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

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v2.0.1

Contents

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
  - 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, 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 2016–2020 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,
```

- 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, pergament,
42        eucase, eujoinedcases, commissiondecision, application,
43        order, bill, draft, opened, signed, adopted, inforce,
44      }
```

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.

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

Here are the new default punctuation conventions. The new \relatedtypepunct is for before the relatedtype localization string, while \recordseriespunct is used for audiovisual resources.

```
47      \renewcommand*{\labelnamepunct}{\addcomma\space}
48      \renewcommand*{\newunitpunct}{\addcomma\space}
49      \renewcommand*{\subtitlepunct}{\addcolon\space}
50      \renewcommand*{\intitlepunct}{\nopunct\space}
51      \renewcommand*{\bibnamedash}{\resizebox{2em}{\height}{\textemdash}\addthinspace}
52      \newcommand*{\recordseriespunct}{\addcomma\space}
53      \newcommand*{\relatedtypepunct}{\addsemicolon\space}
54      \renewcommand*{\relateddelim}{\addsemicolon\space}
```

```
55    \DeclareDelimFormat{revsdnamedelim}{\addcomma}
56    \DeclareDelimFormat{authortypedelim}{\addspace}
57    \DeclareDelimFormat{editortypedelim}{\addspace}
58    \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.

```
59    \DeclareNameAlias{bookauthor}{default}
60    \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.

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

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.

```
65    \newtoggle{blx@ox@nametitle}\toggletrue{blx@ox@nametitle}%
66    \DeclareBibliographyOption{usenametitles}[true]{%
67      \settoggle{blx@ox@nametitle}{#1}}
68    \DeclareTypeOption{usenametitles}[true]{%
69      \settoggle{blx@ox@nametitle}{#1}}
70    \DeclareEntryOption{usenametitles}[true]{%
71      \settoggle{blx@ox@nametitle}{#1}}
```

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

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

Here is the one for inverted name order.

```
84    \newbibmacro*{name:family-title-given}[5]{%
85      \ifuseprefix{%
86        \usebibmacro{name:delim}{#3#1}%
87        \usebibmacro{name:hook}{#3#1}%
88        \ifdefvoid{#3}{}{%
```

```
 89         \ifcapital{%
 90           \mkbibnameprefix{\MakeCapital{#3}}\isdot
 91         }{%
 92           \mkbibnameprefix{#3}\isdot}%
 93         \ifprefchar{}{\bibnamedelimc}}%
 94       \mkbibnamefamily{#1}\isdot
 95       \ifdefvoid{#4}{}{\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}\isdot}%
 96       \ifboolexpe{%
 97         (test {\ifdefvoid{#5}} or not togl {blx@ox@nametitle})
 98         and
 99         test {\ifdefvoid{#2}}%
100       }{}{%
101         \revsdnamepunct}%
102       \ifdefvoid{#5}{}{\iftoggle{blx@ox@nametitle}{\bibnamedelimd\mkbibnametitle{#5}\isdot}{}}%
103       \ifdefvoid{#2}{}{\bibnamedelimd\mkbibnamegiven{#2}\isdot}%
104     }{%
105       \usebibmacro{name:delim}{#1}%
106       \usebibmacro{name:hook}{#1}%
107       \mkbibnamefamily{#1}\isdot
108       \ifdefvoid{#4}{}{\bibnamedelimd\mkbibnamesuffix{#4}\isdot}%
109       \ifboolexpe{%
110         (test {\ifdefvoid{#5}} or not togl {blx@ox@nametitle})
111         and
112         test {\ifdefvoid{#2}}
113         and
114         test {\ifdefvoid{#3}}%
115       }{}{%
116         \revsdnamepunct}%
117       \ifdefvoid{#5}{}{\iftoggle{blx@ox@nametitle}{\bibnamedelimd\mkbibnametitle{#5}\isdot}{}}%
118       \ifdefvoid{#2}{}{\bibnamedelimd\mkbibnamegiven{#2}\isdot}%
119       \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.

```
120   \def\blx@ox@lasthash{}
121   \DeclareNameFormat{bib-family-given/cite-given-family}{%
122     \iffieldannotation{inferred}{\ifnumequal{\value{listcount}}{1}{\bibopenbracket}{}}{}%
123     \ifitemannotation{inferred}{\bibopenbracket}{}%
124     \ifbibliography{%
125       \iftoggle{blx@ox@scnames}{%
126         \renewcommand*{\mkbibnamefamily}[1]{\textsc{##1}}%
127         \renewcommand*{\mkbibnamegiven}[1]{\textsc{##1}}%
128         \renewcommand*{\mkbibnameprefix}[1]{\textsc{##1}}%
129         \renewcommand*{\mkbibnamesuffix}[1]{\textsc{##1}}%
130         \renewcommand*{\mkbibnametitle}[1]{##1}%
131       }{}%
132       \ifgiveninits{%
133         \usebibmacro{name:family-title-given}%
134           {\namepartfamily}%
135           {\namepartgiveni}%
136           {\namepartprefix}%
137           {\namepartsuffix}%
138           {\nameparttitle}%
139       }{%
140         \usebibmacro{name:family-title-given}%
141           {\namepartfamily}%
142           {\namepartgiven}%
143           {\namepartprefix}%
```

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

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.

```
196  \newtoggle{blx@ox@variantname}
197  \DeclareNameFormat{given-family}{%
198    \ifgiveninits
199      {\usebibmacro{name:title-given-family}
```

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

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

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

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

```
237    \xpatchbibmacro{name:given-family}%
238      {\bibnamedelimd\mkbibnamesuffix{#4}}%
239      {\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}}%
240    {}{\wlog{WARNING: biblatex-oxref failed to patch name:given-family}}
241    \xpatchbibmacro{name:family-given}%
242      {\bibnamedelimd\mkbibnamesuffix{#4}}%
243      {\ifnumeral{#4}{}{\addcomma}\bibnamedelimd\mkbibnamesuffix{#4}}%
244    {}{\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).

```
245    \DeclareFieldFormat{nameaddon}{\mkbibbrackets{#1}}
246    \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.

```
247   \newcounter{namepairs}
248   \newsavebox{\blx@ox@namebox}
249   \newsavebox{\blx@ox@altnamebox}
250   \newbibmacro*{namepairs}[2]{%
251     \setcounter{namepairs}{0}%
252     \savebibmacro{name:andothers}%
253     \renewbibmacro*{name:andothers}{}%
254     \whileboolexpr{%
255       test {\ifnumless{\value{namepairs}}{\value{#1}}}
256       and (
257         test {\ifdefvoid{\c@maxnames}}
258         or
259         test {\ifnumequal{\c@maxnames}{0}}
260         or
261         test {\ifnumless{\value{#1}}{\c@maxnames}}
262         or
263         test {\ifnumequal{\value{#1}}{\c@maxnames}}
264         or
265         test {\ifdefvoid{\c@minnames}}
266         or
267         test {\ifnumequal{\c@minnames}{0}}
268         or
269         test {\ifnumless{\value{namepairs}}{\c@minnames}}
270       )
271     }{%
272       \stepcounter{namepairs}%
273       \ifnumgreater{\value{namepairs}}{1}{%
274         \ifnumequal{\value{#1}}{2}{%
275           \setunit*{\addspace\bibstring{and}\addspace}%
276         }{%
277           \ifnumequal{\value{namepairs}}{\value{#1}}{%
278             \setunit*{\addcomma\space\bibstring{and}\addspace}%
279           }{%
280             \setunit*{\addcomma\space}%
281           }%
282         }%
283       }{}%
284       \savebox{\blx@ox@namebox}{%
285         \printnames[#1][\value{namepairs}-\value{namepairs}]{#1}%
286       }%
287       \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.

```
288       \IfEndWith{#2}{addon}{%
289         \savebox{\blx@ox@altnamebox}{%
290           \printnames[by#1][\value{namepairs}-\value{namepairs}]{#2}%
291         }%
292         \let\blx@ox@secondhash=\blx@ox@lasthash
293         \ifdefstrequal{\blx@ox@firsthash}{\blx@ox@secondhash}{%
294           \unhbox\blx@ox@namebox
295         }{%
296           \unhbox\blx@ox@namebox\addspace
```

```
297              \iftoggle{blx@ox@variantname}{%
298                \ifbibliography{%
299                  \printtext[namevariant]{\printnames[#1][\value{namepairs}-
                     ↪  \value{namepairs}]{#2}}%
300                }{}%
301              }{%
302                \printtext[nameaddon]{\unhbox\blx@ox@altnamebox}%
303              }%
304            }%
```

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.

```
305            }{%
306              \savebox{\blx@ox@altnamebox}{%
307                \printnames[#1][\value{namepairs}-\value{namepairs}]{#2}%
308              }%
309              \let\blx@ox@secondhash=\blx@ox@lasthash
310              \ifdefstrequal{\blx@ox@firsthash}{\blx@ox@secondhash}{%
311                \unhbox\blx@ox@namebox
312              }{%
313                \unhbox\blx@ox@altnamebox
314                \addspace\mkbibparens{\unhbox\blx@ox@namebox}%
315              }%
316            }%
317          }%
```

Now we return to common code.

```
318        \ifboolexpr{
319          test {\ifnumequal{\value{namepairs}}{\c@minnames}}
320          and
321          test {\ifnumgreater{\value{#1}}{\c@maxnames}}
322        }{%
323          \ifnumgreater{\c@minnames}{1}{%
324            \finalandcomma
325          }{}%
326          \printdelim{andothersdelim}\bibstring{andothers}%
327        }{}%
328        \restorebibmacro{name:andothers}%
329      }
```

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

```
330      \newbibmacro*{author+altauthor}{%
331        \ifboolexpr{
332          test {\ifnameundef{authoraddon}}
333          and
334          test {\ifnameundef{jointauthor}}
335        }{%
336          \printnames{author}%
337        }{%
338          \ifnumequal{\value{authoraddon}}{\value{author}}{%
339            \usebibmacro{namepairs}{author}{authoraddon}%
340          }{%
341            \printnames{author}%
342            \ifnameundef{authoraddon}{}{%
343              \setunit*{\addspace}%
344              \printtext[nameaddon]{\printnames[byauthor]{authoraddon}}}%
```

```
345        }%
346        \ifnameundef{jointauthor}{}{%
347          \setunit{\addcomma\space}%
348          \iffieldundef{jointauthortype}{%
349            \bibstring{byeditor}%
350          }{%
351            \printfield{jointauthortype}}%
352          \setunit{\addspace}%
353          \printnames[author]{jointauthor}%
354        }%
355      }%
356    }
357    \DeclareFieldFormat{jointauthortype}{%
358      \ifbibstring{by#1}{\bibstring{by#1}}{#1}}
```

This is the (simpler) implementation for editors.

```
359    \newbibmacro*{editor+alteditor}{%
360      \ifnameundef{editoraddon}{%
361        \printnames{editor}%
362      }{
363        \ifnumequal{\value{editoraddon}}{\value{editor}}{%
364          \usebibmacro{namepairs}{editor}{editoraddon}%
365        }{%
366          \printnames{editor}%
367          \setunit*{\addspace}%
368          \printtext[nameaddon]{\printnames[byeditor]{editoraddon}}%
369        }%
370      }%
371    }
```

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.

```
372    \newbibmacro*{bbx:savehash}{}
373    \DeclareBibliographyOption{dashed}[true]{%
374      \ifstrequal{#1}{true}{%
375        \ExecuteBibliographyOptions{pagetracker}%
376        \renewbibmacro*{bbx:savehash}{\savefield{fullhash}{\bbx@lasthash}}%
377      }{%
378        \renewbibmacro*{bbx:savehash}{}%
379      }%
380    }
381    \InitializeBibliographyStyle{%
382      \global\undef\bbx@lasthash}
383    \newbibmacro*{bbx:dashcheck}[2]{%
384      \ifboolexpr{
385        test {\iffieldequals{fullhash}{\bbx@lasthash}}
386        and
387        not test \iffirstonpage
388        and
389        (
390          not bool {bbx@inset}
391          or
392          test {\iffieldequalstr{entrysetcount}{1}}
393        )
394      }{#1}{#2}%
395    }
```

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

```
396   \newbool{bbx@inset}
397   \DeclareBibliographyDriver{set}{%
398     \booltrue{bbx@inset}%
399     \entryset{}{}%
400     \newunit\newblock
401     \usebibmacro{setpageref}%
402     \finentry}
```

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

```
403   \newtoggle{blx@ox@autoanon}
404   \newtoggle{blx@ox@abbranon}
405   \DeclareBibliographyOption[string]{anon}[short]{%
406     \ifcsdef{blx@ox@opt@anon@#1}{%
407       \csuse{blx@ox@opt@anon@#1}%
408     }{%
409       \PackageError{biblatex-oxref}
410       {Invalid option 'anon=#1'}
411       {Valid values are 'long', 'short', and 'literal'.}}}
412   \csdef{blx@ox@opt@anon@literal}{\togglefalse{blx@ox@autoanon}}
413   \csdef{blx@ox@opt@anon@long}{\toggletrue{blx@ox@autoanon}\togglefalse{blx@ox@abbranon}}
414   \csdef{blx@ox@opt@anon@short}{\toggletrue{blx@ox@autoanon}\toggletrue{blx@ox@abbranon}}
```

We copy the author to rawauthor for easier testing.

```
415   \DeclareStyleSourcemap{
416     \maps[datatype=bibtex]{%
417       \map{%
418         \step[fieldsource=author]%
419         \step[fieldset=rawauthor, origfieldval]%
420       }
421     }%
422   }
```

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`).

```
423   \newcommand*{\oxrefanon}{Anonymous}
424   \newtoggle{blx@ox@isanon}
425   \renewbibmacro*{author}{%
426     \iffieldequals{rawauthor}{\oxrefanon}{%
427       \toggletrue{blx@ox@isanon}%
428     }{%
429       \togglefalse{blx@ox@isanon}}%
430     \ifboolexpr{
431       test \ifuseauthor
432       and
433       ( not test {\ifnameundef{author}} )
434       and (
435         ( not togl {blx@ox@isanon} )
```

```
436          or
437          ( not togl {blx@ox@autoanon} )
438          or
439          test {\ifbibliography}
440        )
441      }
442      {\usebibmacro{bbx:dashcheck}
443        {\bibnamedash}
444        {\usebibmacro{bbx:savehash}%
445          \ifboolexpr{
446            togl {blx@ox@autoanon}
447            and
448            togl {blx@ox@isanon}
449          }{%
450            \iftoggle{blx@ox@abbranon}{\bibcpsstring{anon}}{\bibcplstring{anon}}%
451          }{%
452            \usebibmacro{author+altauthor}%
453          }%
454          \iffieldundef{nameaddon}
455          {}
456          {\setunit{\addspace}%
457            \printfield{nameaddon}}%
458          \setunit{\printdelim{authortypedelim}}}%
459        \iffieldundef{authortype}
460        {}
461        {\usebibmacro{authorstrg}%
462          \setunit{\addspace}}}%
463      {\global\undef\bbx@lasthash}}
464    \DeclareFieldFormat{authortype}{\mkbibparens{#1}}
```

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

```
465    \newcommand{\titlebyauthordelim}{\addspace}
```

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.

```
466    \renewbibmacro*{editor}{%
467      \usebibmacro{bbx:editor}{editorstrg}}
468    \renewbibmacro*{editor+others}{%
469      \usebibmacro{bbx:editor}{editor+othersstrg}}
470    \newbibmacro*{bbx:editor}[1]{%
471      \ifboolexpr{
472        test \ifuseeditor
473        and
474        not test {\ifnameundef{editor}}
475      }
476      {\usebibmacro{bbx:dashcheck}
477        {\bibnamedash}
478        {\usebibmacro{editor+alteditor}%
479          \setunit{\printdelim{editortypedelim}}%
480          \usebibmacro{bbx:savehash}}%
481        \usebibmacro{#1}%
482        \clearname{editor}}
483      {\global\undef\bbx@lasthash}}
484    \DeclareFieldFormat{editortype}{\mkbibparens{#1}}
```

We do the same for `translator` as well.

```
485    \renewbibmacro*{translator}{%
486      \usebibmacro{bbx:translator}{translatorstrg}}
487    \renewbibmacro*{translator+others}{%
488      \usebibmacro{bbx:translator}{translator+othersstrg}}
489    \newbibmacro*{bbx:translator}[1]{%
490      \ifboolexpr{
491        test \ifusetranslator
492        and
493        not test {\ifnameundef{translator}}
494      }
495      {\usebibmacro{bbx:dashcheck}
496        {\bibnamedash}
497        {\printnames{translator}%
498          \setunit{\printdelim{translatortypedelim}}%
499          \usebibmacro{bbx:savehash}}%
500        \usebibmacro{#1}%
501        \clearname{translator}%
502        \setunit{\addspace}}%
503      {\global\undef\bbx@lasthash}}
504    \xpatchbibmacro{translatorstrg}%
505      {\bibstring}%
506      {\bibstring[\mkbibparens]}%
507    {}{\wlog{WARNING: biblatex-oxref failed to patch translatorstrg}}%
508    \xpatchbibmacro{translator+othersstrg}%
509      {\bibstring}%
510      {\bibstring[\mkbibparens]}%
511    {}{\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).

```
512    \renewbibmacro*{bybookauthor}{%
513      \ifnamesequal{author}{bookauthor}%
514      {\bibstring{idem\thefield{gender}}}%
515      {\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.

```
516    \newbibmacro*{bookeditor}{%
517      \ifboolexpr{
518        test \ifuseeditor
519        and
520        not test {\ifnameundef{editor}}
521      }{%
522        \ifnamesequal{author}{editor}{%
523          \bibstring{idem\thefield{gender}}%
524          \setunit{\addspace}%
525          \usebibmacro{editor+othersstrg}%
526          \clearname{editor}%
527        }{%
528          \printnames[bookeditor]{editor}%
529          \setunit*{\addspace}%
530          \usebibmacro{editor+othersstrg}%
531          \clearname{editor}%
532        }%
533      }{}}
```

We provide a macro for printing series editors.

```
534   \newbibmacro*{byserieseditor}{%
535     \ifnameundef{serieseditor}
536       {}
537       {\usebibmacro{bytypestrg}{serieseditor}{serieseditor}%
538        \setunit{\addspace}%
539        \printnames[byeditor]{serieseditor}%
540        \newunit}}
```

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.

```
541   \renewbibmacro*{title}{%
542     \ifboolexpr{
543       test {\iffieldundef{title}}
544       and
545       test {\iffieldundef{subtitle}}
546     }
547     {}
548     {\printtext[title]{%
549         \printfield[titlecase]{title}%
550         \setunit{\subtitlepunct}%
551         \printfield[titlecase]{subtitle}}%
552       \setunit{\addspace}}%
553     \usebibmacro{origtitle}%
554     \setunit*{\addspace}%
555     \printfield{titleaddon}%
556     \iffieldequalstr{relatedtype}{equals}{%
557       \iftoggle{bbx:related}{%
558         \usebibmacro{related:init}%
559         \usebibmacro{related}%
560         \clearfield{related}%
561       }{}%
562     }{}%
563   }
564   \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 and 'translation of'.

```
565   \DeclareFieldFormat{origtitle}{\mkbibemph{#1}}
566   \newbibmacro*{origtitle}{%
567     \iffieldundef{origtitle}{}{%
568       \iflistundef{language}{%
569         \printtext[parens]{\printfield{origtitle}}%
570       }{%
571         \printtext[brackets]{%
572           \printlist{language}\space
573           \bibstring{translationof}\space
574           \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]

```
575    \newcommand{\blx@ox@compyear}[2]{%
576      \def\num@one{#1}%
577      \def\num@two{#2}%
578      \StrLen{\num@one}[\num@one@len]%
579      \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.

```
580      \ifboolexpr{
581        test {\ifnumequal{\num@one@len}{\num@two@len}}
582        and
583        test {\ifnumless{\num@one}{\num@two}}
584      }{%
```

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

```
585          \StrCompare{\num@one}{\num@two}[\Result]%
586          \ifnum\num@two@len>3%
587            \IfStrEq{\Result}{2}{\def\Result{1}}{}%
588          \fi
```

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.

```
589          \StrGobbleLeft{0\num@two}{\Result}%
590      }{\num@two}}
```

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

```
591    \patchcmd{\mkdaterangefull}{%
592      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
593    }{%
594      \iffieldundef{#2endmonth}%
595        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
596        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
597    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangefull}}
598    \patchcmd{\mkdaterangefullextra}{%
599      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
600    }{%
601      \iffieldundef{#2endmonth}%
602        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
603        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
604    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangefullextra}}
605    \patchcmd{\mkdaterangetrunc@i}{%
606      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
607    }{%
608      \iffieldundef{#2endmonth}%
609        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
610        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
611    }{}{\wlog{WARNING: biblatex-oxref failed to patch mkdaterangetrunc@i}}
612    \patchcmd{\mkdaterangetruncextra@i}{%
613      \csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}%
614    }{%
615      \iffieldundef{#2endmonth}%
616        {\blx@ox@compyear{\thefield{#2year}}{\thefield{#2endyear}}}%
```

---

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

```
617        {\csuse{mkbibdate#1}{#2endyear}{#2endmonth}{#2endday}}%
618     }{}{\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.

```
619     \DeclareFieldFormat{datetype}{%
620       \ifbibstring{#1}{\bibstring{#1}}{#1\isdot}%
621     }
622     \newtoggle{blx@ox@timefirst}
623     \DeclareBibliographyOption{timefirst}[true]{%
624       \settoggle{blx@ox@timefirst}{#1}}
625     \DeclareTypeOption{timefirst}[true]{%
626       \settoggle{blx@ox@timefirst}{#1}}
627     \DeclareEntryOption{timefirst}[true]{%
628       \settoggle{blx@ox@timefirst}{#1}}
629     \newbibmacro*{date+time}{%
630       \ifboolexpr{
631         test {\iffieldundef{year}}
632         and
633         test {\iffieldundef{season}}
634         and
635         test {\iffieldundef{month}}
636         and
637         test {\iffieldundef{hour}}
638       }{}{%
639         \printfield{datetype}}%
640       \setunit*{\addspace}%
641       \iftoggle{blx@ox@timefirst}{%
642         \printtime
643         \setunit*{\addcomma\space}}{}%
644       \printdate
645       \iftoggle{blx@ox@timefirst}{}{%
646         \setunit*{\addcomma\space}%
647         \printtime}%
648     }
649     \renewbibmacro*{date}{\usebibmacro{date+time}}
```

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

```
650     \DeclareFieldFormat{origdatetype}{%
651       \ifbibstring{#1}{\bibstring{#1}}{#1\isdot}%
652     }
653     \newbibmacro*{origdate+time}{%
654       \ifboolexpr{
655         test {\iffieldundef{origyear}}
656         and
657         test {\iffieldundef{origseason}}
658         and
659         test {\iffieldundef{origmonth}}
660         and
661         test {\iffieldundef{orighour}}
662       }{}{%
663         \printfield{origdatetype}}%
664       \setunit*{\addspace}%
665       \iftoggle{blx@ox@timefirst}{%
666         \printorigtime
667         \setunit*{\addcomma\space}}{}%
668       \printorigdate
669       \iftoggle{blx@ox@timefirst}{}{%
```

```
670        \setunit*{\addcomma\space}%
671        \printorigtime}%
672    }
```

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

```
673    \DeclareFieldFormat{date}{%
674      \def\currentfield{date}%
675      \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
676      \undef\currentfield}
677    \DeclareFieldFormat{origdate}{%
678      \def\currentfield{origdate}%
679      \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
680      \undef\currentfield}
681    \DeclareFieldFormat{eventdate}{%
682      \def\currentfield{eventdate}%
683      \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
684      \undef\currentfield}
```

2.1.5 Editions, pages, and other number-like fields

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

```
685    \xpatchfieldformat{edition}%
686      {#1\isdot}%
687      {\ifbibstring{#1}{\bibstring{#1}}{#1\isdot}}%
688    {}{\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.

```
689    \DeclareFieldFormat{pages}{%
690      \iffieldundef{bookpagination}%
691        {\mkcomprange{#1}}%
692        {\mkcomprange[{\mkpageprefix[bookpagination]}]{#1}}%
693    }
```

The same is true in citations.

```
694    \DeclareFieldFormat{postnote}{%
695      \iffieldundef{pagination}%
696      {\mkcomprange{#1}}%
697      {\mkcomprange[{\mkpageprefix}]{#1}}%
698    }
```

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.

```
699    \DeclareBibliographyOption{nopublisher}[true]{%
700      \DeclareFieldInputHandler{publisher}{\def\NewValue{}}%
701    }
```

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.

```
702    \DeclareBibliographyOption{nolocation}[true]{%
703      \DeclareStyleSourcemap{
704        \maps[datatype=bibtex]{
705          \map{
706            \pertype{book}
707            \pertype{mvbook}
708            \pertype{bookinbook}
709            \pertype{inbook}
710            \pertype{suppbook}
711            \pertype{collection}
712            \pertype{mvcollection}
713            \pertype{incollection}
714            \pertype{suppcollection}
715            \pertype{reference}
716            \pertype{mvreference}
717            \pertype{inreference}
718            \pertype{proceedings}
719            \pertype{mvproceedings}
720            \pertype{inproceedings}
721            \step[notfield=location, fieldset=location,
                 ↪  fieldvalue={\noexpand\bibstring{nolocation}}]
722          }
723        }
724      }%
725    }
```

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

```
726    \newtoggle{blx@ox@noloc}
727    \def\blx@ox@noloc{{\bibstring{nolocation}}}
728    \DeclareEntryOption{nolocation}[true]{%
729      \settoggle{blx@ox@noloc}{#1}%
730      \iflistundef{location}{%
731        \iftoggle{blx@ox@noloc}{\restorelist{location}{\blx@ox@noloc}}{}%
732      }{}}
```

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.

```
733    \DeclareBibliographyOption{isourls}[true]{%
734      \ifstrequal{#1}{true}
735        {\DeclareFieldFormat{url}{$\langle$\url{##1}$\rangle$}}
736        {\DeclareFieldFormat{url}{\url{##1}}}%
737    }
738    \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.

```
739    \renewcommand*{\biburlsetup}{%
740      \Urlmuskip=0mu plus 2mu\relax
741      \mathchardef\UrlBigBreakPenalty=100\relax
742      \mathchardef\UrlBreakPenalty=200\relax
```

```
743      \def\UrlBigBreaks{\do\/\do\:}%
744      \def\UrlNoBreaks{\do\(\do\[\do\{\do\<}%
745      \def\UrlBreaks{%
746        \do\>\do\}\do\]\do\)\do\\\do\|%
747        \do\'\do\$\do\*\do\^\do\"}%
748      \appto\UrlSpecials{%
749        \do\!{\mathbin{}\mskip-\Urlmuskip\mathchar`\!\mskip\Urlmuskip}%
750        \do\&{\mathbin{}\mskip-\Urlmuskip\mathchar`\&\mskip\Urlmuskip}%
751        \do\+{\mathbin{}\mskip-\Urlmuskip\mathchar`\+\mskip\Urlmuskip}%
752        \do\,{\mathbin{}\mskip-\Urlmuskip\mathchar`\,\mskip\Urlmuskip}%
753        \do\-{\mathbin{}\mskip-\Urlmuskip\mathchar`\-\mskip\Urlmuskip}%
754        \do\.{\mathbin{}\mskip-\Urlmuskip\mathchar`\.\mskip\Urlmuskip}%
755        \do\;{\mathbin{}\mskip-\Urlmuskip\mathchar`\;\mskip\Urlmuskip}%
756        \do\={\mathbin{}\mskip-\Urlmuskip\mathchar`\=\mskip\Urlmuskip}%
757        \do\?{\mathbin{}\mskip-\Urlmuskip\mathchar`\?\mskip\Urlmuskip}%
758        \do\_{\mathbin{}\mskip-\Urlmuskip\_\mskip\Urlmuskip}%
759        \do\#{\mathbin{}\mskip-\Urlmuskip\#\mskip\Urlmuskip}%
760      }%
761      \ifnumgreater{\value{biburlnumpenalty}}{0}
762        {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburlnumpenalty}}}}%
763         \do\1\do\2\do\3\do\4\do\5\do\6\do\7\do\8\do\9\do\0}
764        {}%
765      \ifnumgreater{\value{biburlucpenalty}}{0}
766        {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburlucpenalty}}}}%
767         \do\A\do\B\do\C\do\D\do\E\do\F\do\G\do\H\do\I\do\J
768         \do\K\do\L\do\M\do\N\do\O\do\P\do\Q\do\R\do\S\do\T
769         \do\U\do\V\do\W\do\X\do\Y\do\Z}
770        {}%
771      \ifnumgreater{\value{biburllcpenalty}}{0}
772        {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburllcpenalty}}}}%
773         \do\a\do\b\do\c\do\d\do\e\do\f\do\g\do\h\do\i\do\j
774         \do\k\do\l\do\m\do\n\do\o\do\p\do\q\do\r\do\s\do\t
775         \do\u\do\v\do\w\do\x\do\y\do\z}
776        {}%
777      \let\do=\noexpand}
```

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

```
778      \DeclareFieldFormat{urldate}{\bibstring{urlseen}\space#1}
779      \xpatchbibmacro{url+urldate}%
780        {\setunit*{\addspace}}%
781        {\setunit*{\addcomma\addspace}}%
782      {}{\wlog{WARNING: biblatex-oxref failed to patch url+urldate}}
```

The DOI is introduced by 'doi' in lowercase.

```
783      \xpatchfieldformat{doi}%
784        {\mkbibacro{DOI}}%
785        {\printtext{doi}}%
786      {}{\wlog{WARNING: biblatex-oxref failed to patch doi}}
```

Unlike URLs, DOIs are preceded by a full stop.

```
787      \xpatchbibmacro{doi+eprint+url}%
788        {\printfield{doi}}%
789        {\setunit{\addperiod\space}\printfield{doi}}%
790      {}{\wlog{WARNING: biblatex-oxref failed to patch doi+eprint+url}}
```

2.1.8 Addenda

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

```
791  \renewbibmacro*{addendum+pubstate}{%
792    \ifboolexpr{
793      test {\iffieldundef{pubstate}}
794      or
795      test {\iffieldequalstr{labeldatesource}{pubstate}}
796    }{}{%
797      \nopunct
798      \ifbibstring{\thefield{pubstate}}{%
799        \printtext[pubstate]{\bibstring{\thefield{pubstate}}}%
800      }{%
801        \printfield{pubstate}}}%
802    \setunit{\addsemicolon\addspace}\newblock
803    \printfield{addendum}}
804  \DeclareFieldFormat{pubstate}{\mkbibparens{#1}}
```

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

```
805  \DeclareFieldFormat{howpublished}{\mkbibbrackets{#1}}
806  \DeclareFieldFormat[misc,unpublished]{howpublished}{#1}
```

2.1.9 Articles and periodicals

Subtypes for articles and similar are in square brackets.

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

We provide a command for testing if a title is abbreviated. We use the traditional LaTeX accent commands in case a non-Unicode input encoding is being used. Testing for Ç and Ş causes errors when using OT1 encoding.

```
808  \newcommand*{\blx@ox@abbrevstring}{%
809    A\^{A}BCDEFG\u{G}HI\.{I}\^{I}JKLMNO\"{O}\^{O}PQRSTU\"{U}\^{U}VWXYZ.}%
810  \AtBeginDocument{
811    \ifdefstring{\encodingdefault}{OT1}{}{%
812      \renewcommand*{\blx@ox@abbrevstring}{%
813        A\^{A}BC\c{C}DEFG\u{G}HI\.{I}\^{I}JKLMNO\"{O}\^{O}PQRS\c{S}TU\"{U}\^{U}VWXYZ.}%
814    }%
815  }
816  \newcommand*{\ifabbrev}[3]{%
817    \StrRight{#1}{1}[\blx@ox@lastchar]%
818    \IfSubStr{\blx@ox@abbrevstring}{\blx@ox@lastchar}{#2}{#3}
819  }
```

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.

```
820  \renewbibmacro*{journal+issuetitle}{%
821    \ifboolexpr{
822      test {\iffieldundef{title}}
823      and
```

```
824        not test {\iffieldundef{issuetitle}}
825    }{%
826      \usebibmacro{issue}%
827      \setunit{\addspace =\addspace}%
828    }{%
829      \ifboolexpr{
830        ( not test {\iffieldundef{pubstate}} )
831        and
832        test {\ifbibxstring{\thefield{pubstate}in}}
833      }{%
834        \printtext{\bibstring{\thefield{pubstate}in}\space}%
835        \clearfield{pubstate}%
836      }{}}%
837    \usebibmacro{journal}%
838    \iffieldundef{journalsubtitle}{%
839      \ifabbrev{\thefield{journaltitle}}{\setunit{\addspace}}{\newunit}%
840    }{%
841      \ifabbrev{\thefield{journalsubtitle}}{\setunit{\addspace}}{\newunit}}%
842    \iffieldundef{series}{}{%
843      \newunit\newblock
844      \printfield{series}%
845      \ifbibxstring{\thefield{series}}{%
846        \setunit{\addspace}%
847      }{%
848        \newunit}}%
849    \usebibmacro{volume+number+eid}%
850    \setunit{\addspace}%
851    \usebibmacro{issue+date}%
852    \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.

```
853    \renewbibmacro*{title+issuetitle}{%
854      \usebibmacro{periodical}%
855      \iffieldundef{subtitle}{%
856        \ifabbrev{\thefield{title}}{\setunit{\addspace}}{\newunit}%
857      }{%
858        \ifabbrev{\thefield{subtitle}}{\setunit{\addspace}}{\newunit}}%
859      \iffieldundef{series}{}{%
860        \newunit\newblock
861        \printfield{series}%
862        \ifbibxstring{\thefield{series}}{%
863          \setunit{\addspace}%
864        }{%
865          \newunit}}%
866      \usebibmacro{volume+number+eid}%
867      \setunit{\addspace}%
868      \usebibmacro{issue+date}%
869      \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).

```
870    \DeclareBibliographyOption[string]{issuestyle}[slash]{%
871      \ifcsdef{blx@ox@issuestyle@#1}{%
872        \csuse{blx@ox@issuestyle@#1}%
```

```
873        }{%
874          \PackageError{biblatex-oxref}
875            {Invalid option 'issuestyle=#1'}
876            {Valid values are 'slash', 'colon', 'comma', 'parens'}%
877        }%
878      }
879      \csdef{blx@ox@issuestyle@slash}{%
880        \renewbibmacro*{volume+number+eid}{%
881          \printfield{volume}%
882          \setunit*{\addslash}%
883          \printfield{number}%
884        }%
885      }
886      \csdef{blx@ox@issuestyle@colon}{%
887        \renewbibmacro*{volume+number+eid}{%
888          \printfield{volume}%
889          \setunit*{\addcolon\space}%
890          \printfield{number}%
891        }%
892      }
893      \csdef{blx@ox@issuestyle@comma}{%
894        \renewbibmacro*{volume+number+eid}{%
895          \printfield{volume}%
896          \setunit*{\addcomma\space}%
897          \printfield{number}%
898        }%
899      }
900      \csdef{blx@ox@issuestyle@parens}{%
901        \renewbibmacro*{volume+number+eid}{%
902          \printfield{volume}%
903          \setunit*{\addspace}%
904          \printfield[parens]{number}%
905        }%
906      }
907      \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 season and date are printed bare. Otherwise (second block) they are printed in parentheses just as in the standard version of the macro.

```
908      \newtoggle{blx@ox@varissuedate}
909      \DeclareBibliographyOption{varissuedate}[true]{%
910        \settoggle{blx@ox@varissuedate}{#1}}
911      \DeclareTypeOption{varissuedate}[true]{%
912        \settoggle{blx@ox@varissuedate}{#1}}
913      \DeclareEntryOption{varissuedate}[true]{%
914        \settoggle{blx@ox@varissuedate}{#1}}
915      \DeclareBibliographyOption{issuedate-plain}[true]{%
916        \settoggle{blx@ox@varissuedate}{#1}}
917      \DeclareTypeOption{issuedate-plain}[true]{%
918        \settoggle{blx@ox@varissuedate}{#1}}
919      \DeclareEntryOption{issuedate-plain}[true]{%
920        \settoggle{blx@ox@varissuedate}{#1}}
921      \renewbibmacro*{issue+date}{%
922        \ifboolexpr{
923          test {\iffieldundef{issue}}
924            and
```

```
925        test {\iffieldundef{year}}
926        and
927        test {\iffieldundef{season}}
928        and
929        test {\iffieldundef{month}}
930      }{}{%
931        \ifboolexpr{
932          togl {blx@ox@varissuedate}
933          and
934          test {\iffieldundef{volume}}
935          and
936          test {\iffieldundef{number}}
937        }{%
938          \newunit
939          \printtext{%
940            \iffieldundef{issue}{%
941              \usebibmacro{date}
942            }{%
943              \printfield{issue}%
944              \setunit*{\addspace}%
945              \usebibmacro{date}}}%
946        }{%
947          \printtext[parens]{%
948            \iffieldundef{issue}{%
949              \usebibmacro{date}%
950            }{%
951              \printfield{issue}%
952              \setunit*{\addspace}%
953              \usebibmacro{date}}}}}%
954      \newunit
955      \printfield{eid}%
956    }
```

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.

```
957    \DeclareBibliographyDriver{article}{%
958      \usebibmacro{bibindex}%
959      \usebibmacro{begentry}%
960      \usebibmacro{author/translator+others}%
961      \setunit{\printdelim{nametitledelim}}\newblock
962      \usebibmacro{title}%
963      \setunit{\titlebyauthordelim}\newblock
964      \usebibmacro{byauthor}%
965      \newunit\newblock
966      \usebibmacro{bytranslator+others}%
967      \newunit\newblock
968      \printfield{version}%
969      \newunit\newblock
970      \usebibmacro{journal+issuetitle}%
971      \newunit
972      \usebibmacro{byeditor+others}%
973      \iffieldequalstr{relatedtype}{suppto}{%
974        \setunit{\addsemicolon\space}%
975        \iftoggle{bbx:related}{%
976          \usebibmacro{related:init}%
```

```
977          \usebibmacro{related}%
978          \clearfield{related}%
979        }{}%
980      }{}%
981      \newunit
982      \usebibmacro{note+pages}%
983      \newunit\newblock
984      \iftoggle{bbx:isbn}
985        {\printfield{issn}}
986        {}%
987      \newunit\newblock
988      \usebibmacro{doi+eprint+url}%
989      \newunit\newblock
990      \usebibmacro{addendum+pubstate}%
991      \setunit{\bibpagerefpunct}\newblock
992      \usebibmacro{pageref}%
993      \setunit{\relatedtypepunct}\newblock
994      \iftoggle{bbx:related}
995        {\usebibmacro{related:init}%
996         \usebibmacro{related}}
997        {}%
998      \usebibmacro{finentry}}
```

Similar changes are made to the `periodical` driver.

```
999    \DeclareBibliographyDriver{periodical}{%
1000     \usebibmacro{bibindex}%
1001     \usebibmacro{begentry}%
1002     \usebibmacro{editor}%
1003     \setunit{\printdelim{nametitledelim}}\newblock
1004     \usebibmacro{title+issuetitle}%
1005     \newunit\newblock
1006     \usebibmacro{byeditor}%
1007     \newunit\newblock
1008     \printfield{note}%
1009     \newunit\newblock
1010     \iftoggle{bbx:isbn}
1011       {\printfield{issn}}
1012       {}%
1013     \newunit\newblock
1014     \usebibmacro{doi+eprint+url}%
1015     \newunit\newblock
1016     \usebibmacro{addendum+pubstate}%
1017     \setunit{\bibpagerefpunct}\newblock
1018     \usebibmacro{pageref}%
1019     \setunit{\relatedtypepunct}\newblock
1020     \iftoggle{bbx:related}
1021       {\usebibmacro{related:init}%
1022        \usebibmacro{related}}
1023       {}%
1024     \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.

```
1025   \DeclareFieldFormat[suppperiodical]{title}{%
1026     \def\currentfield{title}%
1027     \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
1028     \undef\currentfield
```

```
1029    \DeclareFieldFormat[suppperiodical]{volume}{#1}% volume of a journal
1030    \DeclareFieldFormat[suppperiodical]{number}{#1}% number of a journal
1031    \DeclareFieldFormat[suppperiodical]{series}{% series of a journal
1032      \ifinteger{#1}
1033      {\mkbibordseries{#1}~\bibstring{jourser}}
1034      {\ifbibstring{#1}{\bibstring{#1}}{#1}}}
1035    \DeclareBibliographyDriver{suppperiodical}{%
1036      \usebibmacro{bibindex}%
1037      \usebibmacro{begentry}%
1038      \usebibmacro{author/translator+others}%
1039      \setunit{\printdelim{nametitledelim}}\newblock
1040      \usebibmacro{title}%
1041      \setunit{\titlebyauthordelim}\newblock
1042      \usebibmacro{byauthor}%
1043      \newunit\newblock
1044      \usebibmacro{bytranslator+others}%
1045      \newunit\newblock
1046      \printfield{note}\clearfield{note}%
1047      \newunit\newblock
1048      \printfield{version}%
1049      \newunit\newblock
1050      \usebibmacro{journal+issuetitle}%
1051      \newunit
1052      \usebibmacro{byeditor+others}%
1053      \iffieldequalstr{relatedtype}{suppto}{%
1054        \setunit{\addsemicolon\space}%
1055        \iftoggle{bbx:related}{%
1056          \usebibmacro{related:init}%
1057          \usebibmacro{related}%
1058          \clearfield{related}%
1059        }{}%
1060      }{}%
1061      \newunit
1062      \usebibmacro{note+pages}%
1063      \newunit\newblock
1064      \iftoggle{bbx:isbn}
1065        {\printfield{issn}}
1066        {}%
1067      \newunit\newblock
1068      \usebibmacro{doi+eprint+url}%
1069      \newunit\newblock
1070      \usebibmacro{addendum+pubstate}%
1071      \setunit{\bibpagerefpunct}\newblock
1072      \usebibmacro{pageref}%
1073      \setunit{\relatedtypepunct}\newblock
1074      \iftoggle{bbx:related}
1075        {\usebibmacro{related:init}%
1076         \usebibmacro{related}}
1077        {}%
1078      \usebibmacro{finentry}}
```

2.1.10 Books and works in books

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

```
1079    \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.

```
1080  \DeclareFieldFormat[bookinbook]{title}{%
1081    \ifboolexpr{
1082      test {\iffieldequalstr{entrysubtype}{poem}}
1083      or
1084      test {\iffieldequalstr{entrysubtype}{play}}
1085    }{%
1086      \mkbibemph{#1}%
1087    }{%
1088      \mkbibquote{#1\isdot}}}
```

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

```
1089    \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.

```
1090  \DeclareFieldFormat[book,mvbook,bookinbook,inbook,suppbook,%
1091  collection,mvcollection,incollection,suppcollection,%
1092  proceedings,mvproceedings,inproceedings,%
1093  reference,mvreference,inreference]{volume}{%
1094  \IfSubStr{#1}{-}{%
1095    \StrCount{#1}{-}[\blx@ox@dashnum]%
1096    \StrBefore{#1}{-}[\blx@ox@volnum]%
1097    \expandafter\ifinteger\blx@ox@volnum{\Rn{\blx@ox@volnum}}{\blx@ox@volnum}\bibrangedash
1098    \StrBehind[\blx@ox@dashnum]{#1}{-}[\blx@ox@volnum]%
1099    \expandafter\ifinteger\blx@ox@volnum{\Rn{\blx@ox@volnum}}{\blx@ox@volnum}%
1100  }{%
1101    \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.

```
1102  \newbibmacro*{maintitle+volume}{%
1103    \ifboolexpr{
1104      test {\iffieldundef{maintitle}}
1105      or
1106      test {\iffieldundef{volume}}
1107    }{}%
1108    {\printtext[maintitle+volume]{%
1109      \bibstring{volume}\addspace
1110      \printfield{volume}\printfield{part}\addspace
1111      \bibstring{ofseries}\addspace
1112      \usebibmacro{maintitle}}}
1113  }
1114  \DeclareFieldFormat{maintitle+volume}{\mkbibbrackets{#1}}
```

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

```
1115  \renewbibmacro*{in:}{%
1116    \iffieldequalstr{entrysubtype}{yearbook}{}{%
1117      \printtext{\bibstring{in}\intitlepunct}}}
```

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

```
1118    \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.

```
1119    \renewbibmacro*{series+number}{%
1120        \printfield{series}%
1121        \setunit*{\addcomma\space}%
1122        \usebibmacro{byserieseditor}%
1123        \setunit*{\addcomma\space}%
1124        \printfield{number}}
```

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

```
1125    \newtoggle{blx@ox@altbookseries}
1126    \DeclareBibliographyOption[string]{bookseries}[in]{%
1127      \ifstrequal{#1}{out}{%
1128        \toggletrue{blx@ox@altbookseries}%
1129      }{%
1130        \togglefalse{blx@ox@altbookseries}%
1131        \ifstrequal{#1}{in}{}{%
1132          \PackageError{biblatex-oxref}
1133          {Invalid option 'bookseries=#1'}
1134          {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.

```
1135    \newcounter{locpubpairs}
1136    \newbibmacro*{edition+publisher+location+date}{%
1137      \printlist{origlocation}%
1138      \iflistundef{origpublisher}%
1139        {\setunit*{\addcomma\space}}%
1140        {\setunit*{\addcolon\space}}%
1141      \printlist{origpublisher}%
1142      \setunit*{\addcomma\space}%
1143      \ifboolexpr{
1144        test {\iflistundef{origlocation}}
1145        and
1146        test {\iflistundef{origpublisher}}
1147        and
1148        test {\iffieldundef{edition}}
1149      }{}{%
1150        \printorigdate}%
1151      \setunit{\addsemicolon\space}%
1152      \printfield{edition}%
1153      \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.

```
1154        \ifboolexpr{%
1155          test {\ifnumcomp{\value{publisher}}{>}{1}}
1156          and
1157          test {\ifnumequal{\value{location}}{\value{publisher}}}
1158        }{%
1159          \setcounter{locpubpairs}{0}%
```

```
1160        \savebibmacro{list:andothers}%
1161        \renewbibmacro*{list:andothers}{}%
1162        \whileboolexpr{%
1163          test {\ifnumcomp{\value{locpubpairs}}{<}{\value{publisher}}}
1164        }{%
1165          \stepcounter{locpubpairs}%
1166          \ifnumcomp{\value{locpubpairs}}{>}{1}{%
1167            \ifnumequal{\value{publisher}}{2}{%
1168              \setunit*{\addspace\bibstring{and}\addspace}%
1169            }{%
1170              \ifnumequal{\value{locpubpairs}}{\value{publisher}}{%
1171                \setunit*{\addcomma\space\bibstring{and}\addspace}%
1172              }{%
1173                \setunit*{\addcomma\space}%
1174              }%
1175            }%
1176          }{}%
1177          \printlist[][\value{locpubpairs}-\value{locpubpairs}]{location}%
1178          \setunit*{\addcolon\space}%
1179          \printlist[][\value{locpubpairs}-\value{locpubpairs}]{publisher}%
1180        }%
1181        \restorebibmacro{list:andothers}%
1182      }{%
1183        \printlist{location}%
1184        \iflistundef{publisher}%
1185        {\setunit*{\addcomma\space}}%
1186        {\setunit*{\addcolon\space}}%
1187        \printlist{publisher}%
1188      }%
1189      \setunit*{\addcomma\space}%
1190      \usebibmacro{date}%
1191    }
```

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

```
1192    \newbibmacro*{series+number+edition+publisher+location+date}{%
1193      \iftoggle{blx@ox@altbookseries}{%
1194        \usebibmacro{series+number}%
1195        \setunit{\addspace}\newblock}{}%
1196      \ifboolexpr{
1197        test {\iffieldundef{series}}
1198        and
1199        test {\iffieldundef{number}}
1200        and
1201        test {\iffieldundef{edition}}
1202        and
1203        test {\iflistundef{publisher}}
1204        and
1205        test {\iflistundef{location}}
1206        and
1207        test {\iffieldundef{year}}
1208        and
1209        test {\iffieldundef{season}}
1210        and
1211        test {\iffieldundef{month}}
1212      }{}{%
1213        \nopunct
1214        \printtext[publication]{%
1215        \iftoggle{blx@ox@altbookseries}{}{%
1216          \usebibmacro{series+number}%
```

```
1217            \setunit{\addsemicolon\addspace}}%
1218          \usebibmacro{edition+publisher+location+date}%
1219          \usebibmacro{copub}}}%
1220        \iffieldequalstr{relatedtype}{copub}{\clearfield{related}}%
1221        \setunit{\addspace}\newblock
1222        \usebibmacro{origpub}%
1223      }
```

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

```
1224    \newbibmacro*{series+number+publisher+location+date}{%
1225      \iftoggle{blx@ox@altbookseries}{%
1226        \usebibmacro{series+number}%
1227        \setunit{\addspace}\newblock}{}%
1228      \ifboolexpr{
1229        test {\iffieldundef{series}}
1230        and
1231        test {\iffieldundef{number}}
1232        and
1233        test {\iflistundef{publisher}}
1234        and
1235        test {\iflistundef{location}}
1236        and
1237        test {\iffieldundef{year}}
1238        and
1239        test {\iffieldundef{season}}
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{publisher+location+date}%
1249        \usebibmacro{copub}}}%
1250      \iffieldequalstr{relatedtype}{copub}{\clearfield{related}}%
1251      \setunit{\addspace}\newblock
1252      \usebibmacro{origpub}%
1253    }
```

The copub macro prints co-publication details.

```
1254    \newbibmacro*{copub}{%
1255      \ifboolexpr{
1256        togl {bbx:related}
1257        and
1258        test {\iffieldequalstr{relatedtype}{copub}}
1259      }{%
1260        \setunit{\addsemicolon\space}%
1261        \usebibmacro{related:init}%
1262        \usebibmacro{related}%
1263      }{}%
1264    }
```

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

```
1265    \newbibmacro*{origpub}{%
1266      \ifboolexpr{
```

```
1267        test {\iflistundef{origlocation}}
1268        and
1269        test {\iflistundef{origpublisher}}
1270        and
1271        test {\iffieldundef{edition}}
1272        and
1273        ( not test {\iffieldundef{origyear}} )
1274      }{%
1275        \printtext[parens]{\bibstring{origpubin}\space\printorigdate}%
1276      }{}%
1277    }
```

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;

```
1278    \DeclareBibliographyDriver{book}{%
1279      \usebibmacro{bibindex}%
1280      \usebibmacro{begentry}%
1281      \usebibmacro{author/editor+others/translator+others}%
1282      \setunit{\printdelim{nametitledelim}}\newblock
1283      \usebibmacro{title}%
1284      \setunit{\titlebyauthordelim}\newblock
1285      \usebibmacro{byauthor}%
1286      \newunit\newblock
1287      \usebibmacro{byeditor+others}%
1288      \newunit\newblock
1289      \printfield{note}%
1290      \newunit\newblock
1291      \usebibmacro{maintitle+volume}%
1292      \newunit
1293      \usebibmacro{series+number+edition+publisher+location+date}%
1294      \setunit{\addspace}%
1295      \printfield{howpublished}%
1296      \newunit\newblock
1297      \usebibmacro{chapter+pages}%
1298      \newunit
1299      \printfield{pagetotal}%
1300      \newunit\newblock
1301      \iftoggle{bbx:isbn}
1302        {\printfield{isbn}}
1303        {}%
1304      \newunit\newblock
1305      \usebibmacro{doi+eprint+url}%
1306      \newunit\newblock
1307      \usebibmacro{addendum+pubstate}%
1308      \setunit{\bibpagerefpunct}\newblock
1309      \usebibmacro{pageref}%
1310      \setunit{\relatedtypepunct}\newblock
1311      \iftoggle{bbx:related}
1312        {\usebibmacro{related:init}%
1313         \usebibmacro{related}}
1314        {}%
1315      \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;

```
1316  \DeclareBibliographyDriver{mvbook}{%
1317    \usebibmacro{bibindex}%
1318    \usebibmacro{begentry}%
1319    \usebibmacro{author/editor+others/translator+others}%
1320    \setunit{\printdelim{nametitledelim}}\newblock
1321    \usebibmacro{maintitle+title}%
1322    \newunit
1323    \ifboolexpr{
1324      test {\iffieldequalstr{relatedtype}{multivolume}}
1325      or
1326      ( not test {\iffieldundef{maintitle}} )
1327    }{}{%
1328      \printfield{volume}%
1329      \printfield{part}}%
1330    \setunit{\titlebyauthordelim}\newblock
1331    \usebibmacro{byauthor}%
1332    \newunit\newblock
1333    \usebibmacro{byeditor+others}%
1334    \newunit\newblock
1335    \printfield{volumes}%
1336    \newunit\newblock
1337    \printfield{note}%
1338    \newunit\newblock
1339    \ifboolexpr{
1340      test {\iffieldequalstr{relatedtype}{multivolume}}
1341      and
1342      test {\iffieldundef{maintitle}}
1343    }{%
1344      \printfield{volume}%
1345      \printfield{part}%
1346    }{}%
1347    \newunit\newblock
1348    \usebibmacro{series+number+edition+publisher+location+date}%
1349    \newunit\newblock
1350    \usebibmacro{chapter+pages}%
1351    \newunit
1352    \printfield{pagetotal}%
1353    \newunit\newblock
1354    \iftoggle{bbx:isbn}
1355    {\printfield{isbn}}
1356    {}%
1357    \newunit\newblock
1358    \usebibmacro{doi+eprint+url}%
1359    \newunit\newblock
1360    \usebibmacro{addendum+pubstate}%
1361    \setunit{\bibpagerefpunct}\newblock
1362    \usebibmacro{pageref}%
1363    \setunit{\relatedtypepunct}\newblock
1364    \iftoggle{bbx:related}
1365    {\usebibmacro{related:init}%
1366      \usebibmacro{related}}
1367    {}%
1368    \usebibmacro{finentry}}
```

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

```
1369  \DeclareBibliographyDriver{inbook}{%
1370    \usebibmacro{bibindex}%
1371    \usebibmacro{begentry}%
1372    \usebibmacro{author/translator+others}%
1373    \setunit{\printdelim{nametitledelim}}\newblock
1374    \usebibmacro{title}%
1375    \setunit{\titlebyauthordelim}\newblock
1376    \usebibmacro{byauthor}%
1377    \newunit\newblock
1378    \usebibmacro{in:}%
1379    \usebibmacro{bybookauthor}%
1380    \newunit\newblock
1381    \usebibmacro{maintitle+booktitle}%
1382    \newunit
1383    \iffieldundef{maintitle}
1384    {\printfield{volume}%
1385      \printfield{part}}
1386    {}%
1387    \newunit\newblock
1388    \usebibmacro{byeditor+others}%
1389    \newunit\newblock
1390    \printfield{volumes}%
1391    \newunit\newblock
1392    \printfield{note}%
1393    \newunit\newblock
1394    \usebibmacro{series+number+edition+publisher+location+date}%
1395    \newunit\newblock
1396    \usebibmacro{chapter+pages}%
1397    \newunit\newblock
1398    \iftoggle{bbx:isbn}
1399    {\printfield{isbn}}
1400    {}%
1401    \newunit\newblock
1402    \usebibmacro{doi+eprint+url}%
1403    \newunit\newblock
1404    \usebibmacro{addendum+pubstate}%
1405    \setunit{\bibpagerefpunct}\newblock
1406    \usebibmacro{pageref}%
1407    \setunit{\relatedtypepunct}\newblock
1408    \iftoggle{bbx:related}
1409    {\usebibmacro{related:init}%
1410      \usebibmacro{related}}
1411    {}%
1412    \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.

```
1413  \DeclareFieldFormat[suppbook]{title}{%
1414    \def\currentfield{title}%
1415    \iffieldannotation{descriptor}{#1}{\mkbibemph{#1}}%
1416    \undef\currentfield}
1417  \DeclareBibliographyDriver{suppbook}{%
1418    \usebibmacro{bibindex}%
1419    \usebibmacro{begentry}%
1420    \usebibmacro{author/translator+others}%
1421    \setunit{\printdelim{nametitledelim}}\newblock
1422    \usebibmacro{title}%
```

```
1423    \setunit{\titlebyauthordelim}\newblock
1424    \usebibmacro{byauthor}%
1425    \newunit\newblock
1426    \printfield{note}%
1427    \setunit{\addspace}\newblock
1428    \usebibmacro{in:}%
1429    \usebibmacro{bybookauthor}%
1430    \newunit\newblock
1431    \usebibmacro{maintitle+booktitle}%
1432    \newunit
1433    \iffieldundef{maintitle}
1434    {\printfield{volume}%
1435      \printfield{part}}
1436    {}%
1437    \newunit\newblock
1438    \usebibmacro{byeditor+others}%
1439    \newunit\newblock
1440    \printfield{volumes}%
1441    \newunit\newblock
1442    \usebibmacro{series+number+edition+publisher+location+date}%
1443    \newunit\newblock
1444    \usebibmacro{chapter+pages}%
1445    \newunit\newblock
1446    \iftoggle{bbx:isbn}
1447    {\printfield{isbn}}
1448    {}%
1449    \newunit\newblock
1450    \usebibmacro{doi+eprint+url}%
1451    \newunit\newblock
1452    \usebibmacro{addendum+pubstate}%
1453    \setunit{\bibpagerefpunct}\newblock
1454    \usebibmacro{pageref}%
1455    \setunit{\relatedtypepunct}\newblock
1456    \iftoggle{bbx:related}
1457    {\usebibmacro{related:init}%
1458      \usebibmacro{related}}
1459    {}%
1460    \usebibmacro{finentry}}
```

We also provide a bookinbook driver that handles origdate differently.

```
1461    \DeclareBibliographyDriver{bookinbook}{%
1462    \usebibmacro{bibindex}%
1463    \usebibmacro{begentry}%
1464    \usebibmacro{author/translator+others}%
1465    \setunit{\printdelim{nametitledelim}}\newblock
1466    \usebibmacro{title}%
1467    \setunit{\titlebyauthordelim}\newblock
1468    \usebibmacro{byauthor}%
1469    \newunit\newblock
1470    \usebibmacro{in:}%
1471    \usebibmacro{bybookauthor}%
1472    \newunit\newblock
1473    \usebibmacro{maintitle+booktitle}%
1474    \newunit
1475    \iffieldundef{maintitle}
1476    {\printfield{volume}%
1477      \printfield{part}}
1478    {}%
1479    \newunit\newblock
1480    \usebibmacro{byeditor+others}%
```

```
1481        \newunit\newblock
1482        \printfield{volumes}%
1483        \newunit\newblock
1484        \printfield{note}%
1485        \newunit\newblock
1486        \usebibmacro{series+number+edition+publisher+location+date}%
1487        \newunit\newblock
1488        \usebibmacro{chapter+pages}%
1489        \newunit\newblock
1490        \iftoggle{bbx:isbn}
1491        {\printfield{isbn}}
1492        {}%
1493        \newunit\newblock
1494        \usebibmacro{doi+eprint+url}%
1495        \newunit\newblock
1496        \usebibmacro{addendum+pubstate}%
1497        \setunit{\bibpagerefpunct}\newblock
1498        \usebibmacro{pageref}%
1499        \setunit{\relatedtypepunct}\newblock
1500        \iftoggle{bbx:related}
1501        {\usebibmacro{related:init}%
1502          \usebibmacro{related}}
1503        {}%
1504        \usebibmacro{finentry}}
```

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

```
1505    \DeclareBibliographyDriver{collection}{%
1506      \usebibmacro{bibindex}%
1507      \usebibmacro{begentry}%
1508      \usebibmacro{editor+others}%
1509      \setunit{\printdelim{nametitledelim}}\newblock
1510      \usebibmacro{title}%
1511      \newunit\newblock
1512      \usebibmacro{byeditor+others}%
1513      \newunit\newblock
1514      \printfield{note}%
1515      \newunit\newblock
1516      \usebibmacro{maintitle+volume}%
1517      \newunit
1518      \usebibmacro{series+number+edition+publisher+location+date}%
1519      \newunit\newblock
1520      \usebibmacro{chapter+pages}%
1521      \newunit
1522      \printfield{pagetotal}%
1523      \newunit\newblock
1524      \iftoggle{bbx:isbn}
1525      {\printfield{isbn}}
1526      {}%
1527      \newunit\newblock
1528      \usebibmacro{doi+eprint+url}%
1529      \newunit\newblock
1530      \usebibmacro{addendum+pubstate}%
1531      \setunit{\bibpagerefpunct}\newblock
1532      \usebibmacro{pageref}%
1533      \setunit{\relatedtypepunct}\newblock
1534      \iftoggle{bbx:related}
1535      {\usebibmacro{related:init}%
1536        \usebibmacro{related}}
1537      {}%
1538      \usebibmacro{finentry}}
```

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

```
1539    \DeclareBibliographyDriver{mvcollection}{%
1540      \usebibmacro{bibindex}%
1541      \usebibmacro{begentry}%
1542      \usebibmacro{editor+others}%
1543      \setunit{\printdelim{nametitledelim}}\newblock
1544      \usebibmacro{maintitle+title}%
1545      \newunit
1546      \ifboolexpr{
1547        test {\iffieldequalstr{relatedtype}{multivolume}}
1548        or
1549        ( not test {\iffieldundef{maintitle}} )
1550      }{}{%
1551        \printfield{volume}%
1552        \printfield{part}}%
1553      \newunit\newblock
1554      \usebibmacro{byeditor+others}%
1555      \newunit\newblock
1556      \printfield{volumes}%
1557      \newunit\newblock
1558      \printfield{note}%
1559      \newunit\newblock
1560      \ifboolexpr{
1561        test {\iffieldequalstr{relatedtype}{multivolume}}
1562        and
1563        test {\iffieldundef{maintitle}}
1564      }{%
1565        \printfield{volume}%
1566        \printfield{part}%
1567      }{}%
1568      \newunit\newblock
1569      \usebibmacro{series+number+edition+publisher+location+date}%
1570      \newunit\newblock
1571      \usebibmacro{chapter+pages}%
1572      \newunit
1573      \printfield{pagetotal}%
1574      \newunit\newblock
1575      \iftoggle{bbx:isbn}
1576      {\printfield{isbn}}
1577      {}%
1578      \newunit\newblock
1579      \usebibmacro{doi+eprint+url}%
1580      \newunit\newblock
1581      \usebibmacro{addendum+pubstate}%
1582      \setunit{\bibpagerefpunct}\newblock
1583      \usebibmacro{pageref}%
1584      \setunit{\relatedtypepunct}\newblock
1585      \iftoggle{bbx:related}
1586      {\usebibmacro{related:init}%
1587        \usebibmacro{related}}
1588      {}%
1589      \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.

```
1590    \DeclareBibliographyDriver{incollection}{%
1591      \usebibmacro{bibindex}%
```

```
1592        \usebibmacro{begentry}%
1593        \usebibmacro{author/translator+others}%
1594        \setunit{\printdelim{nametitledelim}}\newblock
1595        \usebibmacro{title}%
1596        \setunit{\titlebyauthordelim}\newblock
1597        \usebibmacro{byauthor}%
1598        \newunit\newblock
1599        \usebibmacro{in:}%
1600        \usebibmacro{bookeditor}%
1601        \newunit\newblock
1602        \usebibmacro{maintitle+booktitle}%
1603        \newunit
1604        \iffieldundef{maintitle}
1605        {\printfield{volume}%
1606          \printfield{part}}
1607        {}%
1608        \newunit\newblock
1609        \printfield{volumes}%
1610        \newunit\newblock
1611        \printfield{note}%
1612        \newunit\newblock%
1613        \usebibmacro{series+number+edition+publisher+location+date}%
1614        \newunit\newblock
1615        \usebibmacro{chapter+pages}%
1616        \newunit\newblock
1617        \iftoggle{bbx:isbn}
1618        {\printfield{isbn}}
1619        {}%
1620        \newunit\newblock
1621        \usebibmacro{doi+eprint+url}%
1622        \newunit\newblock
1623        \usebibmacro{addendum+pubstate}%
1624        \setunit{\bibpagerefpunct}\newblock
1625        \usebibmacro{pageref}%
1626        \setunit{\relatedtypepunct}\newblock
1627        \iftoggle{bbx:related}
1628        {\usebibmacro{related:init}%
1629          \usebibmacro{related}}
1630        {}%
1631        \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.

```
1632    \DeclareFieldFormat[suppcollection]{title}{%
1633      \def\currentfield{title}%
1634      \iffieldannotation{descriptor}{#1}{\mkbibemph{#1}}%
1635      \undef\currentfield}
1636    \DeclareBibliographyDriver{suppcollection}{%
1637      \usebibmacro{bibindex}%
1638      \usebibmacro{begentry}%
1639      \usebibmacro{author/translator+others}%
1640      \setunit{\printdelim{nametitledelim}}\newblock
1641      \usebibmacro{title}%
1642      \setunit{\titlebyauthordelim}\newblock
1643      \usebibmacro{byauthor}%
1644      \newunit\newblock
1645      \printfield{note}%
1646      \setunit{\addspace}\newblock
1647      \usebibmacro{in:}%
1648      \usebibmacro{bookeditor}%
```

```
1649    \newunit\newblock
1650    \usebibmacro{maintitle+booktitle}%
1651    \newunit
1652    \iffieldundef{maintitle}
1653    {\printfield{volume}%
1654      \printfield{part}}
1655    {}%
1656    \newunit\newblock
1657    \printfield{volumes}%
1658    \newunit\newblock%
1659    \usebibmacro{series+number+edition+publisher+location+date}%
1660    \newunit\newblock
1661    \usebibmacro{chapter+pages}%
1662    \newunit\newblock
1663    \iftoggle{bbx:isbn}
1664    {\printfield{isbn}}
1665    {}%
1666    \newunit\newblock
1667    \usebibmacro{doi+eprint+url}%
1668    \newunit\newblock
1669    \usebibmacro{addendum+pubstate}%
1670    \setunit{\bibpagerefpunct}\newblock
1671    \usebibmacro{pageref}%
1672    \setunit{\relatedtypepunct}\newblock
1673    \iftoggle{bbx:related}
1674    {\usebibmacro{related:init}%
1675      \usebibmacro{related}}
1676    {}%
1677    \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.

```
1678    \DeclareBibliographyDriver{reference}{%
1679    \usebibmacro{bibindex}%
1680    \usebibmacro{begentry}%
1681    \usebibmacro{author/editor+others/translator+others}%
1682    \setunit{\printdelim{nametitledelim}}\newblock
1683    \usebibmacro{title}%
1684    \newunit\newblock
1685    \printfield{edition}%
1686    \setunit{\titlebyauthordelim}\newblock
1687    \usebibmacro{byauthor}%
1688    \newunit\newblock
1689    \usebibmacro{byeditor+others}%
1690    \newunit\newblock
1691    \printfield{note}%
1692    \newunit\newblock
1693    \usebibmacro{maintitle+volume}%
1694    \newunit
1695    \usebibmacro{series+number+publisher+location+date}%
1696    \newunit\newblock
1697    \usebibmacro{chapter+pages}%
1698    \newunit
1699    \printfield{pagetotal}%
1700    \newunit\newblock
1701    \iftoggle{bbx:isbn}
1702    {\printfield{isbn}}
1703    {}%
1704    \newunit\newblock
1705    \usebibmacro{doi+eprint+url}%
```

```
1706    \newunit\newblock
1707    \usebibmacro{addendum+pubstate}%
1708    \setunit{\bibpagerefpunct}\newblock
1709    \usebibmacro{pageref}%
1710    \setunit{\relatedtypepunct}\newblock
1711    \iftoggle{bbx:related}
1712    {\usebibmacro{related:init}%
1713      \usebibmacro{related}}
1714    {}%
1715    \usebibmacro{finentry}}
```

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

```
1716    \DeclareBibliographyDriver{mvreference}{%
1717      \usebibmacro{bibindex}%
1718      \usebibmacro{begentry}%
1719      \usebibmacro{author/editor+others/translator+others}%
1720      \setunit{\printdelim{nametitledelim}}\newblock
1721      \usebibmacro{maintitle+title}%
1722      \newunit
1723      \ifboolexpr{
1724        test {\iffieldequalstr{relatedtype}{multivolume}}
1725        or
1726        ( not test {\iffieldundef{maintitle}} )
1727      }{}{%
1728        \printfield{volume}%
1729        \printfield{part}}%
1730      \newunit\newblock
1731      \printfield{edition}%
1732      \setunit{\titlebyauthordelim}\newblock
1733      \usebibmacro{byauthor}%
1734      \newunit\newblock
1735      \usebibmacro{byeditor+others}%
1736      \newunit\newblock
1737      \printfield{volumes}%
1738      \newunit\newblock
1739      \printfield{note}%
1740      \newunit\newblock
1741      \ifboolexpr{
1742        test {\iffieldequalstr{relatedtype}{multivolume}}
1743        and
1744        test {\iffieldundef{maintitle}}
1745      }{%
1746        \printfield{volume}%
1747        \printfield{part}%
1748      }{}%
1749      \newunit\newblock
1750      \usebibmacro{series+number+publisher+location+date}%
1751      \newunit\newblock
1752      \usebibmacro{chapter+pages}%
1753      \newunit
1754      \printfield{pagetotal}%
1755      \newunit\newblock
1756      \iftoggle{bbx:isbn}
1757      {\printfield{isbn}}
1758      {}%
1759      \newunit\newblock
1760      \usebibmacro{doi+eprint+url}%
1761      \newunit\newblock
1762      \usebibmacro{addendum+pubstate}%
1763      \setunit{\bibpagerefpunct}\newblock
```

```
1764        \usebibmacro{pageref}%
1765        \setunit{\relatedtypepunct}\newblock
1766        \iftoggle{bbx:related}
1767        {\usebibmacro{related:init}%
1768          \usebibmacro{related}}
1769        {}%
1770        \usebibmacro{finentry}}
```

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

```
1771    \DeclareBibliographyDriver{inreference}{%
1772      \usebibmacro{bibindex}%
1773      \usebibmacro{begentry}%
1774      \usebibmacro{author/translator+others}%
1775      \setunit{\printdelim{nametitledelim}}\newblock
1776      \usebibmacro{title}%
1777      \setunit{\titlebyauthordelim}\newblock
1778      \usebibmacro{byauthor}%
1779      \newunit\newblock
1780      \iffieldundef{editor}{}{%
1781        \usebibmacro{in:}%
1782        \usebibmacro{bookeditor}%
1783        \newunit\newblock}%
1784      \usebibmacro{maintitle+booktitle}%
1785      \newunit
1786      \iffieldundef{maintitle}
1787      {\printfield{volume}%
1788        \printfield{part}}
1789      {}%
1790      \newunit\newblock
1791      \printfield{edition}%
1792      \newunit
1793      \usebibmacro{byeditor+others}%
1794      \newunit\newblock
1795      \printfield{volumes}%
1796      \newunit\newblock
1797      \printfield{note}%
1798      \newunit\newblock%
1799      \usebibmacro{series+number+publisher+location+date}%
1800      \newunit\newblock
1801      \usebibmacro{chapter+pages}%
1802      \newunit
1803      \printfield{pagetotal}%
1804      \newunit\newblock
1805      \iftoggle{bbx:isbn}
1806      {\printfield{isbn}}
1807      {}%
1808      \newunit\newblock
1809      \usebibmacro{doi+eprint+url}%
1810      \newunit\newblock
1811      \usebibmacro{addendum+pubstate}%
1812      \setunit{\bibpagerefpunct}\newblock
1813      \usebibmacro{pageref}%
1814      \setunit{\relatedtypepunct}\newblock
1815      \iftoggle{bbx:related}
1816      {\usebibmacro{related:init}%
1817        \usebibmacro{related}}
1818      {}%
1819      \usebibmacro{finentry}}
```

2.1.11 WORKS PRESENTED AT MEETINGS

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

```
1820    \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.

```
1821    \renewbibmacro*{event+venue+date}{%
1822      \printfield{eventtitle}%
1823      \newunit
1824      \printfield{eventtitleaddon}%
1825      \newunit
1826      \printfield{venue}%
1827      \newunit%
1828      \printeventdate%
1829      \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!

```
1830    \DeclareBibliographyDriver{proceedings}{%
1831      \usebibmacro{bibindex}%
1832      \usebibmacro{begentry}%
1833      \usebibmacro{author}%
1834      \newunit
1835      \usebibmacro{maintitle+title}%
1836      \newunit
1837      \iffieldundef{maintitle}
1838      {\printfield{volume}%
1839        \printfield{part}}
1840      {}%
1841      \newunit\newblock
1842      \usebibmacro{event+venue+date}%
1843      \newunit\newblock
1844      \usebibmacro{byeditor+others}%
1845      \newunit\newblock
1846      \printfield{volumes}%
1847      \newunit\newblock
1848      \printfield{note}%
1849      \newunit\newblock
1850      \printlist{organization}%
1851      \newunit
1852      \usebibmacro{series+number+edition+publisher+location+date}%
1853      \newunit\newblock
1854      \usebibmacro{chapter+pages}%
1855      \newunit
1856      \printfield{pagetotal}%
```

```
1857        \newunit\newblock
1858        \iftoggle{bbx:isbn}
1859        {\printfield{isbn}}
1860        {}%
1861        \newunit\newblock
1862        \usebibmacro{doi+eprint+url}%
1863        \newunit\newblock
1864        \usebibmacro{addendum+pubstate}%
1865        \setunit{\bibpagerefpunct}\newblock
1866        \usebibmacro{pageref}%
1867        \setunit{\relatedtypepunct}\newblock
1868        \iftoggle{bbx:related}
1869        {\usebibmacro{related:init}%
1870           \usebibmacro{related}}
1871        {}%
1872        \usebibmacro{finentry}}
```

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

```
1873        \DeclareBibliographyDriver{inproceedings}{%
1874          \usebibmacro{bibindex}%
1875          \usebibmacro{begentry}%
1876          \usebibmacro{author/translator+others}%
1877          \setunit{\printdelim{nametitledelim}}\newblock
1878          \usebibmacro{title}%
1879          \setunit{\titlebyauthordelim}\newblock
1880          \usebibmacro{byauthor}%
1881          \newunit\newblock
1882          \usebibmacro{in:}%
1883          \usebibmacro{maintitle+booktitle}%
1884          \newunit
1885          \iffieldundef{maintitle}
1886          {\printfield{volume}%
1887             \printfield{part}}
1888          {}%
1889          \newunit\newblock
1890          \usebibmacro{event+venue+date}%
1891          \newunit\newblock
1892          \usebibmacro{byeditor+others}%
1893          \newunit\newblock
1894          \printfield{volumes}%
1895          \newunit\newblock
1896          \printfield{note}%
1897          \newunit\newblock
1898          \printlist{organization}%
1899          \newunit
1900          \usebibmacro{series+number+publisher+location+date}%
1901          \newunit\newblock
1902          \usebibmacro{chapter+pages}%
1903          \newunit\newblock
1904          \iftoggle{bbx:isbn}
1905          {\printfield{isbn}}
1906          {}%
1907          \newunit\newblock
1908          \usebibmacro{doi+eprint+url}%
1909          \newunit\newblock
1910          \usebibmacro{addendum+pubstate}%
1911          \setunit{\bibpagerefpunct}\newblock
1912          \usebibmacro{pageref}%
1913          \setunit{\relatedtypepunct}\newblock
```

```
1914        \iftoggle{bbx:related}
1915        {\usebibmacro{related:init}%
1916          \usebibmacro{related}}
1917        {}%
1918        \usebibmacro{finentry}}
```

2.1.12 Grey literature

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

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

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

```
1938    \renewbibmacro*{institution+location+date}{%
1939      \ifboolexpr{
1940        ( test {\iffieldundef{number}}
1941          or
1942          not test {\iffieldundef{type}}
1943          or
1944          not test {\iffieldundef{series}}
1945        )
1946        and
1947        test {\iflistundef{institution}}
1948        and
1949        test {\iflistundef{location}}
1950        and
1951        test {\iffieldundef{year}}
1952        and
1953        test {\iffieldundef{season}}
1954        and
1955        test {\iffieldundef{month}}
1956      }{}{%
1957        \nopunct
1958        \printtext[publication]{%
1959          \ifboolexpr{
1960            test {\iffieldundef{series}}
1961            and
```

```
1962              test {\iffieldundef{type}}
1963            }{%
1964              \printfield{number}%
1965              \setunit*{\addcomma\space}%
1966            }{}%
1967            \printlist{location}%
1968            \iflistundef{institution}%
1969            {\setunit*{\addcomma\space}}%
1970            {\setunit*{\addcolon\space}}%
1971            \printlist{institution}%
1972            \setunit*{\addcomma\space}%
1973            \usebibmacro{date}}}}
```

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

```
1974    \newtoggle{blx@ox@altthesis}
1975    \newtoggle{blx@ox@plainthesis}
1976    \DeclareFieldAlias{thesis:publication}{publication}
1977    \DeclareFieldFormat{plain}{#1}
1978    \DeclareBibliographyOption{altthesis}[true]{%
1979      \settoggle{blx@ox@altthesis}{#1}
1980    }
1981    \DeclareBibliographyOption[string]{thesis}[out]{%
1982      \ifstrequal{#1}{plain}{%
1983        \toggletrue{blx@ox@altthesis}%
1984        \toggletrue{blx@ox@plainthesis}%
1985        \DeclareFieldAlias{thesis:publication}{plain}%
1986      }{%
1987        \togglefalse{blx@ox@plainthesis}%
1988        \DeclareFieldAlias{thesis:publication}{publication}%
1989        \ifstrequal{#1}{in}{%
1990          \toggletrue{blx@ox@altthesis}%
1991        }{%
1992          \togglefalse{blx@ox@altthesis}%
1993          \ifstrequal{#1}{out}{}{%
1994            \PackageError{biblatex-oxref}
1995            {Invalid option 'bookseries=#1'}
1996            {Valid values are 'in', 'out', and 'plain'.}}}}}
1997    \newbibmacro*{type+institution+location+date}{%
1998      \iftoggle{blx@ox@altthesis}{%
1999        \ifboolexpr{
2000          test {\iffieldundef{type}}
2001          and
2002          test {\iflistundef{institution}}
2003          and
2004          test {\iflistundef{location}}
2005          and
2006          test {\iffieldundef{year}}
2007          and
2008          test {\iffieldundef{season}}
2009          and
2010          test {\iffieldundef{month}}
2011        }{}{%
2012          \iftoggle{blx@ox@plainthesis}{}{\nopunct}%
2013          \printtext[thesis:publication]{%
2014            \printfield{type}%
2015            \setunit*{\addcomma\space}%
2016            \printlist{location}%
2017            \iflistundef{institution}{%
```

```
2018            \setunit*{\addcomma\space}%
2019          }{%
2020            \setunit*{\addcolon\space}}%
2021          \printlist{institution}%
2022          \setunit*{\addcomma\space}%
2023          \usebibmacro{date}}}
2024        }{%
2025          \printfield{type}%
2026          \newunit
2027          \usebibmacro{institution+location+date}}}
```

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

```
2028    \newbibmacro*{type+series+number+edition+organization+publisher+location+date}{%
2029      \ifboolexpr{
2030        test {\iffieldundef{type}}
2031        and
2032        test {\iffieldundef{series}}
2033        and
2034        test {\iffieldundef{number}}
2035        and
2036        test {\iffieldundef{edition}}
2037        and
2038        test {\iflistundef{organization}}
2039        and
2040        test {\iflistundef{publisher}}
2041        and
2042        test {\iflistundef{location}}
2043        and
2044        test {\iffieldundef{year}}
2045        and
2046        test {\iffieldundef{season}}
2047        and
2048        test {\iffieldundef{month}}
2049      }{}{%
2050        \nopunct
2051        \printtext[publication]{%
2052          \usebibmacro{series+type+number}%
2053          \setunit{\addsemicolon\space}%
2054          \printfield{edition}%
2055          \setunit*{\addcomma\space}%
2056          \iflistundef{publisher}{}{%
2057            \printlist{organization}%
2058            \setunit*{\addcomma\space}}%
2059          \printlist{location}%
2060          \iflistundef{publisher}{%
2061            \iflistundef{organization}{%
2062              \setunit*{\addcomma\space}%
2063            }{%
2064              \setunit*{\addcolon\space}%
2065              \printlist{organization}}%
2066          }{%
2067            \setunit*{\addcolon\space}%
2068            \printlist{publisher}}%
2069          \setunit*{\addcomma\space}%
2070          \usebibmacro{date}}}}
```

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

- support is added for volume, maintitle and series;

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

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

```
2071  \newcommand*{\legreport}{legal}
2072  \DeclareBibliographyDriver{report}{%
2073    \usebibmacro{bibindex}%
2074    \usebibmacro{begentry}%
2075    \usebibmacro{author}%
2076    \setunit{\printdelim{nametitledelim}}\newblock
2077    \usebibmacro{maintitle+title}%
2078    \newunit
2079    \iffieldundef{maintitle}
2080    {\printfield{volume}%
2081      \printfield{part}}
2082    {}%
2083    \setunit{\titlebyauthordelim}\newblock
2084    \usebibmacro{byauthor}%
2085    \newunit\newblock
2086    \printfield{version}%
2087    \newunit\newblock
2088    \printfield{note}%
2089    \newunit\newblock
2090    \usebibmacro{series+type+number}%
2091    \setunit{\addspace}%
2092    \usebibmacro{institution+location+date}%
2093    \iffieldequals{entrysubtype}{\legreport}{%
2094      \setunit{\addspace}\nopunct
2095    }{%
2096      \newunit\newblock}%
2097    \usebibmacro{chapter+pages}%
2098    \newunit
2099    \printfield{pagetotal}%
2100    \newunit\newblock
2101    \iftoggle{bbx:isbn}
2102    {\printfield{isrn}}
2103    {}%
2104    \newunit\newblock
2105    \usebibmacro{doi+eprint+url}%
2106    \newunit\newblock
2107    \usebibmacro{addendum+pubstate}%
2108    \setunit{\bibpagerefpunct}\newblock
2109    \usebibmacro{pageref}%
2110    \setunit{\relatedtypepunct}\newblock
2111    \iftoggle{bbx:related}
2112    {\usebibmacro{related:init}%
2113      \usebibmacro{related}}
2114    {}%
2115    \usebibmacro{finentry}}
```

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

```
2116  \xpatchbibdriver{thesis}{%
2117    \printfield{type}%
2118    \newunit
2119    \usebibmacro{institution+location+date}%
2120  }{%
2121    \usebibmacro{type+institution+location+date}%
2122  }{}{\wlog{WARNING: biblatex-oxref failed to patch thesis}}
```

We give booklet entries descriptor support.

```
2123    \DeclareFieldFormat[booklet]{title}{%
2124      \def\currentfield{title}%
2125      \iffieldannotation{descriptor}{#1}{%
2126        \mkbibquote{#1\isdot}}%
2127      \undef\currentfield}
```

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

```
2128    \DeclareFieldFormat[patent]{title}{\mkbibemph{#1}}
2129    \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.

```
2130    \DeclareNameAlias{byholder}{default}
2131    \renewbibmacro*{byholder}{%
2132      \ifnameundef{holder}{}{%
2133        \bibstring{byholder}%
2134        \setunit{\addspace}%
2135        \printnames[byholder]{holder}}}
2136    \newbibmacro*{location+dates}{%
2137      \ifboolexpr{
2138        test {\iffieldundef{location}}
2139        and
2140        test {\iffieldundef{origyear}}
2141        and
2142        test {\iffieldundef{origmonth}}
2143        and
2144        test {\iffieldundef{year}}
2145        and
2146        test {\iffieldundef{month}}
2147      }{}{%
2148        \nopunct
2149        \printtext[publication]{%
2150          \printlist[][-\value{listtotal}]{location}%
2151          \setunit*{\addcomma\space}%
2152          \ifboolexpr{
2153            test {\iffieldundef{origyear}}
2154            and
2155            test {\iffieldundef{origmonth}}
2156          }{}{%
2157            \iffieldundef{origdatetype}{%
2158              \bibstring{filed}%
2159            }{
2160              \printfield{origdatetype}}%
2161            \setunit*{\addspace}}%
2162          \usebibmacro{origdate+time}%
2163          \setunit*{\addcomma\space}%
2164          \ifboolexpr{
2165            test {\iffieldundef{year}}
2166            and
2167            test {\iffieldundef{month}}
2168          }{}{%
2169            \iffieldundef{datetype}{%
2170              \bibstring{issued}%
2171            }{
2172              \printfield{datetype}}%
2173            \setunit*{\addspace}}%
2174          \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`.

```
2175  \DeclareBibliographyDriver{patent}{%
2176    \usebibmacro{bibindex}%
2177    \usebibmacro{begentry}%
2178    \usebibmacro{author}%
2179    \setunit{\printdelim{nametitledelim}}\newblock
2180    \usebibmacro{title}%
2181    \newunit
2182    \printlist{language}%
2183    \setunit{\titlebyauthordelim}\newblock
2184    \usebibmacro{byauthor}%
2185    \newunit\newblock
2186    \printfield{note}%
2187    \newunit\newblock
2188    \printfield{type}%
2189    \setunit*{\addspace}%
2190    \printfield{number}%
2191    \newunit\newblock
2192    \usebibmacro{byholder}%
2193    \newunit\newblock
2194    \usebibmacro{location+dates}%
2195    \newunit\newblock
2196    \usebibmacro{doi+eprint+url}%
2197    \newunit\newblock
2198    \usebibmacro{addendum+pubstate}%
2199    \setunit{\bibpagerefpunct}\newblock
2200    \usebibmacro{pageref}%
2201    \setunit{\relatedtypepunct}\newblock
2202    \iftoggle{bbx:related}
2203      {\usebibmacro{related:init}%
2204       \usebibmacro{related}}
2205      {}%
2206    \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.

```
2207  \DeclareBibliographyDriver{manual}{%
2208    \usebibmacro{bibindex}%
2209    \usebibmacro{begentry}%
2210    \ifboolexpr{
2211      test {\ifentrytype{standard}}
2212      and
2213      ( test {\ifnameundef{author}}
2214        or
2215        not test \ifuseauthor )
2216      and
2217      not test {\iffieldundef{number}}
2218    }{%
2219      \printfield{number}\clearfield{number}%
2220      \newunit\newblock
2221    }{}%
2222    \usebibmacro{author/editor}%
2223    \setunit{\printdelim{nametitledelim}}\newblock
2224    \ifentrytype{software}{%
2225      \usebibmacro{title+version}%
```

```
2226    }{%
2227      \usebibmacro{title}}%
2228    \setunit{\titlebyauthordelim}\newblock
2229    \usebibmacro{byauthor}%
2230    \newunit\newblock
2231    \usebibmacro{byeditor}%
2232    \newunit
2233    \ifentrytype{software}{}{%
2234      \newunit\printfield{version}}%
2235    \newunit
2236    \printfield{note}%
2237    \newunit\newblock
2238    \usebibmacro{type+series+number+edition+organization+publisher+location+date}%
2239    \newunit\newblock
2240    \usebibmacro{chapter+pages}%
2241    \newunit
2242    \printfield{pagetotal}%
2243    \newunit\newblock
2244    \iftoggle{bbx:isbn}
2245    {\printfield{isbn}}
2246    {}%
2247    \newunit\newblock
2248    \usebibmacro{doi+eprint+url}%
2249    \newunit\newblock
2250    \usebibmacro{addendum+pubstate}%
2251    \setunit{\bibpagerefpunct}\newblock
2252    \usebibmacro{pageref}%
2253    \setunit{\relatedtypepunct}\newblock
2254    \iftoggle{bbx:related}
2255    {\usebibmacro{related:init}%
2256      \usebibmacro{related}}
2257    {}%
2258    \usebibmacro{finentry}}
2259  \DeclareBibliographyAlias{standard}{manual}
2260  \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.

```
2261  \newbibmacro*{publisher+type+series+number+date}{%
2262    \iffieldundef{number}{}{%
2263      \setunit{\addcomma\space}%
2264      \usebibmacro{origdate+time}%
2265    }%
2266    \ifboolexpr{%
2267      test {\iflistundef{origpublisher}}
2268      and
2269      test {\iflistundef{location}}
2270      and
2271      test {\iflistundef{publisher}}
2272      and
2273      test {\iffieldundef{type}}
2274      and
2275      test {\iffieldundef{series}}
2276      and
2277      test {\iffieldundef{number}}
```

```
2278          and
2279          test {\iffieldundef{year}}
2280          and
2281          test {\iffieldundef{season}}
2282          and
2283          test {\iffieldundef{month}}
2284          and
2285          test {\iffieldundef{origyear}}
2286          and
2287          test {\iffieldundef{origseason}}
2288          and
2289          test {\iffieldundef{origmonth}}
2290          and
2291          test {\iffieldundef{hour}}
2292       }{}{%
2293          \nopunct
2294          \printtext[publication]{%
2295            \printlist{origpublisher}%
2296            \setunit*{\addsemicolon\space}%
2297            \printlist{location}%
2298            \iflistundef{publisher}%
2299              {\setunit*{\addcomma\space}}%
2300              {\setunit*{\addcolon\space}}%
2301            \printlist{publisher}%
2302            \iffieldundef{series}%
2303              {\setunit*{\addspace}}%
2304              {\setunit*{\recordseriespunct}}%
2305            \printfield{series}%
2306            \setunit*{\addcomma\space}%
2307            \printfield{type}%
2308            \iflistundef{publisher}%
2309              {\setunit*{\addcomma\space}}%
2310              {\setunit*{\addspace}}%
2311            \printfield{number}%
2312            \iffieldundef{number}{%
2313              \setunit{\addcomma\space}%
2314              \usebibmacro{origdate+time}%
2315            }{}%
2316            \setunit{\addcomma\space}%
2317            \usebibmacro{date+time}}}}
```

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

```
2318      \newtoggle{blx@ox@endeditor}
2319      \DeclareEntryOption{endeditor}[true]{%
2320        \settoggle{blx@ox@endeditor}{#1}}
2321      \newbibmacro*{pre-byeditor+others}{%
2322        \iftoggle{blx@ox@endeditor}{}{%
2323          \usebibmacro{byeditor+others}%
2324        }}
2325      \newbibmacro*{post-byeditor+others}{%
2326        \iftoggle{blx@ox@endeditor}{%
2327          \usebibmacro{byeditor+others}%
2328        }{}}
```

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

```
2329   \DeclareBibliographyDriver{audio}{%
2330     \usebibmacro{bibindex}%
2331     \usebibmacro{begentry}%
2332     \usebibmacro{author}%
2333     \setunit{\printdelim{nametitledelim}}\newblock
2334     \usebibmacro{title}%
2335     \newunit
2336     \usebibmacro{maintitle}%
2337     \iffieldequalstr{relatedtype}{includes}{%
2338       \iftoggle{bbx:related}{%
2339         \newunit\newblock
2340         \usebibmacro{related:init}%
2341         \usebibmacro{related}%
2342         \clearfield{related}%
2343       }{}%
2344     }{}%
2345     \setunit{\addspace}
2346     \usebibmacro{onlinetype}%
2347     \setunit{\titlebyauthordelim}\newblock
2348     \usebibmacro{byauthor}%
2349     \newunit\newblock
2350     \usebibmacro{pre-byeditor+others}%
2351     \newunit\newblock
2352     \printfield{volumes}%
2353     \newunit\newblock
2354     \printfield{note}%
2355     \newunit\newblock%
2356     \printlist{organization}%
2357     \newunit\newblock%
2358     \usebibmacro{publisher+type+series+number+date}%
2359     \setunit{\addspace}%
2360     \printfield{howpublished}%
2361     \newunit\newblock
2362     \usebibmacro{post-byeditor+others}%
2363     \newunit\newblock
2364     \iftoggle{bbx:isbn}
2365     {\printfield{isbn}}
2366     {}%
2367     \newunit\newblock
2368     \usebibmacro{doi+eprint+url}%
2369     \newunit\newblock
2370     \usebibmacro{addendum+pubstate}%
2371     \setunit{\bibpagerefpunct}\newblock
2372     \usebibmacro{pageref}%
2373     \setunit{\relatedtypepunct}\newblock
2374     \iftoggle{bbx:related}
2375     {\usebibmacro{related:init}%
2376       \usebibmacro{related}}
2377     {}%
2378     \usebibmacro{finentry}}
```

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

```
2379   \DeclareBibliographyAlias{music}{audio}
2380   \DeclareBibliographyAlias{movie}{audio}
2381   \DeclareBibliographyAlias{video}{audio}
```

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

```
2382   \DeclareBibliographyDriver{inaudio}{%
2383     \usebibmacro{bibindex}%
2384     \usebibmacro{begentry}%
2385     \usebibmacro{author}%
2386     \setunit{\printdelim{nametitledelim}}\newblock
2387     \usebibmacro{title}%
2388     \setunit{\titlebyauthordelim}\newblock
2389     \usebibmacro{byauthor}%
2390     \newunit\newblock
2391     \usebibmacro{in:}%
2392     \usebibmacro{bybookauthor}%
2393     \newunit\newblock
2394     \usebibmacro{maintitle+booktitle}%
2395     \iffieldequalstr{relatedtype}{includes}{%
2396       \iftoggle{bbx:related}{%
2397         \newunit\newblock
2398         \usebibmacro{related:init}%
2399         \usebibmacro{related}%
2400         \clearfield{related}%
2401       }{}%
2402     }{}%
2403     \setunit{\addspace}
2404     \usebibmacro{onlinetype}%
2405     \newunit\newblock
2406     \usebibmacro{pre-byeditor+others}%
2407     \newunit\newblock
2408     \printfield{volumes}%
2409     \newunit\newblock
2410     \printfield{note}%
2411     \newunit\newblock%
2412     \printlist{organization}%
2413     \newunit\newblock%
2414     \usebibmacro{publisher+type+series+number+date}%
2415     \setunit{\addspace}%
2416     \printfield{howpublished}%
2417     \newunit\newblock
2418     \usebibmacro{post-byeditor+others}%
2419     \newunit\newblock
2420     \iftoggle{bbx:isbn}
2421     {\printfield{isbn}}
2422     {}%
2423     \newunit\newblock
2424     \usebibmacro{doi+eprint+url}%
2425     \newunit\newblock
2426     \usebibmacro{addendum+pubstate}%
2427     \setunit{\bibpagerefpunct}\newblock
2428     \usebibmacro{pageref}%
2429     \setunit{\relatedtypepunct}\newblock
2430     \iftoggle{bbx:related}
2431     {\usebibmacro{related:init}%
2432       \usebibmacro{related}}
2433     {}%
2434     \usebibmacro{finentry}}
```

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

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

We set up appropriate inheritance rules.

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

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

```
2447   \DeclareFieldFormat[audio,music]{title}{%
2448     \def\currentfield{title}%
2449     \iffieldannotation{descriptor}{#1}{%
2450       \iffieldequalstr{entrysubtype}{podcast}{%
2451         \mkbibquote{#1\isdot}%
2452       }{%
2453         \mkbibemph{#1}}}%
2454     \undef\currentfield}
2455   \DeclareFieldFormat[movie,video]{title}{%
2456     \def\currentfield{title}%
2457     \iffieldannotation{descriptor}{#1}{%
2458       \ifboolexpr{
2459         test {\iffieldequalstr{entrysubtype}{episode}}
2460         or
2461         test {\iffieldequalstr{entrysubtype}{clip}}
2462         or
2463         test {\iffieldequalstr{entrysubtype}{webcast}}
2464       }{%
2465         \mkbibquote{#1\isdot}%
2466       }{%
2467         \mkbibemph{#1}}}%
2468     \undef\currentfield}
2469   \DeclareFieldFormat[inaudio,inmusic,inmovie,invideo]{title}{%
2470     \def\currentfield{title}%
2471     \iffieldannotation{descriptor}{#1}{%
2472       \mkbibquote{#1\isdot}%
2473     }%
2474     \undef\currentfield}
2475   \DeclareFieldFormat[inaudio,inmusic]{booktitle}{%
2476     \def\currentfield{booktitle}%
2477     \iffieldannotation{descriptor}{#1}{%
2478       \iffieldequalstr{entrysubtype}{podcast}{%
2479         \mkbibquote{#1\isdot}%
2480       }{%
2481         \mkbibemph{#1}}}%
2482     \undef\currentfield}
2483   \DeclareFieldFormat[inmovie,invideo]{booktitle}{%
2484     \def\currentfield{booktitle}%
2485     \iffieldannotation{descriptor}{#1}{%
2486       \ifboolexpr{
2487         test {\iffieldequalstr{entrysubtype}{episode}}
2488         or
2489         test {\iffieldequalstr{entrysubtype}{clip}}
2490         or
2491         test {\iffieldequalstr{entrysubtype}{webcast}}
2492       }{%
```

```
2493          \mkbibquote{#1\isdot}%
2494        }{%
2495          \mkbibemph{#1}}}%
2496      \undef\currentfield}
```

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.

```
2497      \DeclareBibliographyDriver{performance}{%
2498        \usebibmacro{bibindex}%
2499        \usebibmacro{begentry}%
2500        \usebibmacro{author}%
2501        \setunit{\printdelim{nametitledelim}}\newblock
2502        \usebibmacro{title}%
2503        \newunit
2504        \usebibmacro{maintitle}%
2505        \iffieldequalstr{relatedtype}{includes}{%
2506          \iftoggle{bbx:related}{%
2507            \newunit\newblock
2508            \usebibmacro{related:init}%
2509            \usebibmacro{related}%
2510            \clearfield{related}%
2511          }{}%
2512        }{}%
2513        \setunit{\addspace}
2514        \usebibmacro{onlinetype}%
2515        \setunit{\titlebyauthordelim}\newblock
2516        \usebibmacro{byauthor}%
2517        \newunit\newblock
2518        \usebibmacro{pre-byeditor+others}%
2519        \setunit{\addspace}%
2520        \printfield{howpublished}%
2521        \newunit\newblock
2522        \printfield{type}%
2523        \newunit\newblock
2524        \printfield{note}%
2525        \ifboolexpr{
2526          test {\iffieldundef{origyear}}
2527          and
2528          test {\iffieldundef{origmonth}}
2529        }{}{%
2530          \setunit{\addspace}\newblock
2531          \printtext[publication]{\usebibmacro{origdate+time}}}
2532        \newunit\newblock
2533        \usebibmacro{event+venue+location+date}%
2534        \newunit\newblock
2535        \usebibmacro{post-byeditor+others}%
2536        \newunit\newblock
2537        \printlist{organization}%
2538        \newunit\newblock
2539        \iftoggle{bbx:isbn}
2540        {\printfield{isbn}}
2541        {}%
2542        \newunit\newblock
2543        \usebibmacro{doi+eprint+url}%
2544        \newunit\newblock
2545        \usebibmacro{addendum+pubstate}%
2546        \setunit{\bibpagerefpunct}\newblock
2547        \usebibmacro{pageref}%
2548        \setunit{\relatedtypepunct}\newblock
2549        \iftoggle{bbx:related}
```

```
2550        {\usebibmacro{related:init}%
2551          \usebibmacro{related}}
2552        {}%
2553        \usebibmacro{finentry}}
2554      \DeclareBibliographyAlias{image}{performance}
2555      \DeclareBibliographyAlias{artwork}{performance}
```

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

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

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.

```
2572      \DeclareFieldFormat[online,image]{title}{%
2573        \def\currentfield{title}%
2574        \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
2575        \undef\currentfield}
```

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

```
2576      \newbibmacro*{onlinetype}{%
2577        \ifboolexpr{
2578          test {\iffieldundef{url}}
2579          or
2580          test {\iffieldundef{entrysubtype}}
2581        }{}{%
2582          \ifbibxstring{\thefield{entrysubtype}}{%
2583            \printtext[brackets]{\bibstring{\thefield{entrysubtype}}}%
2584          }{}}}
```

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.

```
2585    \DeclareBibliographyDriver{online}{%
2586      \usebibmacro{bibindex}%
2587      \usebibmacro{begentry}%
2588      \usebibmacro{author/editor+others/translator+others}%
2589      \setunit{\printdelim{nametitledelim}}\newblock
2590      \usebibmacro{title}%
2591      \newunit
2592      \usebibmacro{maintitle}
2593      \setunit{\addspace}%
2594      \usebibmacro{onlinetype}%
2595      \setunit{\titlebyauthordelim}\newblock
2596      \usebibmacro{byauthor}%
2597      \newunit\newblock
2598      \usebibmacro{byeditor+others}%
2599      \newunit\newblock
2600      \printfield{version}%
2601      \newunit
2602      \printfield{note}%
2603      \newunit\newblock
2604      \printlist{organization}%
2605      \iffieldundef{year}{}{%
2606        \setunit{\addspace}\newblock
2607        \printtext[parens]{\usebibmacro{date+time}}%
2608      }%
2609      \newunit\newblock
2610      \printlist{publisher}%
2611      \newunit\newblock
2612      \iftoggle{bbx:eprint}
2613      {\usebibmacro{eprint}}
2614      {}%
2615      \newunit\newblock
2616      \usebibmacro{url+urldate}%
2617      \newunit\newblock
2618      \usebibmacro{addendum+pubstate}%
2619      \setunit{\bibpagerefpunct}\newblock
2620      \usebibmacro{pageref}%
2621      \setunit{\relatedtypepunct}\newblock
2622      \iftoggle{bbx:related}
2623      {\usebibmacro{related:init}%
2624        \usebibmacro{related}}
2625      {}%
2626      \usebibmacro{finentry}}
```

Software

The version for software goes between the title and titleaddon.

```
2627    \newbibmacro*{title+version}{%
2628      \ifboolexpr{
2629        test {\iffieldundef{title}}
2630        and
2631        test {\iffieldundef{subtitle}}
2632      }
2633      {}
2634      {\printtext[title]{%
2635          \printfield[titlecase]{title}%
2636          \setunit{\subtitlepunct}%
2637          \printfield[titlecase]{subtitle}}%
```

```
2638        \setunit{\addspace}}%
2639      \printfield{version}%
2640      \setunit{\addspace}%
2641      \printfield{titleaddon}%
2642    }
2643    \DeclareFieldFormat[software]{version}{\mkbibparens{\bibstring{version}~#1}}
```

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

```
2644    \DeclareFieldFormat[software]{urldate}{\bibstring{urldown}\space#1}
```

The software driver is a variant of the manual driver.

```
2645    \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.

```
2646    \DeclareBibliographyDriver{dataset}{%
2647      \usebibmacro{bibindex}%
2648      \usebibmacro{begentry}%
2649      \usebibmacro{author/editor+others/translator+others}%
2650      \setunit{\printdelim{nametitledelim}}\newblock
2651      \usebibmacro{title}%
2652      \newunit
2653      \printlist{language}%
2654      \setunit{\titlebyauthordelim}\newblock
2655      \usebibmacro{byauthor}%
2656      \newunit\newblock
2657      \usebibmacro{byeditor+others}%
2658      \newunit\newblock
2659      \printfield{type}%
2660      \newunit
2661      \printfield{version}%
2662      \newunit\newblock
2663      \printfield{note}%
2664      \newunit\newblock
2665      \usebibmacro{type+series+number+edition+organization+publisher+location+date}%
2666      \newunit\newblock
2667      \usebibmacro{doi+eprint+url}%
2668      \newunit\newblock
2669      \usebibmacro{addendum+pubstate}%
2670      \setunit{\bibpagerefpunct}\newblock
2671      \usebibmacro{pageref}%
2672      \newunit\newblock
2673      \iftoggle{bbx:related}
2674        {\usebibmacro{related:init}%
2675         \usebibmacro{related}}
2676        {}%
2677      \usebibmacro{finentry}}
```

2.1.15 Legal references

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

Entry options

```
2678   \newtoggle{bbx:scotstyle}
2679   \DeclareEntryOption{scottish-style}[true]{%
2680     \settoggle{bbx:scotstyle}{#1}}
2681   \newboolean{bbx@year-essential}\setboolean{bbx@year-essential}{false}
2682   \DeclareEntryOption{year-essential}[true]{%
2683       \setboolean{bbx@year-essential}{#1}}
2684   \newboolean{bbx@paryear-essential}\setboolean{bbx@paryear-essential}{false}
2685   \DeclareEntryOption{paryear-essential}[true]{%
2686       \setboolean{bbx@paryear-essential}{#1}}
2687   \newtoggle{blx@ox@nopostnotedelim}
2688   \newtoggle{bbx:altcourt}
2689   \DeclareBibliographyOption{court-plain}[true]{%
2690     \settoggle{bbx:altcourt}{#1}}
2691   \DeclareEntryOption{court-plain}[true]{%
2692     \settoggle{bbx:altcourt}{#1}}
2693   \newtoggle{bbx@ecliuse}
2694   \newtoggle{bbx@eclionly}
2695   \DeclareBibliographyOption[string]{ecli}[yes]{%
2696     \ifstrequal{#1}{no}{%
2697       \global\togglefalse{bbx@ecliuse}%
2698       \global\togglefalse{bbx@eclionly}%
2699     }{%
2700       \global\toggletrue{bbx@ecliuse}%
2701       \ifstrequal{#1}{only}{%
2702         \global\toggletrue{bbx@eclionly}%
2703       }{}}}
```

Field formats

```
2704   \DeclareFieldFormat{casenotetitle}{\mkbibquote{\mkbibemph{#1}}}
2705   \DeclareFieldFormat[jurisdiction,legislation,legal]{journaltitle}{#1}
2706   \DeclareFieldFormat[jurisdiction]{volume}{#1}
2707   \DeclareFieldFormat[jurisdiction]{titleaddon}{\mkbibparens{#1}}
2708   \DeclareFieldFormat{romanvol}{\RN{#1}}
2709   \DeclareListFormat[jurisdiction]{listb}{}
2710   \DeclareFieldFormat{usseries}{\ifinteger{#1}{\mkusbibordinal{#1}}{#1}}
2711   \DeclareFieldFormat{verba}{#1}
2712
2713   \DeclareListFormat{echrinst}{%
2714     \ifboolexpr{%
2715       test {\ifnumequal{\value{listtotal}}{1}}
2716       or
2717       test {\ifnumequal{\value{listcount}}{\value{listtotal}}}
2718     }{%
2719       \ifboolexpr{
2720         test {\ifdefstring{\Commission}{#1}}
2721         or
2722         test {\ifdefstring{\commission}{#1}}%
2723       }{%
2724         \bibstring{commissiondecision}%
2725       }{#1}%
2726     }{%
2727       \setcounter{blx@tmpcnt}{\value{listcount}}%
2728       \addtocounter{blx@tmpcnt}{1}%
2729       \ifnumequal{\value{blx@tmpcnt}}{\value{listtotal}}{%
2730         #1\space\bibstring{and}\addspace
2731       }{%
2732         #1\addcomma\space}}}%
```

```
2733
2734    \newcommand*{\commission}{commission}
2735    \newcommand*{\Commission}{Commission}
2736    \DeclareListFormat{ecthr}{%
2737      \ifboolexpr{
2738        test {\ifdefstring{\Commission}{#1}}
2739        or
2740        test {\ifdefstring{\commission}{#1}}
2741      }{\bibstring[\mkbibparens]{commissiondecision}\toggletrue{blx@ox@nopostnotedelim}}{}}
2742
2743    \newcommand*{\pcijrep}{PCIJ Rep}
2744    \DeclareFieldFormat{international}{%
2745      \iffieldequals{journaltitle}{\pcijrep}{%
2746        \bibcplstring{jourser}\space #1%
2747      }{#1}}
2748
2749    \DeclareListFormat{checkcontains}{%
2750      \bbx@check{#1}}
2751    \newtoggle{bbx@institutiontoggle}
2752    \newcommand\iflistcontains[2]{%
2753      \global\togglefalse{bbx@institutiontoggle}%
2754      \def\bbx@check##1{%
2755        \ifdefstring{#2}{##1}{\global\toggletrue{bbx@institutiontoggle}}{}}%
2756      \printlist[checkcontains]{#1}%
2757      \iftoggle{bbx@institutiontoggle}}
2758
2759    \DeclareFieldFormat{draftleg}{%
2760      \StrBefore{#1}{ Bill}}
2761
2762    \DeclareListFormat{billprinting}{%
2763      \ifstrequal{#1}{HC}{%
2764        \mkbibbrackets{\strfield{number}}%
2765        \toggletrue{blx@ox@nopostnotedelim}%
2766      }{%
2767        \strfield{number}%
2768        \togglefalse{blx@ox@nopostnotedelim}}}
2769
2770    \newcommand*{\treatypartysep}{\allowbreak ---\allowbreak}
2771    \DeclareListFormat{treaty}{%
2772      \ifmoreitems{}{%
2773        \ifnumequal{\value{listcount}}{1}{%
2774          \bibopenparen
2775        }{}%
2776        \ifnumgreater{\value{liststop}}{\value{listcount}}{%
2777          #1\treatypartysep
2778        }{%
2779          #1\bibcloseparen}}}
2780
2781    \def\siganddate#1{%
2782      \def\bbx@tempa{#1}%
2783      \expandafter\bbx@signeddatei#1/relax}
2784    \def\bbx@signeddatei#1=#2/relax{%
2785      \def\bbx@tempa{#2-}%
2786      \bibstring{#1}\space\expandafter\makebbx@datei\bbx@tempa}
2787    \def\makebbx@datei#1-#2-#3-{%
2788      \makebbx@dateii{#1}{#2}{#3}}
2789    \def\makebbx@dateii#1#2#3{%
2790      \blx@imc@stripzeros{#3}~\mkbibmonth{#2}%
2791      \space
2792      #1}
2793    \DeclareListFormat{treatydates}{%
2794      \ifnumequal{\value{listcount}}{1}{%
```

```
2795        \siganddate{#1}%
2796      }{%
2797        \addcomma\space\siganddate{#1}}}
```

Pagination formats

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

```
2798    \newrobustcmd*{\mkrawpageprefix}[1][none]{%
2799      \begingroup
2800      \def\blx@tempa{\blx@mkpageprefix@i}%
2801      \ifstrequal{#1}{none}{}{%
2802        \ifbibstring{#1}{%
2803          \def\blx@tempa{\blx@mkpageprefix{#1}}%
2804        }{%
2805          \blx@warning@entry{Unknown pagination type '#1'}}}%
2806      \@ifnextchar[%]
2807        {\blx@tempa}
2808        {\blx@tempa[\@firstofone]}}
2809
2810    \newcommand*\paragraphmarkings{[]}
2811    \DeclareFieldFormat[jurisdiction,legislation,legal]{postnote}{%
2812      \iffieldundef{pagination}{%
2813        \ifboolexpr{
2814          test {\ifkeyword{eu}}
2815          or
2816          test {\ifkeyword{echr}}
2817        }{%
2818          \mkcomprange[{\mkrawpageprefix[paragraph]}]{#1}%
2819        }{%
2820          \mkcomprange{#1}}%
2821      }{%
2822        \iffieldequals{pagination}{\paragraphmarkings}{%
2823          \mkcomprange[\mkbibbrackets]{#1}%
2824        }{%
2825          \mkcomprange[{\mkpageprefix[pagination]}]{#1}}}}
```

Shorthands

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

```
2826    \renewbibmacro*{shorthandintro}{%
2827      \iffieldundef{shorthandintro}
2828        {\iffieldundef{shorthand}
2829          {}
2830          {\setunit{\addspace}%
2831           \printtext[parens]{%
2832             \ifboolexpr{
2833               test {\ifentrytype{jurisdiction}}
2834               or
2835               test {\ifentrytype{legal}}
2836               or
2837               test {\ifentrytype{legislation}}
2838             }{}{%
2839               \bibstring{citedas}\space}%
2840             \printfield{shorthand}}}}
2841        {\setunit{\addspace}%
2842         \printtext[parens]{\printfield{shorthandintro}}}}
```

Common macros

```
2843   \newbibmacro*{issue/volume}{%
2844     \iffieldundef{volume}%
2845       {\iffieldundef{issue}%
2846        {}%
2847        {\printfield{issue}}}%
2848       {\printfield[default]{volume}}}
2849   \newcommand*{\subtypenewsp}{newspaper}
2850   \newbibmacro*{year+vol+report}[1][default]{%
2851     \iffieldequals{entrysubtype}{\subtypenewsp}{%
2852       \setunit{\addcomma\space}%
2853     }{%
2854       \usebibmacro{journaldate}%
2855       \setunit{\addspace}%
2856       \printfield[parens]{origyear}%
2857       \setunit{\addspace}%
2858       \printfield{volume}%
2859       \setunit{\addspace}}%
2860     \printfield{journaltitle}%
2861     \setunit*{\addspace}%
2862     \iffieldundef{series}{}{%
2863       \setunit{\addspace}%
2864       \printfield[#1]{series}%
2865       \setunit{\addspace}}%
2866     \iffieldequals{entrysubtype}{\subtypenewsp}{%
2867       \setunit{\addcomma\space}%
2868       \printdate%
2869     }{}}
2870   \newbibmacro*{journaldate}[1][]{%
2871     \ifboolexpr{
2872       test {\iffieldundef{#1volume}}
2873       or
2874       bool {bbx@#1year-essential}
2875     }{%
2876       \ifboolexpr{
2877         test {\ifkeyword{sc}}
2878         or
2879         test {\iftoggle{bbx:scotstyle}}
2880       }{%
2881         \setunit{\addcomma\space}%
2882         \printfield{#1year}%
2883       }{%
2884         \printfield[brackets]{#1year}}%
2885     }{%
2886       \printfield[parens]{#1year}}}
2887   \newcommand*{\casenote}{casenote}
2888   \newcommand{\casenotetext}{\bibstring{casenote}}
2889   \newbibmacro{journaltitle}{%
2890     \iffieldequals{entrysubtype}{\casenote}{%
2891       \iffieldundef{crossref}{%
2892         \usebibmacro{title}%
2893       }{%
2894         \iffieldundef{note}{%
2895           \restorefield{note}{\casenotetext}%
2896         }{}%
2897         \ifboolexpr{
2898           test {\iffootnote}
2899           and test {\iftoggle{bbx@samefootnote}}
2900           and test {\iffieldequals{crossref}{\blx@lastkey@foot}}%
2901         }{}{\printfield[casenotetitle]{title}}}%
2902     }{%
```

```
2903          \usebibmacro{title}}}
2904      \newbibmacro*{unreported}[1][default]{%
2905        \iffieldundef{verba}{%
2906          \ifboolexpr{
2907            test {\iflistundef{institution}}
2908            and
2909            test {\iffieldundef{date}}
2910            and
2911            test {\iffieldundef{year}}
2912          }{}{%
2913            \ifboolexpr{
2914              test {\iffieldundef{date}}
2915              and
2916              test {\iffieldundef{year}}
2917            }{%
2918              \mkbibparens{\printlist[jurisdiction]{institution}}%
2919            }{%
2920              \toggletrue{blx@ox@nopostnotedelim}%
2921              \iflistundef{institution}{%
2922                \mkbibparens{\usebibmacro{date}}%
2923              }{%
2924                \printtext[parens]{%
2925                  \printlist[#1]{institution}%
2926                  \setunit{\addcomma\space}
2927                  \usebibmacro{date}}}}}%
2928        }{%
2929          \iftoggle{bbx@ecliuse}{}{%
2930            \printfield{verba}}}}
2931      \newbibmacro{court-note}{%
2932        \iffieldundef{note}%
2933          {}%
2934          {\printfield{note}%
2935           \toggletrue{blx@ox@nopostnotedelim}}}
2936      \newbibmacro*{jurisdictionpages}{%
2937        \iffieldequals{entrysubtype}{\subtypenewsp}{}{%
2938          \setunit{\addspace}%
2939          \printfield{pages}}}
2940      \newbibmacro{pcitenote}{%
2941        \iffieldundef{parreporter}{}{%
2942          \setunit{\addcomma\space}%
2943          \iffieldundef{postnote}{}{%
2944            \printfield{postnote}%
2945            \clearfield{postnote}%
2946            \setunit{\addsemicolon\space}}}}
2947      \newbibmacro*{courtid}{%
2948        \iffieldundef{number}{%
2949          \ifboolexpr{
2950            test {\iflistundef{institution}}
2951            and
2952            test {\iffieldundef{location}}%
2953          }{%
2954            \togglefalse{blx@ox@nopostnotedelim}%
2955          }{%
2956            \ifboolexpr{%
2957              test {\iffieldundef{journaltitle}}
2958              or
2959              not togl {bbx:altcourt}
2960            }{%
2961              \printtext[parens]{%
2962                \printfield{location}%
2963                \setunit{\addspace}%
2964                \printlist{institution}%
```

```
2965              \usebibmacro{unrep:date}}%
2966            \toggletrue{blx@ox@nopostnotedelim}
2967          }{%
2968            \setunit{\addcomma\space}%
2969            \printfield{location}%
2970            \setunit*{\addspace}%
2971            \printlist{institution}}}%
2972        }{%
2973          \togglefalse{blx@ox@nopostnotedelim}}}
2974      \newbibmacro*{unrep:date}{%
2975        \ifboolexpr{
2976          test {\iffieldundef{journaltitle}}%
2977          and
2978          test {\iffieldundef{number}}%
2979        }{%
2980          \setunit{\addcomma\space}%
2981          \usebibmacro{date}%
2982        }{}}
```

Legal cases

There are different formats depending on the jurisdiction.

```
2983      \DeclareBibliographyDriver{jurisdiction}{%
2984        \usebibmacro{bibindex}%
2985        \usebibmacro{begentry}%
2986        \usebibmacro{juriscitation}%
2987        \usebibmacro{doi+eprint+url}%
2988        \setunit{\addspace}%\newblock
2989        \usebibmacro{addendum+pubstate}%
2990        \setunit{\bibpagerefpunct}\newblock
2991        \usebibmacro{pageref}%
2992        \setunit{\addspace}%\newblock
2993        \iftoggle{bbx:related}
2994          {\usebibmacro{related:init}%
2995           \usebibmacro{related}}
2996          {}%
2997        \usebibmacro{finentry}}
2998      \newtoggle{bbx@juriscitedone}
2999      \newbibmacro{juriscitation}{%
3000        \togglefalse{bbx@juriscitedone}%
3001        \renewcommand{\do}[1]{%
3002          \ifkeyword{##1}{%
3003            \toggletrue{bbx@juriscitedone}\usebibmacro{##1juriscitation}%
3004            \listbreak
3005          }{}}%
3006        \docsvlist{eu,echr,int,ca,us}%
3007        \iftoggle{bbx@juriscitedone}{}{\usebibmacro{enjuriscitation}}%
3008      }
```

Here is the format for EU cases.

```
3009      \newtoggle{bbx@commissiondecision}
3010      \newbibmacro*{eujuriscitation}{%
3011        \ifboolexpr{
3012          test {\iflistcontains{institution}{\commission}}
3013          or
3014          test {\iflistcontains{institution}{\Commission}}
3015        }{%
3016          \toggletrue{bbx@commissiondecision}%
```

```
3017        }{%
3018          \togglefalse{bbx@commissiondecision}}%
3019        \iftoggle{bbx@commissiondecision}{}{%
3020          \usebibmacro{eucasenumber}}%
3021        \usebibmacro{title}%
3022        \setunit{\addspace}%
3023        \iftoggle{bbx@commissiondecision}{%
3024          \usebibmacro{eucommissiondecision}}{}%
3025        \setunit{\addspace}%
3026        \usebibmacro{eu:reportinfo}%
3027        \iftoggle{bbx@commissiondecision}{%
3028          \setunit{\addcomma\space}%
3029        }{%
3030          \setunit{\addspace}}%
3031        \usebibmacro{altreportdetails}%
3032        \usebibmacro{court-note}%
3033      }
3034      \newcommand*\oxrefand{ and }
3035      \newbibmacro{eucasetype}{%
3036        \iffieldundef{type}{%
3037          \ifboolexpr{
3038            test {\IfSubStr{\thefield{number}}{,}}
3039            or
3040            test {\IfSubStr{\thefield{number}}{--}}
3041            or
3042            test {\IfSubStr{\thefield{number}}{\oxrefand}}
3043          }{%
3044            \bibstring{eujoinedcases}%
3045          }{%
3046            \bibstring{eucase}}%
3047        }{%
3048          \printfield{type}}%
3049      }
3050      \newbibmacro{eucasenumber}{%
3051        \usebibmacro{eucasetype}%
3052        \setunit{\addnbspace}%
3053        \printfield{number}%
3054        \setunit{\addspace}}
3055      \newbibmacro{eucommissiondecision}{%
3056        \iffieldundef{userb}{%
3057          \iffieldundef{number}{}{%
3058            \printtext[parens]{%
3059              \usebibmacro{eucasetype}%
3060              \setunit{\addnbspace}%
3061              \printfield{number}}}%
3062        }{%
3063          \printtext[parens]{%
3064            \usebibmacro{eucasetype}%
3065            \setunit{\addnbspace}%
3066            \printfield{userb}}%
3067          \setunit{\addspace}%
3068          \iffieldundef{number}{}{%
3069            \iffieldundef{type}{%
3070              \setunit{\addspace\bibstring{commissiondecision}\addspace}%
3071            }{%
3072              \setunit{\addspace\printfield{type}\addspace}}%
3073            \printfield{number}}%
3074        }%
3075      }
3076      \newbibmacro*{eu:reportinfo}{%
3077        \iftoggle{bbx@eclionly}{%
3078          \iffieldundef{verba}{%
```

```
3079            \usebibmacro{eu:osreport}
3080          }{%
3081            \printfield{verba}}%
3082        }{%
3083          \usebibmacro{eu:osreport}}}
3084      \newbibmacro*{eu:osreport}{%
3085        \iftoggle{bbx@ecliuse}{%
3086          \iffieldundef{verba}{}{%
3087            \printfield{verba}%
3088            \setunit{\addcomma\space}}%
3089        }{}%
3090        \iffieldundef{journaltitle}{%
3091          \usebibmacro{unreported}%
3092        }{%
3093          \usebibmacro{eu:year+vol+report}}}
3094      \newcommand*\officialjournaltitle{OJ}
3095      \newcommand*\ecrreporttitle{ECR}
3096      \newbibmacro*{eu:year+vol+report}{%
3097        \iffieldequals{journaltitle}{\ecrreporttitle}{%
3098          \printfield[brackets]{year}%
3099          \setunit{\addspace}%
3100          \printfield{journaltitle}%
3101          \setunit{\addspace}%
3102          \printfield{volume}%
3103          \setunit*{\printtext{--\allowbreak}}%
3104          \printfield{pages}%
3105        }{%
3106          \iffieldequals{journaltitle}{\officialjournaltitle}{%
3107            \printfield[brackets]{year}%
3108            \setunit{\addspace}%
3109            \printfield{journaltitle}%
3110            \setunit{\addspace}%
3111            \printfield[default]{series}%
3112            \usebibmacro{issue/volume}%
3113            \setunit{\printtext{\slash}}%
3114            \printfield{pages}%
3115          }{%
3116            \usebibmacro{year+vol+report}}}}
```

Here is the format for European Human Rights cases.

```
3117      \newbibmacro*{echrjuriscitation}{%
3118        \usebibmacro{title}%
3119        \setunit{\addspace}\newblock
3120        \iffieldundef{number}{}{%
3121          \printtext[parens]{%
3122            \def\adddot{}%
3123            \bibstring{application}\space
3124            \bibstring{number}\space
3125            \printfield{number}}%
3126          \setunit{\addspace}\newblock}%
3127        \iffieldundef{journaltitle}{%
3128          \usebibmacro{unreported}[echrinst]%
3129        }{%
3130          \usebibmacro{echr:year+vol+report}
3131          \setunit{\addspace}\newblock
3132          \usebibmacro{echr:courtid}}%
3133        \setunit{\addspace}%
3134        \usebibmacro{court-note}%
3135        \newblock
3136        \setunit{\addspace}}
```

```
3137    \newcommand*{\seriesa}{Series A}
3138    \newcommand*{\echrreports}{ECHR}
3139    \newbibmacro*{echr:year+vol+report}{%
3140      \iffieldequals{journaltitle}{\seriesa}{%
3141        \usebibmacro{seriesareport}%
3142      }{%
3143        \iffieldequals{journaltitle}{\echrreports}{%
3144          \usebibmacro{echrreports}%
3145        }{%
3146          \usebibmacro{year+vol+report}
3147          \setunit{\addspace}%
3148      \printfield{pages}}}}
3149    \newbibmacro*{seriesareport}{%
3150      \printfield[parens]{year}%
3151      \setunit{\addspace}%
3152      \printfield{journaltitle}%
3153      \setunit{\addspace}%
3154      \printtext{\def\adddot{}\bibstring{number}\addspace}%
3155      \printfield{pages}}
3156    \newbibmacro*{echrreports}{%
3157      \printfield{journaltitle}%
3158      \setunit{\addspace}%
3159      \printfield{year}%
3160      \iffieldundef{volume}{}{%
3161        \printtext{--}\printfield[romanvol]{volume}}
3162      \setunit{\addspace}%
3163      \printfield{pages}}
3164    \newcommand*{\decisionsandreports}{DR}
3165    \newcommand*{\collectionofdecisions}{CD}
3166    \newbibmacro*{echr:courtid}{%
3167      \ifboolexpr{
3168        test {\iffieldequals{journaltitle}{\decisionsandreports}}
3169        or
3170        test {\iffieldequals{journaltitle}{\collectionofdecisions}}%
3171      }{}{%
3172        \printlist[ecthr]{institution}}}
```

Here is the format for international cases.

```
3173    \newbibmacro*{intjuriscitation}{%
3174      \iflistundef{institution}{%
3175        \setunit{}\printtext{}%
3176      }{%
3177        \printlist{institution}%
3178        \setunit{\addcomma\space}}%
3179      \usebibmacro{int:title}%
3180      \setunit{\addspace}\newblock
3181      \iffieldundef{journaltitle}{%
3182        \printfield{number}%
3183        \setunit{\addspace}\newblock
3184        \printtext[parens]{\printdate}%
3185      }{%
3186        \usebibmacro{year+vol+report}[international]%
3187      }%
3188      \setunit{\addspace}%
3189      \usebibmacro{int:jurisdictionpages}%
3190      \setunit{\addspace}\newblock
3191      \usebibmacro{court-note}%
3192    }
3193    \newbibmacro*{int:title}{%
3194      \ifboolexpr{
3195        test {\iffieldundef{title}}
```

```
3196        and
3197        test {\iffieldundef{subtitle}}
3198      }{}{%
3199        \printtext[title]{%
3200          \printfield[titlecase]{title}%
3201          \setunit{\addspace}%
3202          \printfield[parens]{subtitle}}}%
3203      \setunit{\addspace}%
3204      \printfield{titleaddon}%
3205    }
3206  \newbibmacro*{int:jurisdictionpages}{%
3207    \iffieldequals{journaltitle}{\pcijrep}{%
3208      \printtext{\bibcpstring{number}\addspace}%
3209      \iffieldundef{pages}{%
3210        \printfield{number}%
3211      }{%
3212        \printfield{pages}}%
3213    }{%
3214      \printfield{pages}}}
```

Here is the format for Canadian cases.

```
3215    \newbibmacro{canjuriscitation}{%
3216      \usebibmacro{title}%
3217      \setunit{\addspace}\newblock
3218      \printfield{number}%
3219      \setunit{\addcomma\space}%
3220      \iffieldundef{journaltitle}{}{%
3221        \usebibmacro{can:year+vol+report}}%
3222      \usebibmacro{jurisdictionpages}%
3223      \usebibmacro{pcitenote}%
3224      \usebibmacro{altreportdetails}%
3225      \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}%
3226      \newunit\newblock
3227      \usebibmacro{courtid}%
3228      \newunit%
3229      \usebibmacro{court-note}%
3230      \newblock%
3231      \newunit}
3232    \newbibmacro*{can:year+vol+report}{%
3233      \iffieldundef{number}{%
3234        \setunit{\addspace}%
3235      }{%
3236        \ifboolexpr{
3237          test {\iffieldundef{volume}}
3238          or
3239          bool {bbx@year-essential}%
3240        }{}{%
3241          \clearfield{year}}}%
3242      \iffieldequals{entrysubtype}{\subtypenewsp}{}{%
3243        \iffieldundef{year}{}{%
3244          \usebibmacro{journaldate}%
3245          \setunit{\addspace}}}%
3246      \printfield{volume}%
3247      \setunit{\addspace}%
3248      \printfield{journaltitle}%
3249      \setunit*{\addspace}%
3250      \iffieldundef{series}{}{%
3251        \setunit{\addspace}%
3252        \printtext[parens]{\printfield[usseries]{series}}%
3253        \setunit{\addspace}}%
```

```
3254        \iffieldequals{entrysubtype}{\subtypenewsp}{%
3255          \setunit{\addcomma\space}%
3256          \usebibmacro{newspaperdate}%
3257        }{}}
```

Here is the format for American cases.

```
3258    \newbibmacro{usjuriscitation}{%
3259      \usebibmacro{title}%
3260      \setunit{\addcomma\space}\newblock%
3261      \iffieldundef{journaltitle}{%
3262        \printfield{number}%
3263        \setunit{\addcomma\space}%
3264        \printfield[default]{eprint}%
3265        \clearfield{eprint}%
3266      }{
3267        \usebibmacro{us:vol+report}}%
3268      \setunit{\addspace}%
3269      \usebibmacro{jurisdictionpages}%
3270      \usebibmacro{us:postnote}%
3271      \usebibmacro{altreportdetails}%
3272      \setunit{\addspace}\newblock
3273      \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}%
3274      \setunit{\addspace}%
3275      \usebibmacro{us:courtid+date}%
3276      \setunit{\addspace}%
3277      \usebibmacro{court-note}%
3278      \newblock
3279      \setunit{\addspace}}
3280    \newbibmacro{us:vol+report}{%
3281      \printfield{volume}%
3282      \setunit{\addspace}%
3283      \printfield{journaltitle}%
3284      \iffieldundef{series}{}{%
3285        \setunit{\addspace}%
3286        \printfield[usseries]{series}}}
3287    \newbibmacro{us:postnote}{%
3288      \iffieldundef{postnote}{}{%
3289        \setunit{\addcomma\space}%
3290        \printfield{postnote}%
3291        \clearfield{postnote}%
3292      }}
3293    \newbibmacro{us:courtid+date}{%
3294      \ifboolexpr{
3295        test {\iflistundef{institution}}
3296        and
3297        test {\iflistundef{location}}
3298        and
3299        test {\iffieldundef{year}}
3300      }{}{%
3301        \printtext[parens]{%
3302          \printlist{location}%
3303          \setunit*{\addspace}%
3304          \printlist{institution}%
3305          \setunit{\addspace}%
3306          \printfield{year}%
3307          \nopunct}}}
```

Here is the format for English cases.

```
3308  \newbibmacro{enjuriscitation}{%
3309    \usebibmacro{title}%
3310    \setunit{\addspace}\newblock
3311    \printfield{number}%
3312    \setunit*{\addcomma\space}%
3313    \iffieldundef{journaltitle}{}{%
3314      \usebibmacro{year+vol+report}}%
3315    \usebibmacro{jurisdictionpages}%
3316    \usebibmacro{pcitenote}%
3317    \usebibmacro{altreportdetails}%
3318    \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}% additionalreports
3319    \setunit{\addspace}\newblock
3320    \usebibmacro{courtid}%
3321    \setunit{\addspace}%
3322    \usebibmacro{court-note}}
3323  \newbibmacro{altreportdetails}{%
3324    \restorefield{prenote}{\postnotesecond}%
3325    \iffieldundef{parreporter}{}{%
3326      \usebibmacro{journaldate}[par]%
3327      \setunit{\addspace}\newblock
3328      \usebibmacro{altreportvolume}%
3329      \setunit{\addspace}\newblock
3330      \usebibmacro{altjournaltitle}%
3331      \setunit{\addspace}\newblock
3332      \usebibmacro{altseries}%
3333      \setunit{\addspace}\newblock
3334      \usebibmacro{altjurisdictionpages}%
3335      \iffieldundef{prenote}{}{%
3336        \setunit{\addcomma\space}%
3337        \printfield[postnote]{prenote}}}}
3338  \newbibmacro*{altreportvolume}{%
3339    \iffieldundef{parvolume}{}{%
3340      \printfield{parvolume}}}
3341  \newbibmacro*{altjournaltitle}{%
3342    \iffieldundef{parreporter}{}{
3343      \printfield{parreporter}}}
3344  \newbibmacro*{altseries}{%
3345    \iffieldundef{parseries}{}{%
3346      \printfield{parseries}}}
3347  \newbibmacro*{altjurisdictionpages}{%
3348    \iffieldundef{parpages}{}{%
3349      \printfield{parpages}}}%
```

Legislation

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

```
3350  \newcommand*{\subtypecourtrules}{procedure-rule}
3351  \DeclareBibliographyDriver{legislation}{%
3352    \usebibmacro{bibindex}%
3353    \usebibmacro{begentry}%
3354    \iffieldequals{entrysubtype}{\subtypecourtrules}{%
3355      \usebibmacro{courtrules}%
3356    }{%
3357      \ifkeyword{draft}{%
3358        \usebibmacro{legislation:bill}%
3359      }{%
3360        \ifkeyword{eu}{%
3361          \usebibmacro{eulegislation}%
```

```
3362          }{%
3363            \printfield[default]{title}%
3364            \setunit{\addspace}%
3365            \printfield[default]{year}%
3366            \setunit*{\addspace}%
3367            \usebibmacro{legnumber}%
3368            \setunit{\addspace}\newblock
3369            \usebibmacro{legsupp}}}}%
3370       \setunit{\addcomma\space}%
3371       \printfield{note}%
3372       \setunit{\addspace}%
3373       \usebibmacro{finentry}}
3374     \newbibmacro*{courtrules}{%
3375       \restorefield{prenote}{\postnotesecond}%
3376       \iffieldequalstr{shorttitle}{PD}{%
3377         \printfield{postnote}%
3378         \clearfield{postnote}%
3379         \setunit{\addspace}%
3380       }{}%
3381       \iffieldundef{shorttitle}{%
3382         \printfield[default]{title}%
3383       }{%
3384         \printfield[default]{shorttitle}}%
3385       \setunit{\addspace}\newblock
3386       \iffieldundef{postnote}{%
3387         \toggletrue{blx@ox@nopostnotedelim}%
3388       }{%
3389         \iffieldequalstr{shorttitle}{CPR}{%
3390           \printfield{postnote}%
3391           \setunit{\addspace}%
3392         }{%
3393           \printtext{%
3394             \bibstring{order}\space
3395             \printfield{postnote}%
3396             \setunit{\addcomma\space}}}}%
3397       \restorefield{postnote}{\postnotesecond}%
3398       \usebibmacro{postnote}%
3399       \clearfield{postnote}%
3400       \setunit{\addspace}\newblock
3401     \newcommand*{\subtypeprimarylegislation}{primary}
3402     \newbibmacro*{legislation:bill}{%
3403       \printfield[draftleg]{title}%
3404       \setunit{\addspace}%
3405       \printlist{institution}%
3406       \setunit*{\addspace}%
3407       \iffieldequals{entrysubtype}{\subtypeprimarylegislation}{%
3408         \bibcpstring{bill}%
3409         \setunit{\addspace}%
3410         \printtext[parens]{\usebibmacro{sessionyear}}%
3411         \setunit{\addspace}%
3412         \iffieldundef{number}{}{%
3413           \printlist[billprinting]{institution}}%
3414       }{%
3415         \printtext[parens]{%
3416           \bibstring{draft}\space
3417           \printdate}}
3418       \setunit{\addspace}}
3419     \newbibmacro*{sessionyear}{%
3420       \iffieldundef{year}{}{%
3421         \printfield{year}%
3422         \iffieldundef{endyear}{}{%
3423           \bibdaterangesep
```

```
3424              \blx@ox@compyear{\thefield{year}}{\thefield{endyear}}}}}
3425        \newbibmacro{eulegislation}{%
3426          \printfield[default]{title}%
3427          \setunit{\addspace}\newblock%
3428          \usebibmacro{eulegref}}
3429        \newcommand*{\ojspecedtitle}{OJ Spec Ed}
3430        \newbibmacro*{eulegref}{%
3431          \iffieldequals{journaltitle}{\officialjournaltitle}{%
3432            \printfield[brackets]{year}%
3433            \setunit{\addspace}%
3434            \printfield{journaltitle}%
3435            \setunit{\addspace}%
3436            \iffieldundef{series}{%
3437              \printtext{L}%
3438            }{%
3439              \printfield[default]{series}}%
3440            \usebibmacro{issue/volume}%
3441            \setunit*{\addslash}%
3442            \printfield{pages}%
3443            \togglefalse{blx@ox@nopostnotedelim}%
3444          }{%
3445            \usebibmacro{year+vol+report}%
3446            \setunit*{\addspace}%
3447            \printfield{pages}}}
3448        \newbibmacro*{legnumber}{%
3449          \iffieldequals{entrysubtype}{\subtypeprimarylegislation}{%
3450            \ifboolexpr{(
3451                test {\iffieldundef{number}}
3452                or
3453                not test {\iffieldundef{title}} )
3454              and not (
3455                test {\ifkeyword{cy}}
3456                or
3457                test {\ifkeyword{sc}}
3458                or
3459                test {\ifkeyword{ni}} )
3460            }{}{%
3461              \printtext[parens]{\printfield{number}}%
3462              \toggletrue{blx@ox@nopostnotedelim}}%
3463          }{%
3464            \iffieldundef{number}{}{%
3465              \setunit{\addcomma\addspace}%
3466              \printfield{number}%
3467              \togglefalse{blx@ox@nopostnotedelim}}}}
```

This adds additional material for Welsh statutory instruments.

```
3468        \newbibmacro*{legsupp}{%
3469          \ifkeyword{cy}
3470            {\iffieldundef{userb}
3471              {}
3472              {\printtext{\mkbibparens{\printfield{userb}}}\toggletrue{blx@ox@nopostnotedelim}}}
3473            {}}
```

Treaties, explanatory notes and Hansard

```
3474  \newcommand*{\explanatorynote}{explanatory note}
3475  \newcommand*{\parliamentarytype}{parliamentary}
3476  \newcommand*{\treatysubtype}{piltreaty}
3477  \DeclareBibliographyDriver{legal}{%
3478    \usebibmacro{bibindex}%
3479    \usebibmacro{begentry}%
3480    \iffieldequals{entrysubtype}{\explanatorynote}{%
3481      \printfield[default]{title}%
3482      \setunit{\addspace}\newblock
3483    }{%
3484      \iffieldequals{entrysubtype}{\parliamentarytype}{%
3485        \usebibmacro{legal:parliamentary}%
3486      }{%
3487        \usebibmacro{treatycitation}}}%
3488    \setunit{\addcomma\space}\newblock
3489    \printfield[default]{note}
3490    \setunit{\addspace}\newblock
3491    \setunit{\bibpagerefpunct}%
3492    \usebibmacro{pageref}%
3493    \usebibmacro{finentry}}
3494  \newbibmacro{legal:parliamentary}{%
3495    \printfield[default]{title}%
3496    \newunit\newblock
3497    \printfield{type}%
3498    \setunit{\addspace}%
3499    \iffieldundef{series}{}{%
3500      \printtext[parens]{%
3501        \biblstring{jourser}\space
3502        \printfield{series}}}%
3503    \setunit{\addspace}%
3504    \printfield{volume}%
3505    \setunit{\addcomma\space}%
3506    \usebibmacro{hansard-ref}%
3507    \setunit{\addspace}%
3508    \iffieldundef{year}{}{%
3509      \printtext[parens]{\usebibmacro{date}}}%
3510    \togglefalse{blx@ox@nopostnotedelim}}
3511  \newbibmacro*{hansard-ref}{%
3512    \iffieldundef{postnote}{%
3513      \iffieldundef{pages}{}{%
3514        \printfield{pages}}%
3515    }{}}%
3516  \newbibmacro{treatycitation}{%
3517    \printfield[default]{title}%
3518    \setunit{\addspace}\newblock%
3519    \printlist[treaty]{institution}
3520    \setunit{\addspace}\newblock
3521    \usebibmacro{treatyinfo}%
3522    \setunit{\addspace}\newblock
3523    \usebibmacro{treaty:year+vol+report}}
3524  \newbibmacro{treatyinfo}{%
3525    \iflistundef{lista}{% execution
3526      \iffieldundef{year}{}{%
3527        \iffieldundef{volume}{}{%
3528          \printtext[parens]{\printdate}}}%
3529    }{%
3530      \printtext[parens]{\printlist[treatydates]{lista}}}}
3531  \newbibmacro{treaty:year+vol+report}{%
3532    \iffieldequals{journaltitle}{\officialjournaltitle}{%
3533      \usebibmacro{eulegref}%
```

```
3534        }{%
3535          \usebibmacro{treaty:date}%
3536          \setunit{\addspace}%
3537          \printfield[default]{volume}%
3538          \setunit{\addspace}%
3539          \printfield{journaltitle}%
3540          \setunit*{\addspace}%
3541          \iffieldundef{series}{}{%
3542            \setunit{\addspace}%
3543            \printfield{series}%
3544            \setunit{\addspace}}%
3545          \printfield{pages}}}%
3546      \newbibmacro*{treaty:date}{%
3547        \ifboolexpr{
3548          test {\iffieldundef{volume}}
3549          or
3550          bool {bbx@year-essential}
3551        }{%
3552          \ifboolexpr{
3553            test {\ifkeyword{sc}}
3554            or
3555            test {\iftoggle{bbx:scotstyle}}
3556          }{%
3557            \printfield{year}%
3558          }{%
3559            \printfield[brackets]{year}%
3560          }}{}}
```

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

```
3561      \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.

```
3562      \newcommand{\locationlibrarypunct}{\addcomma\addspace}
3563      \newcommand{\collectionshelfmarkpunct}{\addspace}
3564      \newcommand{\datingpagespunct}{\addcomma\addspace}
3565      \newcommand{\librarycollectionpunct}{\addcomma\addspace}
3566      \newcommand{\pagetotalpagespunct}{\addcomma\addspace}
3567      \newcommand{\columnslayerpunct}{\addsemicolon\addspace}%
```

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

```
3568      \def\recto{r}
3569      \def\verso{v}
3570      \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.

```
3571      \DeclareFieldFormat[manuscript,unpublished]{title}{%
3572        \def\currentfield{title}%
```

```
3573        \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
3574        \undef\currentfield}
3575      \DeclareFieldFormat{columns+layer}{\mkbibparens{#1}}
3576      \DeclareFieldFormat{columns}{\mkbibparens{#1}}
3577      \DeclareFieldFormat{layer}{\mkbibparens{#1}}
3578      \DeclareFieldFormat{dating}{#1\isdot}%
3579      \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.

```
3580      \newbibmacro{manuscript:date}{%
3581        \ifboolexpr{
3582          test {\ifnameundef{author}}
3583          and
3584          test {\iffieldundef{title}}
3585          and
3586          test {\iffieldundef{label}}
3587        }{}{\usebibmacro{date}}}
3588      \newbibmacro{dating}{%
3589        \ifboolexpr{(
3590            test {\ifnameundef{author}}
3591            and
3592            test {\iffieldundef{title}}
3593            and
3594            test {\iffieldundef{label}}
3595          ) or
3596          test {\iffieldundef{year}}
3597        }{%
3598          \printfield{dating}%
3599        }{}}
```

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.

```
3600      \newbibmacro{location+library+collection+shelfmark}{%
3601        \printfield{library}%
3602        \setunit{\locationlibrarypunct}%
3603        \printlist{location}%
3604        \setunit{\librarycollectionpunct}%
3605        \usebibmacro{collection+shelfmark}}
3606      \newbibmacro{collection+shelfmark}{%
3607        \ifboolexpr{
3608          test {\iffieldundef{collection}}
3609          and
3610          test {\iffieldundef{shelfmark}}
3611        }{}{%
3612          \printtext[collection+shelfmark]{%
3613            \printfield{collection}%
3614            \setunit*{\collectionshelfmarkpunct}%
3615            \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.

```
3616      \newbibmacro{manuscript:pages}{%
3617        \printfield{pagetotal}%
```

```
3618    \setunit{\addspace}%
3619    \iffieldundef{pages}{%
3620      \usebibmacro{manuscript:columns+layer}%
3621    }{%
3622      \usebibmacro{manuscript:columns}%
3623      \setunit{\pagetotalpagespunct}%
3624      \printfield{pages}%
3625      \setunit{\addspace}%
3626      \usebibmacro{manuscript:layer}}}
3627  \newbibmacro{manuscript:columns}{%
3628    \iffieldundef{columns}{}{%
3629    \printtext[columns]{\bibstring{\strfield{columns}column}}}%
3630  }%
3631  \newbibmacro{manuscript:layer}{%
3632    \iffieldundef{layer}{}{%
3633    \printtext[layer]{\bibstring{\strfield{layer}layer}}}%
3634  }%
3635  \newbibmacro{manuscript:columns+layer}{%
3636    \ifboolexpr{
3637      test {\iffieldundef{columns}}
3638      or
3639      test{\iffieldundef{layer}}
3640    }{%
3641      \usebibmacro{manuscript:columns}%
3642      \usebibmacro{manuscript:layer}%
3643    }{%
3644      \printtext[columns+layer]{%
3645        \bibstring{\strfield{columns}column}%
3646        \setunit*{\columnslayerpunct}%
3647        \bibstring{\strfield{layer}layer}}}}%
```

Putting it all together, here is the manuscript driver.

```
3648  \DeclareBibliographyDriver{manuscript}{%
3649    \usebibmacro{bibindex}%
3650    \usebibmacro{begentry}%
3651    \usebibmacro{author}%
3652    \setunit{\printdelim{nametitledelim}}\newblock
3653    \usebibmacro{title}%
3654    \setunit{\titlebyauthordelim}\newblock
3655    \usebibmacro{byauthor}%
3656    \newunit\newblock
3657    \printfield{howpublished}%
3658    \newunit\newblock
3659    \printfield{note}%
3660    \newunit\newblock
3661    \usebibmacro{manuscript:date}%
3662    \newunit\newblock
3663    \usebibmacro{location+library+collection+shelfmark}%
3664    \newunit
3665    \printfield{support}%
3666    \newunit
3667    \usebibmacro{dating}%
3668    \setunit{\datingpagespunct}%
3669    \usebibmacro{manuscript:pages}
3670    \newunit\newblock%
3671    \iftoggle{bbx:url}{%
3672      \usebibmacro{url+urldate}%
3673    }{}%
3674    \setunit{\relatedtypepunct}\newblock
3675    \iftoggle{bbx:related}{%
```

```
3676        \usebibmacro{related:init}%
3677        \usebibmacro{related}%
3678      }{}%
3679      \usebibmacro{finentry}}
```

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

```
3680      \newbibmacro*{library+location+series+number}{%
3681        \printfield{library}%
3682        \setunit{\locationlibrarypunct}%
3683        \printlist{location}%
3684        \setunit{\librarycollectionpunct}%
3685        \ifboolexpr{
3686          test {\iffieldundef{series}}
3687          and
3688          test {\iffieldundef{number}}
3689        }{}{%
3690          \printtext[collection+shelfmark]{%
3691            \printfield{series}%
3692            \setunit*{\collectionshelfmarkpunct}%
3693            \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'.

```
3694      \newtoggle{blx@ox@ms}
3695      \DeclareBibliographyDriver{unpublished}{%
3696        \usebibmacro{bibindex}%
3697        \usebibmacro{begentry}%
3698        \iffieldundef{library}{\togglefalse{blx@ox@ms}}{\toggletrue{blx@ox@ms}}%
3699        \usebibmacro{author}%
3700        \setunit{\printdelim{nametitledelim}}\newblock
3701        \usebibmacro{title}%
3702        \setunit{\titlebyauthordelim}\newblock
3703        \usebibmacro{byauthor}%
3704        \newunit\newblock
3705        \printfield{note}%
3706        \newunit\newblock
3707        \printfield{howpublished}%
3708        \newunit\newblock
3709        \iftoggle{blx@ox@ms}{%
3710          \usebibmacro{manuscript:date}%
3711          \newunit\newblock
3712          \usebibmacro{library+location+series+number}%
3713          \newunit
3714          \printfield{support}%
3715          \newunit
3716          \usebibmacro{dating}%
3717          \setunit{\datingpagespunct}%
3718          \usebibmacro{manuscript:pages}
3719        }{%
3720          \usebibmacro{location+date}%
3721        }%
3722        \newunit\newblock
3723        \iftoggle{bbx:url}
3724          {\usebibmacro{url+urldate}}
3725          {}%
3726        \newunit\newblock
3727        \usebibmacro{addendum+pubstate}%
3728        \setunit{\bibpagerefpunct}\newblock
3729        \usebibmacro{pageref}%
```

```
3730        \setunit{\relatedtypepunct}\newblock
3731        \iftoggle{bbx:related}
3732          {\usebibmacro{related:init}%
3733           \usebibmacro{related}}
3734          {}%
3735        \usebibmacro{finentry}}
```

2.1.17 Letters

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

```
3736     \DeclareBibliographyAlias{letter}{unpublished}
3737     \DeclareFieldFormat[letter]{title}{%
3738        \def\currentfield{title}%
3739        \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
3740        \undef\currentfield}
3741     \DeclareFieldFormat[letter]{date}{%
3742        \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.

```
3743     \xpatchbibdriver{booklet}{%
3744        \newunit\newblock
3745        \iftoggle{bbx:related}
3746     }{%
3747        \setunit{\relatedtypepunct}\newblock
3748        \iftoggle{bbx:related}
3749     }{}{\wlog{WARNING: biblatex-oxref failed to patch booklet}}
3750     \xpatchbibdriver{misc}{%
3751        \newunit\newblock
3752        \iftoggle{bbx:related}
3753     }{%
3754        \setunit{\relatedtypepunct}\newblock
3755        \iftoggle{bbx:related}
3756     }{}{\wlog{WARNING: biblatex-oxref failed to patch misc}}
```

We provide an option for setting the relatedtype punctuation.

```
3757     \DeclareBibliographyOption[string]{relationpunct}[semicolon]{%
3758        \ifcsdef{add#1}{%
3759          \ifstrequal{#1}{space}{%
3760            \renewcommand*{\relatedtypepunct}{\addspace}%
3761          }{%
3762            \renewcommand*{\relatedtypepunct}{\csuse{add#1}\space}}%
3763        }{%
3764          \PackageError{biblatex-oxref}{%
3765            Invalid option 'relationpunct=#1'%
3766          }{%
3767            Valid values are 'dot', 'comma', 'semicolon', 'colon',\MessageBreak
3768            'period', 'exclam', 'question', and 'space'.}}}
3769     \DeclareTypeOption[string]{relationpunct}[semicolon]{%
3770        \ifcsdef{add#1}{%
3771          \ifstrequal{#1}{space}{%
3772            \renewcommand*{\relatedtypepunct}{\addspace}%
3773          }{%
```

```
3774            \renewcommand*{\relatedtypepunct}{\csuse{add#1}\space}}%
3775        }{%
3776            \PackageError{biblatex-oxref}{%
3777                Invalid option 'relationpunct=#1'%
3778            }{%
3779                Valid values are 'dot', 'comma', 'semicolon', 'colon',\MessageBreak
3780                'period', 'exclam', 'question', and 'space'.}}}
3781    \newtoggle{blx@ox@relpunctset}
3782    \DeclareEntryOption[string]{relationpunct}[semicolon]{%
3783        \ifcsdef{add#1}{%
3784            \ifstrequal{#1}{space}{%
3785                \renewcommand*{\relatedtypepunct}{\addspace}%
3786            }{%
3787                \renewcommand*{\relatedtypepunct}{\csuse{add#1}\space}}%
3788            \toggletrue{blx@ox@relpunctset}
3789        }{%
3790            \PackageError{biblatex-oxref}{%
3791                Invalid option 'relationpunct=#1'%
3792            }{%
3793                Valid values are 'dot', 'comma', 'semicolon', 'colon',\MessageBreak
3794                'period', 'exclam', 'question', and 'space'.}}}
3795    \newcounter{blx@ox@relitem}
3796    \xapptobibmacro{begrelated}{%
3797        \setcounter{blx@ox@relitem}{0}%
3798        \iftoggle{blx@ox@relpunctset}{}{%
3799            \iffieldequalstr{relatedtype}{in}{%
3800                \setunit{\addcomma\space}}{}%
3801            \iffieldequalstr{relatedtype}{reprintfrom}{%
3802                \setunit{\addperiod\space}}{}%
3803            \iffieldequalstr{relatedtype}{translationof}{%
3804                \setunit{\addspace}}{}%
3805            \iffieldequalstr{relatedtype}{multivolume}{%
3806                \setunit{\addcomma\space}}{}%
3807    }}{}{\wlog{WARNING: biblatex-oxref failed to append to begrelated}}
3808    \DeclareDelimFormat{relateddelimmultivolume}{\newunitpunct}
3809    \DeclareDelimFormat{begrelateddelimmultivolume}{\newunitpunct}
```

Translations

Where related item is the translation, the related string is prefaced with the language.

```
3810    \newbibmacro*{rellanguage}{%
3811        \def\do##1{%
3812            \entrydata{##1}{%
3813                \printlist{language}}}%
3814        \docsvfield{related}%
3815    }
3816    \DeclareFieldFormat{relatedstring:translationof}{%
3817        \usebibmacro{rellanguage}\space
3818        \bibstring{original}\addcomma\space}
3819
3820    \DeclareFieldFormat{related:translationof}{%
3821        \mkbibbrackets{#1}}
```

Co-publications

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

```
3822    \newbibmacro*{related:copub}[1]{%
3823      \entrydata*{#1}{%
3824        \usebibmacro{publisher+location+date}%
3825        \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.

```
3826    \renewbibmacro*{related:reprintfrom}[1]{%
3827      \entrydata*{#1}{%
3828        \nopunct
3829        \usedriver{%
3830          \ifnameundef{savedauthor}{%
3831            \ifnameundef{savededitor}{}{%
3832              \ifnamesequal{editor}{savededitor}{%
3833                \clearname{editor}%
3834              }{}}%
3835          }{%
3836            \ifnamesequal{author}{savedauthor}{%
3837              \clearname{author}%
3838            }{}}%
3839          \iffieldundef{savedtitle}{}{%
3840            \iffieldsequal{savedtitle}{title}{%
3841              \clearfield{title}%
3842            }{}}%
3843          \renewbibmacro*{related:init}{}%
3844          \DeclareNameAlias{sortname}{default}%
3845          \ifbibmacroundef{date+extradate}{}{%
3846            \renewbibmacro*{date+extradate}{}}%
3847          \renewbibmacro*{date}{\printdate}}%
3848          \renewbibmacro*{pageref}{}%
3849        }{%
3850          \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.

```
3851    \newbibmacro*{related:serialarticle}[1]{%
3852      \entrydata*{#1}{%
3853        \iffieldundef{savedjournaltitle}{}{%
3854          \iffieldsequal{journaltitle}{savedjournaltitle}{%
3855            \clearfield{journaltitle}%
3856          }{}}%
3857        \iffieldundef{savedjournalsubtitle}{}{%
3858          \iffieldsequal{journalsubtitle}{savedjournalsubtitle}{%
3859            \clearfield{journalsubtitle}%
3860          }{}}%
3861        \iffieldundef{savedseries}{}{%
3862          \iffieldsequal{series}{savedseries}{%
3863            \clearfield{series}%
3864          }{}}%
3865        \iffieldundef{savedyear}{\clearfield{year}}{%
3866          \iffieldsequal{year}{savedyear}{%
3867            \clearfield{year}%
3868          }{}}%
```

```
3869        \usebibmacro{journal+issuetitle}%
3870        \newunit
3871        \usebibmacro{note+pages}%
3872        \newunit\newblock
3873        \usebibmacro{doi+eprint+url}%
3874        \newunit\newblock
3875        \usebibmacro{addendum+pubstate}}}
```

Reviews

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

```
3876    \DeclareFieldFormat[review]{title}{\mkbibquote{#1\isdot}}
3877    \DeclareFieldFormat[review]{volume}{#1}% volume of a journal
3878    \DeclareFieldFormat[review]{number}{#1}% number of a journal
3879    \DeclareFieldFormat[review]{series}{% series of a journal
3880      \ifinteger{#1}
3881      {\mkbibordseries{#1}~\bibstring{jourser}}
3882      {\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.

```
3883    \newbibmacro*{related:reviewof}[1]{%
3884      \entrydata*{#1}{%
3885        \usedriver{%
3886          \renewbibmacro*{related:init}{}%
3887          \DeclareNameAlias{author}{given-family}%
3888          \renewbibmacro*{pageref}{}%
3889        }{\thefield{entrytype}}%
3890      }%
3891    }
```

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'.

```
3892    \DeclareBibliographyDriver{review}{%
3893      \usebibmacro{bibindex}%
3894      \usebibmacro{begentry}%
3895      \usebibmacro{author/translator+others}%
3896      \setunit{\printdelim{nametitledelim}}\newblock
3897      \usebibmacro{title}%
3898      \setunit{\titlebyauthordelim}\newblock
3899      \usebibmacro{byauthor}%
3900      \newunit\newblock
3901      \usebibmacro{bytranslator+others}%
3902      \newunit\newblock
3903      \printfield{version}%
3904      \newunit\newblock
3905      \iftoggle{bbx:related}{%
3906        \usebibmacro{related:init}%
3907        \usebibmacro{related}%
3908      }{}%
3909      \newunit\newblock
3910      \usebibmacro{in:}%
3911      \setunit{\addspace}%
```

```
3912        \usebibmacro{journal+issuetitle}%
3913        \newunit
3914        \usebibmacro{byeditor+others}%
3915        \iffieldundef{note}%
3916          {\newunit}%
3917          {\setunit{\addsemicolon\addspace}}%
3918        \usebibmacro{note+pages}%
3919        \newunit\newblock
3920        \iftoggle{bbx:isbn}
3921          {\printfield{issn}}
3922          {}%
3923        \newunit\newblock
3924        \usebibmacro{doi+eprint+url}%
3925        \newunit\newblock
3926        \usebibmacro{addendum+pubstate}%
3927        \setunit{\bibpagerefpunct}\newblock
3928        \usebibmacro{pageref}%
3929        \usebibmacro{finentry}}
```

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.

```
3930        \DeclareFieldFormat{related:multivolume}{#1}
3931        \renewbibmacro*{related:multivolume}[1]{%
3932          \entrydata*{#1}{%
3933            \printtext{%
3934              \printfield{volume}%
3935              \printfield{part}%
3936              \iffieldsequal{savedtitle}{title}{}{%
3937                \setunit{\addcolon\space}%
3938                \usebibmacro{title}}%
3939            }%
3940            \setunit*{\addspace}%
3941            \iffieldsequal{savedseries}{series}{\clearfield{series}}{}%
3942            \iffieldsequal{savednumber}{number}{\clearfield{number}}{}%
3943            \iffieldsequal{savededition}{edition}{\clearfield{edition}}{}%
3944            \ifboolexpr{
3945              test {\iflistsequal{savedpublisher}{publisher}}
3946              and
3947              test {\iflistsequal{savedlocation}{location}}
3948            }{\clearlist{publisher}\clearlist{location}}{}%
3949            \iffieldsequal{saveddate}{date}{\clearfield{date}}{}%
3950            \usebibmacro{series+number+edition+publisher+location+date}%
3951          }}
```

Related editions

This macro is based on the 'bytranslator' one, but more general.

```
3952        \newbibmacro*{related:editedas}[1]{%
3953          \entrydata{#1}{%
3954            \renewbibmacro*{name:hook}[1]{%
3955              \ifnumequal{\value{listcount}}{1}{%
3956                \begingroup
3957                \mkrelatedstring%
3958                \lbx@initnamehook{#1}%
```

```
3959              \endgroup
3960           }{}}%
3961        \printfield{edition}%
3962        \setunit{\addspace}%
3963        \usebibmacro{byeditor+others}%
3964        \setunit*{\addcomma\space\bibstring[\mkrelatedstring]{astitle}\space}%
3965        \usebibmacro{maintitle+title}%
3966        \setunit{\addspace}%
3967        \printfield{note}%
3968        \newunit\newblock
3969        \printfield{volumes}%
3970        \newunit
3971        \usebibmacro{series+number+publisher+location+date}}}
3972     \renewbibmacro*{related:bytranslator}[1]{%
3973       \entrydata{#1}{%
3974         \renewbibmacro*{name:hook}[1]{%
3975           \ifnumequal{\value{listcount}}{1}
3976             {\begingroup
3977              \mkrelatedstring%
3978              \lbx@initnamehook{#1}%
3979              \endgroup}
3980             {}}%
3981         \printnames[bytranslator]{translator}%
3982         \setunit*{\addspace\bibstring[\mkrelatedstring]{astitle}\space}%
3983         \usebibmacro{maintitle+title}%
3984         \setunit{\addspace}%
3985         \printfield{note}%
3986         \newunit\newblock
3987         \printfield{volumes}%
3988         \newunit
3989         \usebibmacro{series+number+publisher+location+date}}}
```

Joint releases

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

```
3990     \newbibmacro*{related:includes}[1]{%
3991       \stepcounter{blx@ox@relitem}%
3992       \ifnumequal{\value{blx@ox@relitem}}{\value{bbx:relatedtotal}}%
3993         {\bibstring{and}\addspace}{}%
3994       \entrydata{#1}{%
3995         \ifbibmacroundef{date+extradate}{}{%
3996           \renewbibmacro*{date+extradate}{}}%
3997         \usebibmacro{author}%
3998         \setunit{\printdelim{nametitledelim}}\newblock
3999         \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.

```
4000     \DeclareFieldFormat[misc]{title}{%
4001       \def\currentfield{title}%
4002       \iffieldannotation{descriptor}{#1}{%
4003         \iffieldequalstr{relatedtype}{in}{%
4004           \mkbibquote{#1\isdot}%
4005         }{%
```

```
4006            \mkbibemph{#1}%
4007          }}%
4008      \undef\currentfield}
4009    \newbibmacro*{related:in}[1]{%
4010      \entrydata*{#1}{%
4011        \usedriver
4012          {\ifnameundef{savedauthor}
4013            {\ifnameundef{savededitor}
4014               {}
4015               {\ifnamesequal{editor}{savededitor}
4016                  {\clearname{editor}}
4017                  {}}}
4018            {\ifnamesequal{author}{savedauthor}
4019               {\clearname{author}}
4020               {}}%
4021         \renewbibmacro*{related:init}{}%
4022         \DeclareNameAlias{sortname}{default}%
4023         \ifbibmacroundef{date+extradate}
4024            {}
4025            {\renewbibmacro*{date+extradate}{}%
4026             \renewbibmacro*{date}{\printdate}}%
4027          \renewbibmacro*{pageref}{}}
4028         {\thefield{entrytype}}%
4029        \ifboolexpr{
4030          test {\iffieldundef{pages}}
4031          or
4032          test {\iffieldundef{savedpages}}
4033        }{%
4034          \newunit\newblock
4035        }{%
4036          \setunit{\addspace}%
4037          \bibstring{thiscite}%
4038          \printunit{\addspace}%
4039        }%
4040      }%
4041      \usebibmacro{chapter+pages}%
4042    }
```

2.1.19 Source maps

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

```
4043    \DeclareStyleSourcemap{%
4044      \maps[datatype=bibtex]{%
```

Sort order

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

```
4045        \map{
4046          \pertype{proceedings}
4047          \pertype{mvproceedings}
4048          \step[notfield=author,
4049            fieldsource=organization,
4050            fieldtarget=author]
4051        }
```

Descriptors

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

```
4052        \map[overwrite=false]{
4053          \step[fieldsource=descriptor, final]
4054          \step[notfield=title,
4055            fieldset=title+an,
4056            fieldvalue={=descriptor}]
4057          \step[notfield=title,
4058            fieldsource=descriptor,
4059            fieldtarget=title]
4060          \step[fieldsource=descriptor,
4061            fieldtarget=note]
4062        }
```

Pseudonyms and inferred authorship

These help ensure compatibility with biblatex-realauthor.

```
4063        \map[overwrite=false]{
4064          \step[fieldsource=realauthor, final]
4065          \step[notfield=author,
4066            fieldset=author+an,
4067            fieldvalue={=inferred}]
4068          \step[notfield=author,
4069            fieldsource=realauthor,
4070            fieldtarget=author]
4071          \step[fieldsource=realauthor,
4072            fieldtarget=authoraddon]
4073        }
4074        \map[overwrite=false]{
4075          \step[fieldsource=realeditor, final]
4076          \step[notfield=editor,
4077            fieldset=editor+an,
4078            fieldvalue={=inferred}]
4079          \step[notfield=editor,
4080            fieldsource=realeditor,
4081            fieldtarget=editor]
4082          \step[fieldsource=realeditor,
4083            fieldtarget=editoraddon]
4084        }
```

Editors as joint authors

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

```
4085        \map[overwrite=false]{
4086          \step[fieldsource=editor+an,
4087            match=\regexp{=jointauthor},
4088            final]
4089          \step[fieldsource=editor,
4090            fieldtarget=jointauthor]
4091          \step[fieldsource=editortype,
4092            fieldtarget=jointauthortype]
4093        }
4094        \map[overwrite=false]{
4095          \step[fieldsource=translator+an,
```

```
4096              match=\regexp{=jointauthor},
4097              final]
4098          \step[fieldsource=translator,
4099            fieldtarget=jointauthor]
4100          \step[fieldset=jointauthortype,
4101            fieldvalue={=translator}]
4102        }
```

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.

```
4103          \map[overwrite=false]{
4104            \pertype{standard}
4105            \step[notfield=author,
4106                fieldsource=number,
4107                final]
4108            \step[fieldset=sortkey,
4109                origfieldval]
4110          }
```

Audiovisual materials

For audiovisual materials, origdatetype defaults to 'recorded'.

```
4111          \map[overwrite=false]{
4112            \pertype{audio}
4113            \pertype{music}
4114            \pertype{movie}
4115            \pertype{video}
4116            \pertype{inaudio}
4117            \pertype{inmusic}
4118            \pertype{inmovie}
4119            \pertype{invideo}
4120            \step[fieldset=origdatetype,fieldvalue={recorded}]
4121          }
```

Legal references

These help ensure compatibility with oscola.

```
4122          \map[overwrite=false]{
4123            \pertype{jurisdiction}
4124            \step[fieldsource=reporter,
4125                fieldtarget=journaltitle]
4126            \step[fieldsource=court,
4127                fieldtarget=institution]
4128            \step[fieldsource=additionalreports,
4129                fieldtarget=listb]
4130            \step[fieldsource=ecli,
4131                fieldtarget=verba]
4132          }%
4133          \map[overwrite=false]{
4134            \pertype{legal}
4135            \step[fieldsource=reporter,
4136                fieldtarget=journaltitle]
4137          }
```

```
4138        \map[overwrite=true]{
4139            \pertype{legal}
4140            \step[fieldsource=parties,
4141                    fieldtarget=institution]
4142            \step[fieldsource=execution,
4143                    fieldtarget=lista]
4144        }
```

This is how oscola removes dots from entries.

```
4145        \map[overwrite=true]{
4146         \pertype{jurisdiction}
4147         \pertype{legislation}
4148         \pertype{legal}
4149         \step[fieldsource=title,
4150                 match=\regexp{(\d)\.(\d)},
4151                 replace=\regexp{$1.$2}]
4152         \step[fieldsource=title,
4153                 match=\regexp{(\D)\.(\d)},
4154                 replace=\regexp{$1 $2}]
4155         \step[fieldsource=title,
4156                  match=\regexp{\.(\D)},
4157                  replace=\regexp{$1}]
4158         \step [fieldsource=title,
4159                  match=\regexp{(\D)\.},
4160                  replace=\regexp{$1}]
4161         \step[fieldsource=shorttitle,
4162                 match=\regexp{(\d)\.(\d)},
4163                 replace=\regexp{$1.$2}]
4164         \step[fieldsource=shorttitle,
4165                 match=\regexp{(\D)\.(\d)},
4166                 replace=\regexp{$1 $2}]
4167         \step[fieldsource=shorttitle,
4168                  match=\regexp{\.(\D)},
4169                  replace=\regexp{$1}]
4170         \step [fieldsource=shorttitle,
4171                  match=\regexp{(\D)\.},
4172                  replace=\regexp{$1}]
4173         \step[fieldsource=parreporter,
4174                 match=\regexp{(\d)\.(\d)},
4175                 replace=\regexp{$1.$2}]
4176         \step[fieldsource=parreporter,
4177                 match=\regexp{(\D)\.(\d)},
4178                 replace=\regexp{$1 $2}]
4179         \step[fieldsource=parreporter,
4180                  match=\regexp{\.(\D)},
4181                  replace=\regexp{$1}]
4182         \step [fieldsource=parreporter,
4183                  match=\regexp{(\D)\.},
4184                  replace=\regexp{$1}]
4185         \step[fieldsource=journaltitle,
4186                 match=\regexp{(\d)\.(\d)},
4187                 replace=\regexp{$1.$2}]
4188         \step[fieldsource=journaltitle,
4189                 match=\regexp{(\D)\.(\d)},
4190                 replace=\regexp{$1 $2}]
4191         \step[fieldsource=journaltitle,
4192                  match=\regexp{\.(\D)},
4193                  replace=\regexp{$1}]
4194         \step [fieldsource=journaltitle,
4195                  match=\regexp{(\D)\.},
```

```
4196                 replace=\regexp{$1}]
4197         \step[fieldsource=institution,
4198             match=\regexp{(\d)\.(\d)},
4199             replace=\regexp{$1.$2}]
4200         \step[fieldsource=institution,
4201             match=\regexp{(\D)\.(\d)},
4202             replace=\regexp{$1 $2}]
4203         \step[fieldsource=institution,
4204              match=\regexp{\.(\D)},
4205              replace=\regexp{$1}]
4206         \step[fieldsource=institution,
4207              match=\regexp{(\D)\.},
4208              replace=\regexp{$1}]
4209         \step[fieldsource=publisher,
4210             match=\regexp{(\d)\.(\d)},
4211             replace=\regexp{$1.$2}]
4212         \step[fieldsource=publisher,
4213             match=\regexp{(\D)\.(\d)},
4214             replace=\regexp{$1 $2}]
4215         \step[fieldsource=publisher,
4216              match=\regexp{\.(\D)},
4217              replace=\regexp{$1}]
4218         \step [fieldsource=publisher,
4219              match=\regexp{(\D)\.},
4220              replace=\regexp{$1}]
4221         \step[fieldsource=location,
4222             match=\regexp{(\d)\.(\d)},
4223             replace=\regexp{$1.$2}]
4224         \step[fieldsource=location,
4225             match=\regexp{(\D)\.(\d)},
4226             replace=\regexp{$1 $2}]
4227         \step[fieldsource=location,
4228              match=\regexp{\.(\D)},
4229              replace=\regexp{$1}]
4230         \step [fieldsource=location,
4231              match=\regexp{(\D)\.},
4232              replace=\regexp{$1}]
4233         \step[fieldsource=series,
4234             match=\regexp{(\d)\.(\d)},
4235             replace=\regexp{$1.$2}]
4236         \step[fieldsource=series,
4237             match=\regexp{(\D)\.(\d)},
4238             replace=\regexp{$1 $2}]
4239         \step[fieldsource=series,
4240              match=\regexp{\.(\D)},
4241              replace=\regexp{$1}]
4242         \step [fieldsource=series,
4243              match=\regexp{(\D)\.},
4244              replace=\regexp{$1}]
4245         \step[fieldsource=indextitle,
4246             match=\regexp{(\d)\.(\d)},
4247             replace=\regexp{$1.$2}]
4248         \step[fieldsource=indextitle,
4249             match=\regexp{(\D)\.(\d)},
4250             replace=\regexp{$1 $2}]
4251         \step[fieldsource=indextitle,
4252              match=\regexp{\.(\D)},
4253              replace=\regexp{$1}]
4254         \step [fieldsource=indextitle,
4255              match=\regexp{(\D)\.},
4256              replace=\regexp{$1}]
4257       }
```

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

```
4258        \map[overwrite=false]{
4259          \step[fieldsource=casenumber, final]
4260          \step[notfield=number, fieldsource=casenumber, fieldtarget=number]
4261          \step[fieldsource=casenumber, fieldtarget=userb]
4262        }
4263      }%
4264    }
```

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).

```
4265    \DeclareSortingTemplate{nty}{
4266      \sort{
4267        \field{presort}
4268      }
4269      \sort[final]{
4270        \field{sortkey}
4271      }
4272      \sort{
4273        \field{sortname}
4274        \field{author}
4275        \field{editor}
4276        \field{translator}
4277        \field{sorttitle}
4278        \field{title}
4279        \field{library}
4280      }
4281      \sort{
4282        \field{sorttitle}
4283        \field{title}
4284      }
4285      \sort{
4286        \field{sortyear}
4287        \field{year}
4288      }
4289      \sort{
4290        \field{volume}
4291        \literal{0}
4292      }
4293      \sort{
4294        \field{location}
4295      }
4296      \sort{
4297        \field{collection}
4298        \field{series}
4299      }
4300    }
4301
4302    \DeclareSortingTemplate{nyt}{
4303      \sort{
4304        \field{presort}
4305      }
4306      \sort[final]{
4307        \field{sortkey}
4308      }
4309      \sort{
4310        \field{sortname}
```

```
4311        \field{author}
4312        \field{editor}
4313        \field{translator}
4314        \field{sorttitle}
4315        \field{title}
4316        \field{library}
4317      }
4318      \sort{
4319        \field{sortyear}
4320        \field{year}
4321      }
4322      \sort{
4323        \field{sorttitle}
4324        \field{title}
4325      }
4326      \sort{
4327        \field{volume}
4328        \literal{0}
4329      }
4330      \sort{
4331        \field{location}
4332      }
4333      \sort{
4334        \field{collection}
4335        \field{series}
4336      }
4337    }
4338
4339    \DeclareSortingTemplate{anyt}{
4340      \sort{
4341        \field{presort}
4342      }
4343      \sort{
4344        \field{labelalpha}
4345      }
4346      \sort[final]{
4347        \field{sortkey}
4348      }
4349      \sort{
4350        \field{sortname}
4351        \field{author}
4352        \field{editor}
4353        \field{translator}
4354        \field{sorttitle}
4355        \field{title}
4356        \field{library}
4357      }
4358      \sort{
4359        \field{sortyear}
4360        \field{year}
4361      }
4362      \sort{
4363        \field{sorttitle}
4364        \field{title}
4365      }
4366      \sort{
4367        \field{volume}
4368        \literal{0}
4369      }
4370      \sort{
4371        \field{location}
4372      }
```

```
4373      \sort{
4374        \field{collection}
4375        \field{series}
4376      }
4377    }
```

The following entry types never put editors first.

```
4378    \ExecuteBibliographyOptions
4379      [proceedings,report,artwork,audio,image,music,movie,performance,video,%
4380      manuscript,unpublished,review]{useeditor=false}
```

2.2 Notes style: oxnotes.bbx

2.2.1 Preliminaries

First we load the common oxref features.

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

2.2.2 Names

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

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

We ensure the printing of the anon localization string matches.

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

2.2.3 Multivolume dates

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

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

2.2.4 Source maps

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

Sort order

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

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

2.3 Numeric style: oxnum.bbx

2.3.1 Preliminaries

First we load the common oxref features.

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

2.3.2 Names

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

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

We ensure the printing of the anon localization string matches.

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

2.3.3 Multivolume dates

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

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

2.3.4 Label numbers

This next code is extracted from the standard numeric style.

```
38  \ExecuteBibliographyOptions{labelnumber}
39
40  \providebool{bbx:subentry}
41
42  \DeclareBibliographyOption{subentry}[true]{%
43    \setbool{bbx:subentry}{#1}}
44
45  \DeclareFieldFormat{bibentrysetcount}{\mkbibparens{\mknumalph{#1}}}
46  \DeclareFieldFormat{labelnumberwidth}{\mkbibbrackets{#1}}
47  \DeclareFieldFormat{shorthandwidth}{\mkbibbrackets{#1}}
48
49  \defbibenvironment{bibliography}
50    {\list
51      {\printtext[labelnumberwidth]{%
52  \printfield{labelprefix}%
53  \printfield{labelnumber}}}
54      {\setlength{\labelwidth}{\labelnumberwidth}%
55       \setlength{\leftmargin}{\labelwidth}%
56       \setlength{\labelsep}{\biblabelsep}%
57       \addtolength{\leftmargin}{\labelsep}%
58       \setlength{\itemsep}{\bibitemsep}%
59       \setlength{\parsep}{\bibparsep}}%
60       \renewcommand*{\makelabel}[1]{\hss##1}}
61    {\endlist}
62    {\item}
63
64  \defbibenvironment{shorthand}
65    {\list
66      {\printfield[shorthandwidth]{shorthand}}
67      {\setlength{\labelwidth}{\shorthandwidth}%
68       \setlength{\leftmargin}{\labelwidth}%
69       \setlength{\labelsep}{\biblabelsep}%
70       \addtolength{\leftmargin}{\labelsep}%
71       \setlength{\itemsep}{\bibitemsep}%
72       \setlength{\parsep}{\bibparsep}%
73       \renewcommand*{\makelabel}[1]{\hss##1}}}
74    {\endlist}
75    {\item}
76
77  \DeclareBibliographyDriver{set}{%
78    \entryset
79      {\ifbool{bbx:subentry}
80         {\printfield[bibentrysetcount]{entrysetcount}%
81  \printunit*{\addnbspace}}
82         {}}
83      {}%
```

```
84        \newunit\newblock
85        \usebibmacro{setpageref}%
86        \finentry}
```

2.4 Author–year style: oxyear.bbx

2.4.1 PRELIMINARIES

First we load the common oxref features.

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

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

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

2.4.2 DATE MERGING OPTION

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

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

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

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

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

```
41        \DeclareLabeldate{%
42          \field{origdate}
43          \field{date}
```

```
44      \field{year}
45      \field{eventdate}
46      \field{pubstate}
47      \literal{nodate}
48    }
```

The extradate string should be printed bare.

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

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

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

```
68    \newtoggle{blx@ox@nonodate}
69    \DeclareBibliographyOption{nonodate}[true]{%
70      \settoggle{blx@ox@nonodate}{#1}}
71    \DeclareTypeOption{nonodate}[true]{%
72      \settoggle{blx@ox@nonodate}{#1}}
73    \DeclareEntryOption{nonodate}[true]{%
74      \settoggle{blx@ox@nonodate}{#1}}
75    \newbibmacro*{labeldate}{%
76      \ifboolexpr{
77        test {\iffieldequalstr{labeldatesource}{nodate}}
78        and
79        togl {blx@ox@nonodate}
80      }{}{\printtext[datelabel]{\printlabeldateextra}}}
```

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).

```
81    \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.

```
82    \def\bbx@opt@mergedate@maximum{%
83      \renewbibmacro*{date+extradate}{%
84        \iffieldundef{labelyear}{}{%
85          \iflabeldateisdate{%
86            \printtext[datelabel]{%
87              \printfield{issue}\clearfield{issue}%
88              \setunit*{\addspace}%
89              \printdateextra}%
90            \clearfield{year}\clearfield{season}\clearfield{month}\clearfield{day}%
91          }{%
92            \iflabeldateisanydate{%
93              \printtext[datelabel]{%
94                \csuse{print\thefield{labeldatesource}dateextra}}%
95              \clearfield{\thefield{labeldatesource}year}%
96              \clearfield{\thefield{labeldatesource}season}%
97              \clearfield{\thefield{labeldatesource}month}%
98              \clearfield{\thefield{labeldatesource}day}%
99            }{%
100             \usebibmacro{labeldate}%
101             \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.

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

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

```
119   \def\bbx@opt@mergedate@year{%
120     \renewbibmacro*{date+extradate}{%
121       \iffieldundef{labelyear}{}{%
122         \usebibmacro{labeldate}%
123         \iflabeldateisdate{%
124           \clearfield{year}
```

```
125            }{%
126              \iflabeldateisanydate{%
127                \clearfield{\thefield{labeldatesource}year}%
128              }{%
129                \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
130              }}}}}
```

- 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.

```
131    \def\bbx@opt@mergedate@basic{%
132      \renewbibmacro*{date+extradate}{%
133        \iffieldundef{labelyear}{}{%
134          \usebibmacro{labeldate}%
135          \iflabeldateisdate{%
136            \ifboolexpr{
137              test {\ifdateshavedifferentprecision{label}{}}
138              or
139              not test {\iffieldundef{issue}}
140            }{}{%
141              \clearfield{year}}%
142          }{%
143            \iflabeldateisanydate{%
144              \ifdateshavedifferentprecision{label}{\thefield{labeldatesource}}{}{%
145                \clearfield{\thefield{labeldatesource}year}}%
146            }{%
147              \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
148            }}}}}
```

- 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.

```
149    \def\bbx@opt@mergedate@minimum{%
150      \renewbibmacro*{date+extradate}{%
151        \iffieldundef{labelyear}{}{%
152          \usebibmacro{labeldate}%
153          \iflabeldateisdate{%
154            \ifboolexpr{
155              test {\ifdateshavedifferentprecision{label}{}}
156              or
157              not test {\iffieldundef{extradate}}
158              or
159              not test {\iffieldundef{issue}}
160            }{}{%
161              \clearfield{year}}%
162          }{%
163            \iflabeldateisanydate{%
164              \ifboolexpr{
165                test {\ifdateshavedifferentprecision{label}{\thefield{labeldatesource}}}
166                or
167                not test {\iffieldundef{extradate}}
168              }{}{%
169                \clearfield{\thefield{labeldatesource}year}}%
170            }{%
171              \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
172            }}}}}
```

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

```
173    \def\bbx@opt@mergedate@false{%
174      \renewbibmacro*{date+extradate}{%
175        \iffieldundef{labelyear}{}{%
176          \usebibmacro{labeldate}%
177          \iflabeldateisanydate{}{%
178            \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
179        }}}}
```

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

```
180    \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`.

```
181    \newrobustcmd*{\mknoyeardaterangefull}[2]{%
182      \iffieldundef{#2month}{}{%
183        \datecircaprint
184        \printtext[#2date]{%
185        \iffieldundef{#2season}{%
186          \csuse{mkbibdate#1}{}{#2month}{#2day}%
187          \blx@printtime{#2}{}%
188        }{%
189          \csuse{mkbibseasondate#1}{}{#2season}}%
190        \dateuncertainprint
191        \iffieldundef{#2endmonth}{}{%
192          \iffieldequalstr{#2endmonth}{}{%
193            \mbox{\bibdaterangesep}%
194          }{%
195            \bibdaterangesep
196            \enddatecircaprint
197            \iffieldundef{#2season}{%
198              \csuse{mkbibdate#1}{}{#2endmonth}{#2endday}%
199              \blx@printtime{#2}{end}%
200            }{%
201              \csuse{mkbibseasondate#1}{}{#2endseason}}%
202            \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.

```
203    \newrobustcmd*{\mknoyeardaterangetrunc}[2]{%
204      \iffieldundef{#2month}{}{%
205        \datecircaprint
206        \printtext[#2date]{%
207          \iffieldundef{#2season}{%
208            \ifboolexpr{
209              test {\iffieldsequal{labelyear}{labelendyear}}
210              and
211              test {\iffieldsequal{#2month}{#2endmonth}}
212            }{%
213              \csuse{mkbibdate#1}{}{}{#2day}%
```

```
214            }{%
215                \csuse{mkbibdate#1}{}{#2month}{#2day}}%
216          }{%
217                \csuse{mkbibseasondate#1}{}{#2season}}%
218          \dateuncertainprint
219          \iffieldundef{#2endmonth}{}{%
220            \iffieldequalstr{#2endmonth}{}{%
221                \mbox{\bibdaterangesep}%
222            }{%
223                \bibdaterangesep
224                \enddatecircaprint
225                \iffieldundef{#2season}{%
226                  \csuse{mkbibdate#1}{}{#2endmonth}{#2endday}%
227                }{%
228                  \csuse{mkbibseasondate#1}{}{#2endseason}}%
229              \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.

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

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{season}}
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}
```

2.4.5 Journal division formatting

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

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

2.4.6 Manuscripts

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

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

We include the `library` field as a fallback title.

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

2.4.7 Source maps

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

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

Suppressing a 'nodate' label

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

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

Standards

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

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

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}
```

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.

```
42    \ExecuteBibliographyOptions{labelalpha,sorting=anyt}
43
44    \DeclareFieldFormat{labelalphawidth}{\mkbibbrackets{#1}}
45    \DeclareFieldFormat{shorthandwidth}{\mkbibbrackets{#1}}
46
47    \defbibenvironment{bibliography}
48      {\list
49        {\printtext[labelalphawidth]{%
50          \printfield{labelprefix}%
51    \printfield{labelalpha}%
52          \printfield{extraalpha}}}
53        {\setlength{\labelwidth}{\labelalphawidth}%
54        \setlength{\leftmargin}{\labelwidth}%
55        \setlength{\labelsep}{\biblabelsep}%
56        \addtolength{\leftmargin}{\labelsep}%
57        \setlength{\itemsep}{\bibitemsep}%
58        \setlength{\parsep}{\bibparsep}}%
59        \renewcommand*{\makelabel}[1]{##1\hss}}
60      {\endlist}
61      {\item}
62
63    \defbibenvironment{shorthand}
64      {\list
65        {\printfield[shorthandwidth]{shorthand}}
66        {\setlength{\labelwidth}{\shorthandwidth}%
67        \setlength{\leftmargin}{\labelwidth}%
68        \setlength{\labelsep}{\biblabelsep}%
69        \addtolength{\leftmargin}{\labelsep}%
70        \setlength{\itemsep}{\bibitemsep}%
71        \setlength{\parsep}{\bibparsep}%
72        \renewcommand*{\makelabel}[1]{##1\hss}}}
73      {\endlist}
74      {\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.

```
75    \DeclareStyleSourcemap{%
76      \maps[datatype=bibtex]{%
```

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

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

Localization modules

5.1 English: english-oxref.lbx

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

```
20   \InheritBibliographyExtras{english}
21   \DeclareBibliographyExtras{%
22     \def\finalandcomma{\addcomma}%
23     \protected\def\mkusbibordinal#1{%
24       \begingroup
25       \@tempcnta0#1\relax\number\@tempcnta
26       \@whilenum\@tempcnta>100\do{\advance\@tempcnta-100\relax}%
27       \ifnum\@tempcnta>20
28         \@whilenum\@tempcnta>9\do{\advance\@tempcnta-10\relax}%
29       \fi
30       \ifcase\@tempcnta th\or st\or d\or d\else th\fi
31       \endgroup}%
32   }
```

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

```
33   \DeclareBibliographyStrings{%
34     inherit          = {english},
```

These are new strings defined by oxref:

- Roles expressed as functions

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

- Roles expressed as actions

```
49      byperformer        = {{}{}},
50      bydirector         = {{directed by}{dir\adddot}},
51      byreader           = {{read by}{read by}},
52      byconductor        = {{conducted by}{cond\adddot}},
53      byserieseditor     = {{edited by}{ed\adddot}},
54      byholder           = {{held by}{held by}},
55      byeditorcm         = {{edited and compiled by}{ed\adddotspace and comp\adddot}},
```

- Publication details

```
56      facsimile          = {{facsimile edition}{facs\adddotspace edn\adddot}},
57      revised            = {{revised edition}{rev\adddotspace edn\adddot}},
58      revisedenlarged    = {{revised and enlarged edition}{rev\adddotspace and enl\adddotspace
   ↪    edn\adddot}},
59      revisedreprint     = {{revised reprint}{rev\adddotspace repr\adddot}},
60      suppto             = {{Supplement to}{Supplement to}},
61      equals             = {{=}{=}},
62      original           = {{original}{orig\adddot}},
```

- Publication state

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

- Pagination

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

```
 98        clausetotal        = {{clause}{cl\adddot}},
 99        clausetotals       = {{clauses}{cls\adddot}},
100        regulationtotal    = {{regulation}{reg\adddot}},
101        regulationtotals   = {{regulations}{regs\adddot}},
102        ruletotal          = {{rule}{r\adddot}},
103        ruletotals         = {{rules}{rr\adddot}},
```

- Types

```
104        facebook           = {{Facebook post}{Facebook post}},
105        tweet              = {{Twitter post}{Twitter post}},
106        podcast            = {{podcast}{podcast}},
107        clip               = {{video}{video}},
108        webcast            = {{webcast}{webcast}},
109        poster             = {{poster}{poster}},
```

- Miscellaneous

```
110        nolocation         = {{no place}{n\adddot p\adddot}},
111        modified           = {{last modified}{last modified}},
112        recorded           = {{recorded}{recorded}},
113        uploaded           = {{uploaded}{uploaded}},
114        filed              = {{filed}{filed}},
115        issued             = {{issued}{issued}},
```

- Labels

```
116        anon               = {{Anonymous}{Anon\adddot}},
117        pseudo             = {{Pseudo-}{Ps\adddot-}},
118        urldown            = {{downloaded}{downloaded}},
```

- Country names, patents, and patent requests,

```
119        countryjp          = {{Japan}{JP}},
120        patentjp           = {{Japanese patent}{Japanese pat.\adddot}},
121        patreqjp           = {{Japanese patent request}{Japanese pat.\adddot req.\adddot}},
```

- These are borrowed from other styles.

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

```
139        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).

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

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

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

```
219        withintroduction = {{with an introduction by}{with an introduction by}},
220        withcommentator  = {{with a commentary by}{with a commentary by}},
221        withannotator     = {{with annotations by}{with annotations by}},
222        withintroduction = {{with an introduction by}{with an introduction by}},
223        withforeword      = {{with a foreword by}{with a foreword by}},
224        withafterword     = {{with an afterword by}{with an afterword by}},
225        introduction      = {{introduction}{introduction}},
```

The abbreviations for some publication details are different.

```
226        newseries         = {{new series}{\mkbibacro{NS}}},
227        oldseries         = {{old series}{\mkbibacro{OS}}},
228        edition           = {{edition}{edn\adddot}},
229        reprint           = {{reprint\nopunct}{repr\adddot\nopunct}},
230        reviewof          = {{review of}{review of}},
231        reprintas         = {{reprinted as}{repr\adddotspace as}},
```

```
232        reprintfrom      = {{from}{from}},
233        translationas    = {{English translation as}{Eng\adddotspace trans\adddotspace as}},
234        origpubin        = {{originally published in}{originally pub\adddot}},
```

There is also a different abbreviation for 'paragraph'.

```
235        paragraph        = {{paragraph}{para\adddot}},
236        paragraphs       = {{paragraphs}{paras\adddot}},
```

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

```
237        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.

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

Languages are abbreviated.

```
248        langamerican     = {{English}{Eng\adddot}},
249        langbrazilian    = {{Brazilian}{Braz\adddot}},
250        langcatalan      = {{Catalan}{Catal\adddot}},
251        langcroatian     = {{Croatian}{Croat\adddot}},
252        langczech        = {{Czech}{Czech}},
253        langdanish       = {{Danish}{Dan\adddot}},
254        langdutch        = {{Dutch}{Dutch}},
255        langenglish      = {{English}{Eng\adddot}},
256        langestonian     = {{Estonian}{Eston\adddot}},
257        langfinnish      = {{Finnish}{Finn\adddot}},
258        langfrench       = {{French}{Fr\adddot}},
259        langgerman       = {{German}{Ger\adddot}},
260        langgreek        = {{Greek}{Gr\adddot}},
261        langitalian      = {{Italian}{It\adddot}},
262        langlatin        = {{Latin}{Lat\adddot}},
263        langnorwegian    = {{Norwegian}{Norw\adddot}},
264        langpolish       = {{Polish}{Pol\adddot}},
265        langportuguese   = {{Portuguese}{Port\adddot}},
266        langrussian      = {{Russian}{Russ\adddot}},
267        langslovene      = {{Slovene}{Slov\adddot}},
268        langspanish      = {{Spanish}{Sp\adddot}},
269        langswedish      = {{Swedish}{Swed\adddot}},
270     }
```

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.

```
34      \def\finalandcomma{\addcomma}%
35      \def\bibtimesep{\addperiod}%
36    }
```

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

```
37    \DeclareBibliographyStrings{%
38      inherit          = {english},
39      am               = {{a\adddot m\adddot}{a\adddot m\adddot}},
40      pm               = {{p\adddot m\adddot}{p\adddot m\adddot}},
41    }
```

5.3   American English: american-oxref.lbx

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

5.4   Other languages

Currently oxref only supports British and American English 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.