
194                \bibdaterangesep
195                \enddatecircaprint
196                \iffieldundef{#2yeardivision}{%
197                  \csuse{mkbibdate#1}{}{#2endmonth}{#2endday}%
198                  \blx@printtime{#2}{end}%
199                }{%
200                  \csuse{mkbibyeardivisiondate#1}{}{#2endyeardivision}}%
201                \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.

```
202      \newrobustcmd*{\mknoyeardaterangetrunc}[2]{%
203        \iffieldundef{#2month}{}{%
204          \printtext[{#2date}]{%
```

```
205        \datecircaprint
206        \iffieldundef{#2yeardivision}{%
207          \ifboolexpr{
208            test {\ifdateyearsequal{label}{labelend}}
209            and
210            test {\iffieldsequal{#2month}{#2endmonth}}
211          }{%
212            \csuse{mkbibdate#1}{}{}{#2day}%
213          }{%
214            \csuse{mkbibdate#1}{}{#2month}{#2day}}%
215        }{%
216          \csuse{mkbibyeardivisiondate#1}{}{#2yeardivision}}%
217        \dateuncertainprint
218        \iffieldundef{#2endmonth}{}{%
219          \iffieldequalstr{#2endmonth}{}{%
220            \mbox{\bibdaterangesep}%
221          }{%
222            \bibdaterangesep
223            \enddatecircaprint
224            \iffieldundef{#2yeardivision}{%
225              \csuse{mkbibdate#1}{}{#2endmonth}{#2endday}%
226            }{%
227              \csuse{mkbibyeardivisiondate#1}{}{#2endyeardivision}}%
228            \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.

```
229    \xpatchcmd{\mkdaterangefull}{%
230      \iffieldundef{#2year} {\blx@nounit}%
231    }{%
232      \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
233    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch mkdaterangefull}}
234    \xpatchcmd{\mkdaterangetrunc@i}{%
235      \iffieldundef{#2year} {\blx@nounit}%
236    }{%
237      \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
238    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch mkdaterangetrunc@i}}
239    \xpatchcmd{\mkdaterangefullextra}{%
240      \iffieldundef{#2year} {\blx@nounit}%
241    }{%
242      \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
243    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch mkdaterangefullextra}}
244    \xpatchcmd{\mkdaterangetruncextra@i}{%
245      \iffieldundef{#2year} {\blx@nounit}%
246    }{%
247      \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
248    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch mkdaterangetruncextra@i}}
249
```

2.4.3 BIBLIOGRAPHY FORMATTING

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

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

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

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

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

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

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

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

The shorthand formatting is just like authoryear.

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

```
301        {\item}
```

2.4.4 Name and date formatting

We set up hashing just as in authoryear.

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

We ensure related entries do not interfere with the hashing.

```
303    \xapptobibmacro{begrelated}{%
304      \booltrue{bbx@inset}}%
305    {}{\wlog{WARNING: biblatex-oxref (oxyear) failed to append to begrelated}}
306    \xapptobibmacro{endrelated}{%
307      \usebibmacro*{bbx:savehash}}%
308    {}{\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).

```
309    \xpatchbibmacro{author}{%
310      \iffieldundef{authortype}%
311    }{%
312      \usebibmacro{date+extradate}%
313      \setunit*{\addspace}%
314      \iffieldundef{authortype}%
315    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch author (authortype)}}%
316    \xpatchbibmacro{author}{%
317      \global\undef\bbx@lasthash
318    }{%
319      \global\undef\bbx@lasthash
320      \usebibmacro{labeltitle}%
321      \setunit*{\addspace}%
322      \usebibmacro{date+extradate}%
323    }{}{\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.

```
324    \xpatchbibmacro{namepairs}{%
325      \printnames[by#1]%
326    }{%
327      \printnames[#1]%
328    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch namepairs}}
329    \xpatchbibmacro{author+altauthor}{%
330      \printnames{author}%
331    }{%
332      \ifboolexpr{%
333        ( not test {\ifnameundef{shortauthor}} )
334        and
335        test {\ifnumequal{\value{shortauthor}}{\value{author}}}
336      }{%
337        \usebibmacro{namepairs}{author}{shortauthor}%
338      }{%
339        \printnames{author}%
340      }%
341    }{}{\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.

```
342    \xpatchbibmacro{bbx:editor}{%
343      \usebibmacro{#1}%
344    }{%
345      \usebibmacro{date+extradate}%
346      \setunit*{\addspace}%
347      \usebibmacro{#1}%
348    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch bbx:editor}}%
349    \xpatchbibmacro{bbx:editor}{%
350      \global\undef\bbx@lasthash
351    }{%
352      \global\undef\bbx@lasthash
353      \usebibmacro{labeltitle}%
354      \setunit*{\addspace}%
355      \usebibmacro{date+extradate}%
356    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch bbx:editor (lasthash)}}%
357    \xpatchbibmacro{editor+alteditor}{%
358      \printnames[byeditor]%
359    }{%
360      \printnames[editor]%
361    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch editor+alteditor}}
362    \xpatchbibmacro{editor+alteditor}{%
363      \printnames{editor}%
364    }{%
365      \ifboolexpr{%
366        ( not test {\ifnameundef{shorteditor}} )
367        and
368        test {\ifnumequal{\value{shorteditor}}{\value{editor}}}
369      }{%
370        \usebibmacro{namepairs}{editor}{shorteditor}%
371      }{%
372        \printnames{editor}%
373      }%
374    }{}{\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.

```
375    \xpatchbibmacro{bbx:translator}{%
376      \global\undef\bbx@lasthash
377    }{%
378      \global\undef\bbx@lasthash
379      \usebibmacro{labeltitle}%
380      \setunit*{\addspace}%
381      \usebibmacro{date+extradate}%
382    }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch bbx:translator (lasthash)}}%
383    \xpatchbibmacro{bbx:translator}{%
384      \usebibmacro{#1}%
385    }{%
386      \usebibmacro{date+extradate}%
387      \setunit*{\addspace}%
388      \usebibmacro{#1}%
389    }{}{\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.

```
390    \newtoggle{blx@ox@clearedtitle}
391    \newbibmacro*{labeltitle}{%
392      \iffieldundef{label}{%
393        \iffieldundef{shorttitle}{%
394          \ifboolexpr{
```

```
395              test {\iffieldundef{title}}
396              and
397              test {\iffieldundef{subtitle}}
398            }{%
399              \printfield{library}%
400              \clearfield{library}%
401            }{%
402              \printtext[title]{%
403                \printfield[titlecase]{title}%
404                \setunit{\subtitlepunct}%
405                \printfield[titlecase]{subtitle}}%
406              \clearfield{title}%
407              \clearfield{subtitle}%
408              \toggletrue{blx@ox@clearedtitle}%
409              \setunit{\addspace}%
410            }%
411          }{%
412            \printtext[title]{\printfield[titlecase]{shorttitle}}%
413          }%
414        }{%
415          \printfield{label}%
416        }%
417      }
```

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

```
418      \xpretobibmacro{maintitle+title}{%
419        \iftoggle{blx@ox@clearedtitle}{%
420          \usebibmacro{maintitle+volume}%
421          \clearfield{maintitle}%
422          \clearfield{volume}%
423        }{}%
424      }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to prepend to maintitle+title}}
425      \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.

```
426      \xpatchbibdriver{online}{%
427        \iffieldundef{year}%
428      }{%
429        \ifboolexpr{
430          test {\iffieldundef{yeardivision}}
431          and
432          test {\iffieldundef{month}}
433        }%
434      }{}{\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.

```
435      \DeclareFieldFormat[bookinbook]{citetitle}{%
436        \ifboolexpr{
437          test {\iffieldequalstr{entrysubtype}{poem}}
438          or
439          test {\iffieldequalstr{entrysubtype}{play}}
440        }{%
441          \mkbibemph{#1}%
442        }{%
```

```
443          \mkbibquote{#1\isdot}}}
444     \DeclareFieldFormat[suppperiodical,inaudio,inmusic,inmovie,invideo,online,%
445          image,manuscript,unpublished]{citetitle}{%
446       \def\currentfield{title}%
447       \ifboolexpr{
448         test {\iffieldannotation{descriptor}}
449         or (
450           test {\iffieldundef{shorttitle}}
451           and
452           test {\iffieldundef{title}}
453         )
454       }{#1}{\mkbibquote{#1\isdot}}%
455       \undef\currentfield}
456     \DeclareFieldFormat[suppperiodical,inaudio,inmusic,inmovie,invideo,online,%
457          image,manuscript,unpublished]{citetitle}{%
458       \def\currentfield{title}%
459       \ifboolexpr{
460         test {\iffieldannotation{descriptor}}
461         or (
462           test {\iffieldundef{shorttitle}}
463           and
464           test {\iffieldundef{title}}
465         )
466       }{#1}{\mkbibquote{#1\isdot}}%
467       \undef\currentfield}
468     \DeclareFieldFormat[audio,music]{citetitle}{%
469       \def\currentfield{title}%
470       \ifboolexpr{
471         test {\iffieldannotation{descriptor}}
472         or (
473           test {\iffieldundef{shorttitle}}
474           and
475           test {\iffieldundef{title}}
476         )
477       }{#1}{%
478         \iffieldequalstr{entrysubtype}{podcast}{%
479           \mkbibquote{#1\isdot}%
480         }{%
481           \mkbibemph{#1}}}%
482       \undef\currentfield}
483     \DeclareFieldFormat[movie,video]{citetitle}{%
484       \def\currentfield{title}%
485       \ifboolexpr{
486         test {\iffieldannotation{descriptor}}
487         or (
488           test {\iffieldundef{shorttitle}}
489           and
490           test {\iffieldundef{title}}
491         )
492       }{#1}{%
493         \ifboolexpr{
494           test {\iffieldequalstr{entrysubtype}{episode}}
495           or
496           test {\iffieldequalstr{entrysubtype}{clip}}
497           or
498           test {\iffieldequalstr{entrysubtype}{webcast}}
499         }{%
500           \mkbibquote{#1\isdot}%
501         }{%
502           \mkbibemph{#1}}}%
503       \undef\currentfield}
504     \DeclareFieldFormat[legislation,legal]{citetitle}{#1}
```

```
505   \DeclareFieldFormat[misc]%
506       {citetitle}{%
507     \def\currentfield{title}%
508     \ifboolexpr{
509       test {\iffieldannotation{descriptor}}
510       or (
511         test {\iffieldundef{shorttitle}}
512         and
513         test {\iffieldundef{title}}
514       )
515     }{#1}{%
516       \iffieldequalstr{relatedtype}{in}{%
517         \mkbibquote{#1\isdot}%
518       }{%
519         \mkbibemph{#1}%
520       }}%
521     \undef\currentfield}
522
```

2.4.5 Journal division formatting

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

```
523   \renewcommand*{\bibpagespunct}{%
524     \ifboolexpr{
525       test {\ifentrytype{article}}
526       or
527       test {\ifentrytype{suppperiodical}}
528       or
529       test {\ifentrytype{review}}
530     }{%
531       \addcolon\space
532     }{%
533       \addcomma\space
534     }%
535   }
```

2.4.6 Manuscripts

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

```
536   \renewbibmacro{manuscript:date}{%
537     \ifboolexpr{
538       test {\ifnameundef{author}}
539       and
540       not togl {blx@ox@clearedtitle}
541       and
542       test {\iffieldundef{label}}
543     }{}{\usebibmacro{date}}}
```

We include the library field as a fallback title.

```
544   \DeclareLabeltitle{%
545     \field{shorttitle}
546     \field{title}
547     \field{maintitle}
548     \field{library}
549   }
```

2.4.7 Source maps

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

```
550    \DeclareStyleSourcemap{%
551      \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.

```
552        \map[overwrite=true]{
553          \step[notmatch=\regexp{nonodate},fieldsource=options,final]
554          \step[fieldsource=sortyear,final]
555          \step[fieldset=options,append,fieldvalue={,nonodate}]
556        }
557        \map[overwrite=true]{
558          \step[notfield=options,final]
559          \step[fieldsource=sortyear,final]
560          \step[fieldset=options,fieldvalue={nonodate}]
561        }
```

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.

```
562        \map[overwrite=false]{
563          \pertype{standard}
564          \step[notfield=author,
565                fieldsource=number,
566                fieldtarget=label]
567        }
568    }}
569
```

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   }
```

3

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 gininits 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}
```

5

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 por}{ed\adddotspace}},
130    byredactor        = {{redacci\'on de}{red\adddotspace de}},
131    byreviser         = {{revisado por}{rev\adddotspace}},
132    byreviewer        = {{rese\~nado por}{res\adddotspace}},
133    byfounder         = {{fundado por}{fund\adddotspace}},
134    bycontinuator     = {{continuado por}{cont\adddotspace}},
135    bycollaborator    = {{colaboraci\'on de}{col\adddotspace de}},
136    bytranslator      = {{traducido \lbx@lfromlang\ por}{trad\adddotspace \lbx@sfromlang}},
137    bycommentator     = {{comentado por}{com\adddotspace}},
138    byannotator       = {{anotado por}{anot\adddotspace}},
139    byeditortr        = {{editado y traducido \lbx@lfromlang\ por}%
140                         {ed\adddotspace y trad\adddotspace \lbx@sfromlang}},
141    byeditorco        = {{editado y comentado por}%
142                         {ed\adddotspace y com\adddotspace }},
143    byeditoran        = {{edici\'on y notas de}%
144                         {ed\adddotspace y not\adddotspace}},
145    byeditorin        = {{edici\'on e introducci\'on de}%
146                         {ed\adddotspace e intr\adddotspace}},
147    byeditorfo        = {{edici\'on y pr\'ologo de}%
148                         {ed\adddotspace y pr\'ol\adddotspace}},
149    byeditoraf        = {{edici\'on y ep\'ilogo de}%
150                         {ed\adddotspace y ep\'il\adddotspace}},
151    byeditortrco      = {{editado,traducido \lbx@lfromlang\ y comentado por}%
152                         {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang\ y
                            ↪ com\adddotspace}},
153    byeditortran      = {{edici\'on,traducci\'on \lbx@lfromlang\ y notas de}%
```

```
154                              {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang\ y
                          ↪  not\adddotspace}},
155        byeditortrin    = {{edici\'on,traducci\'on \lbx@lfromlang\ e introducci\'on de}%
156                              {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang\ e
                          ↪  intr\adddotspace}},
157        byeditortrfo    = {{edici\'on,traducci\'on \lbx@lfromlang\ y pr\'ologo de}%
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    = {{edici\'on,comentarios y pr\'ologo de}%
164                              {ed.,\addabbrvspace com\adddotspace y pr\'ol\adddotspace}},
165        byeditorcoaf    = {{edici\'on,comentarios y ep\'ilogo de}%
166                              {ed.,\addabbrvspace com\adddotspace y ep\'il\adddotspace}},
167        byeditoranin    = {{edici\'on,notas e introducci\'on de}%
168                              {ed.,\addabbrvspace anot\adddotspace e intr\adddotspace}},
169        byeditoranfo    = {{edici\'on,notas y pr\'ologo de}%
170                              {ed.,\addabbrvspace anot\adddotspace y pr\'ol\adddotspace}},
171        byeditoranaf    = {{edici\'on,notas y ep\'ilogo de}%
172                              {ed.,\addabbrvspace anot\adddotspace y ep\'il\adddotspace}},
173        byeditortrcoin  = {{edici\'on,traducci\'on \lbx@lfromlang,comentarios e introducci\'on
          ↪  de}%
174                              {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang,com\adddotspace e
                          ↪  intr\adddotspace}},
175        byeditortrcofo  = {{edici\'on,traducci\'on \lbx@lfromlang,comentarios y pr\'ologo de}%
176                              {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang,com\adddotspace y
                          ↪  pr\'ol\adddotspace}},
177        byeditortrcoaf  = {{edici\'on,traducci\'on \lbx@lfromlang,comentarios y ep\'ilogo de}%
178                              {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang,com\adddotspace y
                          ↪  ep\'il\adddotspace}},
179        byeditortranin  = {{edici\'on,traducci\'on \lbx@lfromlang,notas e introducci\'on de}%
180                              {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang,anot\adddotspace e
                          ↪  intr\adddotspace}},
181        byeditortranfo  = {{edici\'on,traducci\'on \lbx@lfromlang,notas y pr\'ologo de}%
182                              {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang,anot\adddotspace y
                          ↪  pr\'ol\adddotspace}},
183        byeditortranaf  = {{edici\'on,traducci\'on \lbx@lfromlang,notas y ep\'ilogo de}%
184                              {ed.,\addabbrvspace trad\adddotspace \lbx@sfromlang,anot\adddotspace y
                          ↪  ep\'il\adddotspace}},
185        bytranslatorco  = {{traducci\'on \lbx@lfromlang\ y comentarios de}%
186                              {trad\adddotspace \lbx@sfromlang\ y com\adddotspace}},
187        bytranslatoran  = {{traducci\'on \lbx@lfromlang\ y notas de}%
188                              {trad\adddotspace \lbx@sfromlang\ y not\adddotspace}},
189        bytranslatorin  = {{traducci\'on \lbx@lfromlang\ e introducci\'on de}%
190                              {trad\adddotspace \lbx@sfromlang\ e introd\adddotspace}},
191        bytranslatorfo  = {{traducci\'on \lbx@lfromlang\ y pr\'ologo de}%
192                              {trad\adddotspace \lbx@sfromlang\ y pr\'ol\adddotspace}},
193        bytranslatoraf  = {{traducci\'on \lbx@lfromlang\ y ep\'ilogo de}%
194                              {trad\adddotspace \lbx@sfromlang\ y ep\'il\adddotspace}},
195        bytranslatorcoin = {{traducci\'on \lbx@lfromlang,comentarios e introducci\'on de}%
196                              {trad\adddotspace \lbx@sfromlang,com\adddotspace e intr\adddotspace}},
197        bytranslatorcofo = {{traducci\'on \lbx@lfromlang,comentarios y pr\'ologo de}%
198                              {trad\adddotspace \lbx@sfromlang,com\adddotspace y pr\'ol\adddotspace}},
199        bytranslatorcoaf = {{traducci\'on \lbx@lfromlang,comentarios y ep\'ilogo de}%
200                              {trad\adddotspace \lbx@sfromlang,com\adddotspace y ep\'il\adddotspace}},
201        bytranslatoranin = {{traducci\'on \lbx@lfromlang,notas e introducci\'on de}%
202                              {trad\adddotspace \lbx@sfromlang,anot\adddotspace e intr\adddotspace}},
203        bytranslatoranfo = {{traducci\'on \lbx@lfromlang,notas y pr\'ologo}%
```

```
204                           {trad\adddotspace \lbx@sfromlang,anot\adddotspace y
                        ↪ pr\'ol\adddotspace}},
205     bytranslatoranaf = {{traducci\'on \lbx@lfromlang,notas y ep\'ilogo}%
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          = {{accedido}{accedido}},
```

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

```
220     citedas          = {{en adelante}{en adelante}},
221     thiscite         = {{en}{en}},
```

Languages are abbreviated.

```
222     langamerican     = {{ingl\'es americano}{ing\adddotspace amer\adddotspace}},
223     langbrazilian    = {{brasile\~no}{por\adddotspace bras\adddotspace}},
224     langbulgarian    = {{b\'ulgaro}{bul\adddotspace}},
225     langcatalan      = {{catal\'an}{cat\adddotspace}},
226     langcroatian     = {{croata}{hrv\adddotspace}},
227     langczech        = {{checo}{ces\adddotspace}},
228     langdanish       = {{dan\'es}{dan\adddotspace}},
229     langdutch        = {{neerland\'es}{nld\adddotspace}},
230     langenglish      = {{ingl\'es}{ing\adddotspace}},
231     langestonian     = {{estonio}{est\adddotspace}},
232     langfinnish      = {{fin\'es}{fin\adddotspace}},
233     langfrench       = {{franc\'es}{fra\adddotspace}},
234     langgalician     = {{gallego}{glg\adddotspace}},
235     langgerman       = {{alem\'an}{ale\adddotspace}},
236     langgreek        = {{griego}{gr\adddotspace}},
237     langhungarian    = {{h\'ungaro}{hun\adddotspace}},
238     langitalian      = {{italiano}{ita\adddotspace}},
239     langjapanese     = {{japon\'es}{jap\adddotspace}},
240     langlatin        = {{lat\'in}{lat\adddotspace}},
241     langlatvian      = {{lituano}{lit\adddotspace}},
242     langnorwegian    = {{noruego}{nor\adddotspace}},
243     langpolish       = {{polaco}{pol\adddotspace}},
244     langportuguese   = {{portugu\'es}{port\adddotspace}},
245     langrussian      = {{ruso}{rus\adddotspace}},
```

```
246        langserbian        = {{serbio}{srp\adddotspace}},
247        langslovak         = {{eslovaco}{slk\adddotspace}},
248        langslovene        = {{esloveno}{slv\adddotspace}},
249        langspanish        = {{espa\~nol}{esp\adddotspace}},
250        langswedish        = {{sueco}{sueco}},
251        langukrainian      = {{ucraniano}{ucr\adddotspace}},
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.